Naugatuck Valley Community College
2011 - 2012 Catalog

Naugatuck
Valley
Community
College

The smart choice.™
750 Chase Parkway • Waterbury, CT 06708
183 Main Street • Danbury, CT 06810

Naugatuck Valley Community College

A State of Connecticut Two-Year Institution of Higher Education

750 Chase Parkway • Waterbury, Connecticut 06708-3089

www.nvcc.commnet.edu

Telephone Directory
Area Code: 203

Administration

President
  Daisy Cocco De Filippis, 575-8044
Executive Assistant to the President
  Roseann Tunila, 575-8044
Dean of Academic Affairs
  Sandra Susman Palmer, 575-8046
Associate Dean of Academic Affairs
  Estella Lopez *(interim)*, 596-8718
Dean of Student Services
  Lillian Ortiz, *(interim)* 575-8012
Dean of Administration
  James Troup, 575-8089
Associate Dean of
  Information Technology
  Conal Larkin, 575-8041
Dean of Community
and Economic Development
  James Troup, *(interim)* 575-8089
Dean of Community Engagement
  Waldemar Kostrzewa, *(interim)*
  575-8297
Director of Human Resources and
  Labor Relations
  Arthur J. DuBois, 575-8056
Affirmative Action Officer
  Ronald Clymer, 575-8110

Academic Division Directors

Allied Health, Nursing and
Physical Education
  Joanne Ottman, 575-8057
Arts and Humanities
  Pamela Tolbert Bynum, 575-8036
Behavioral and Social Sciences
  William T. Brown, 575-8002
Business
  Mitchell Holmes, 575-8068
Engineering Technologies
  Metaxia Samsel, 575-8090
Mathematics/Science
  Anthony Borgen, 575-8191

Community and Economic Development Directors

Business and Industry Training
  Mary Ann Fontaine, 596-2143
Health Careers and Community Education
  Laurie Hornbecker, 575-8031
Danbury Center
  Matthew Longcore, 797-9361

College Support Services

Academic Center for Excellence (ACE)
  Kathy Taylor, 575-8279
Admissions
  Linda Stango, 575-8016
Career Services
  Maritza Tiru, 575-8143
Center for Academic Planning
  and Student Success (CAPSS)
  Bernd Mattheis *(interim)*, 575-8025
College Marketing and Public Relations
  Thomas R. Violante, 596-2192
Disability Services
  Laurie Novi, 575-8035
Facilities and Campus Services
  James Troup, 575-8089
Facilities Scheduling and Events Planning
  Lisa Calabrese, 575-8226
Financial and Administrative Services
  Lisa Palen, 575-8100
Financial Aid
  Catherine Hardy, 575-8274
Human Resources and Payroll
  Jacquie Swanson, 575-8043
Information Technology
  Conal Larkin, 575-8041
Institutional Research
  Lauren Friedman, 575-8097
Learning Resources Center
  Samuel Brown, 575-8022
Public Relations
  Allison Egan, 575-8276
Registrar
  Joan Arbusto, 575-8091
Student Activities
  Karen Blake, 575-8269
Veterans' Affairs
  Catherine Hardy, 575-8274
Workforce Transition
  Lucretia Sveda, 575-8221

Phone Directory

Admissions
Application Processing
  575-8257
Application Request
  596-2121
Bookstore
  575-8075
Cashiers
*(financial aid and
scholarship transactions)*
  575-8125
Cashiers
(all other transactions)
  575-8055
Child Development Center
  596-8604
Counseling Center
  596-8025
Danbury Center
  798-9361
Financial Aid
  575-8274
Information
  575-8000
Library
  575-8024
Lifelong Learning
(non-credit)
  575-8029
Public Safety
(routine calls)
  575-8113
Public Safety
(emergency calls)
  575-8112
Records/Registration
  596-2177
Services for Students
with Disabilities
(Learning)
  Terry LaTella, 575-8608
(all other)
  575-8035
Student Activities
  575-8229
Student Government
  596-2185
Testing Center
  575-8215

Telephones for Hearing Impaired _____			
Building:	Room:	Department:	Phone #:
Kinney Hall	K518	Health Services	575-8273
Core	1st Floor	Public Safety	596-8760

Naugatuck Valley Community College

750 Chase Parkway • Waterbury, CT 06708

It is a joy to welcome you to Naugatuck Valley Community College, a caring and dynamic institution where students come first. Surrounded by splendid vegetation and served by talented and credentialed faculty, staff and administration, the College offers educational opportunities for those beginning or continuing their journey to a better future.

Our catalog presents prospective students with a rich and significant array of career and transfer academic programs, ranging from Allied Health programs, Aviation, Business, Dance, Digital Arts, to Early Childhood Education, Engineering Technology, Horticulture, Hospitality Management, Human Services, Liberal Arts and Sciences and many more.

Naugatuck Valley Community College takes pride in its historic role as a vehicle for the advancement of the citizens of the region and its strong relationships with Connecticut agencies that promote support for educational, workforce, economic and community development. Our varied offerings of degree, certificate and non-credit programs makes Naugatuck Valley Community College the place to be.

A new academic year brings with it the promise of exciting new opportunities for students at the College. Our state-of-the-art Technology Hall offers the space and equipment to pursue degrees and certificates in the engineering technologies. Our learning commons along the 5th floor afford students quiet places to study and our Academic Center for Excellence (ACE) offers mentoring and tutoring services for all students. The campus is alive with cultural activities for students, their families and the communities we serve.

I am joined by the faculty, staff and administration in welcoming you to a challenging and rewarding educational experience.

Sincerely,

Daisy Cocco De Filippis, Ph.D.
President

President Daisy Cocco De Filippis, Ph.D.,shares a moment with U.S. Representative Chris Murphy during his visit to the college in September 2009 for the grand opening of the NVCC Academic Center for Excellence.

CATALOG CONTENTS

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Waldemar Kostrzewa,
NVCC Liaison

* Ex Officio

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PROGRAMS BY TITLE

The following listing is provided as a quick reference to the curriculum pages for each program and certificate.
Associate in Arts **(A.A.)**, *Associate in Science* **(A.S.)**

Degrees

Certificates

Lifelong Learning

Non-credit certificates, workshops, seminars and short-term training courses are described in the latest semester course catalogs and can be accessed on the college website. For more information call the Lifelong Learning Office at 203-575-8029 or e-mail **continuinged@ nvcc.commnet.edu**.

Non-credit Certificates

Bartending
Basic Computer Proficiency
Basic Computer Skills for the Workplace
Central Sterile Processing Technician
Certified Nurse Aide (CNA)
Essentials of Human Resource Management
Health Unit Coordinator
Medical Coding & Billing Specialist
Medical Transcription
Office Professional Certificate
Patient Care Technician

Personal Fitness Trainer
Phlebotomy Technician
Photography Proficiency
Pre-manufacturing
Real Estate
Security Officer
Wedding Planner
Welding - Gas Metal Arc
Welding - Structural SMAW
Welding - SMAW for Pipe
Welding - Tungsten Arc

Policy Changes

Naugatuck Valley Community College reserves the right to change requirements, courses, prerequisites, regulations, tuition, fees and other policies without prior notice. Upon written request, the President of the College may make waivers of these policies due to extenuating circumstances. The catalog does not constitute a contract and is for informational use only.

Note: The Community-Technical College System is in the process of implementing common course numbering across all twelve Connecticut community colleges as well as other related changes. Adjustments may be phased in over time. Major changes will be posted on the college website.

ACADEMIC CALENDAR
FALL 2011 – SPRING 2012
This calendar is subject to change

CREDIT COURSES - FALL SEMESTER 2011

Friday, August 26 ....Credit Classes begin
Friday, September 2 ....Last Day for Add/Swap
Saturday and Sunday, September 3 - 4 .... College Closed
Monday, September 5 ....Labor Day - College Closed
Friday, September 23 .... *"Late Start"* - College Begin
Monday, October 10...Columbus Day - Credit Classes in Session - College Open
Friday, October 14 ....CCP Professional Staff Day - Classes in Session
Monday, October 17.. Mid-term grades due
Friday, November 11.. Veterans' Day - Credit Classes in Session - College Open
Tuesday, November 15.. Veterans' Day Observed- No Classes - College Open
Tuesday, November 22...Last Day Student Initiated Withdrawal
Wednesday, November 23..Recess/Columbus Day Observed - No Classes - College Open
Thursday, November 24... Thanksgiving Day - College Closed
Friday, November 25 ....Thanksgiving Recess - No Classes - College Open
Saturday, November 26...Thanksgiving Recess - No Classes - College Closed
Sunday, November 27..Thanksgiving Recess - No Classes - College Closed
Friday, December 9 .... Reading and/or Make-up Day (Instructor Discretion)
Sunday, December 11...Last Day of Credit Classes
Monday, December 12 .... Reading and/or Make-up Day (Instructor Discretion)
Tuesday - Monday, Dec. 13 - 19...Examination Period
Tuesday, December 20... Examination Make-up Day
Wednesday, December 21 ....Final Grades Due 9:00 am
Saturday and Sunday, December 24 - 25 ....Christmas Eve and Christmas Day - College Closed
Monday, December 26 ....Christmas Day Observed - College Closed

CREDIT COURSES - SPRING SEMESTER 2012

Sunday, January 1 ....New Year's Day - College Closed
Monday, January 2 .... New Year's Day Observed - College Closed
Monday, January 16... Martin Luther King Day Observed - College Closed
Friday, January 20...Credit Classes begin
Friday, January 27..Last Day for Add/Swap
Monday, February 13 ....Lincoln's Birthday - Credit Classes in Session - College Open
Friday, February 17...*"Late Start"* - College Begin
Monday, February 20 ....Washington's Birthday Observed - No Classes - College Closed
Monday - Sunday, March 12 - 18 ....Spring Break - No Credit Classes - College Open
Monday, March 12 ....Make-up Day (Instructor Discretion)
Monday, March 19 ....Classes Resume
Friday, March 23 .... Mid-term grades due
Friday, April 6 ....Good Friday - College Closed
Saturday and Sunday, April 7 - 8 .... College Closed
Friday, April 13 ....System Faculty Professional Day - College Open - Classes in Session
Wednesday, April 25 ....Last Day Student Initiated Withdrawal
Monday, May 7 ....Last Day of Credit Classes
Tuesday - Thursday, May 8 - 10 .... Reading and/or Make-up Day (Instructor Discretion)
Friday - Thursday, May 11 - 17 ....Examination Period
Monday, May 21 .... Final Grades due 9:00 am
Tuesday, May 22 ....Honors Night
Thursday, May 24 .... Commencement 6:00 pm (tentative date)
Monday, May 28 ....Memorial Day - College Closed

CREDIT COURSES - SUMMER SESSION 2012

Monday, June 4 to Friday, July 27 ....General Session Begins
Monday, June 4 to Friday, July 6 ....Special Session 1
Wednesday, July 4...Independence Day - College Closed
Monday, July 9 to Friday, August 10 .... Special Session II

Academic Calendar on page 5 is subject to change

NVCC Academic Calendar • Fall 2011, Spring & Summer 2012

FALL 2011

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
AUG	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26 Classes begin	27	28
	29	30	31				
SEP				1	2 Last day add/swap	3 College closed	4 College closed
	5 Labor Day-College closed	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23 "Late Start" classes begin	24	25
	26	27	28	29	30		
OCT						1	2
	3	4	5	6	7	8	9
	10 Columbus Day-classes in session	11	12	13	14 CCP pro staff day-class in session	15	16
	17 Mid-term grades due, 9am	18	19	20	21	22	23
	24	25	26	27	28	29	30
NOV	31 (October)	1	2	3	4	5	6
	7	8	9	10	11 Veterans' Day Classes in session	12	13
	14	15 Veterans' Day observed no classes - College open	16	17	18	19	20
	21	22 Last day-stud. initiated W/D	23 Recess/Columbus Day obs. No classes - College open	24 Thanksgiving-Coll. closed	25 Recess: no classes College open	26 College closed	27 College closed
	28	29	30				
DEC				1	2	3	4
	5	6	7	8	9 Reading and/or make-up day (instructor discretion)	10 Classes in session	11 Classes end
	12 Reading and/or make-up day (instructor discretion)	13 Final exams	14 Final exams	15 Final exams	16 Final exams	17 Final exams	18 Final exams
	19 Final exams	20 Exam make-up day	21 Final grades due, 9am	22	23	24 College closed	25 College closed
	26 Christmas observed College closed	27	28	29	30	31	

SPRING 2012

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
JAN							1 College closed
	2 New Year's Day observed College closed	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16 Martin Luther King Day College closed	17	18	19	20 Classes begin	21	22
	23	24	25	26	27 Last day add/swap	28	29
FEB	30 (January)	31 (January)	1	2	3	4	5
	6	7	8	9	10	11	12
	13 Lincoln's Birthday Classes in session	14	15	16	17 "Late Start" classes begin	18	19
	20 Washington's Birthday No classes, college closed	21	22	23	24	25	26
	27	28	29				
MAR				1	2	3	4
	5	6	7	8	9	10	11
	12 Spring break/Make-up day (instructor discretion)	13 Spring break - no classes	14 Spring break - no classes	15 Spring break - no classes	16 Spring break - no classes	17 Break-no classes	18 Break-no classes
	19	20	21	22	23 Mid-term grades due	24	25
	26	27	28	29	30	31	1 (April)
APR	2	3	4	5	6 Good Friday - College closed	7 College closed	8 College closed
	9	10	11	12	13 Faculty professional day Classes in session	14	15
	16	17	18	19	20	21	22
	23	24	25 Last Day-stud. initiated W/D	26	27	28	29
	30						
MAY		1	2	3	4	5	6
	7 Classes end	8 Reading and/or make-up day (instructor discretion)	9 Reading and/or make-up day (instructor discretion)	10 Reading and/or make-up day (instructor discretion)	11 Final exams	12 Final exams	13 Final exams
	14 Final exams	15 Final exams	16 Final exams	17 Final exams	18	19	20
	21 Final grades due - 9am	22 Honors night	23 Leadership banquet	24 COMMENCEMENT (tentative - to be confirmed)	25	26 College closed	27 College closed
	28 Memorial Day-Coll.closed	29	30	31			

SUMMER 2012

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
JUN					1	2	3
	4 Summer session and Special Session I begin	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	1 (July)
JUL	2	3	4 Independence Day College closed	5	6 Special Session I ends (1st 5 weeks)	7	8
	9 Special Session II begins (2nd 5 weeks ends 8/10)	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27 Summer Session ends (8 weeks)	28	29
	30	31					

Naugatuck Valley Community College resulted from the merger in 1992 of Mattatuck Community College and Waterbury State Technical College by the Connecticut General Assembly. The College's Role and Scope flows from the October 1992 comprehensive Mission Statement established by the Board of Trustees. The College's main campus is designated as the Central Naugatuck Valley Region Higher Education Center. The location serves as one of the regional offices of Charter Oak State College, Connecticut's external degree program and an off-campus location for Central and Western Connecticut State Universities, Starbase and Advanced Manufacturing programs of Kaynor Technical School.

The College, conveniently located at the crossroads of state highway 8 and Interstate 84, is accessible by public transportation. It serves over 25 towns and cities in the west central part of the State of Connecticut. Waterbury, with a population of over 110,000, and Danbury with a population of over 65,500 are considered the anchor cities in a region flanked by small rural and suburban communities. Recently, the college began increasing offerings in three Danbury locations: 183 Main Street, W.C.S.U., and at Danbury High School.

The College is comprehensive in its offerings of over 100 associate degree and credit certificate programs. In addition, the College offers hundreds of non-credit learning activities that are customized to fulfill industry specific training, job skills upgrading, and personal enrichment opportunities. Technical and technological education is a key component of our programs and services. Our specialized training programs serve the needs of the people and the industries of the State of Connecticut. Such diversity makes the institution a social, cultural and intellectual environment for people of all ages.

Learners range from youth in elementary and middle school, to young adults just out of high school, to mature adults returning for employment, retraining or leisure time activities. Learners who are non-native speakers of English take English as a Second Language (ESL) classes to help them achieve personal, professional and academic goals. Businesses and industries access additional training, learning resources, and cultural enrichment opportunities for their employees.

The institution accommodates the needs of the physically challenged. It houses Smart classrooms, large and small classrooms, specialized labs for science, art, and engineering; computer and technology labs; a learning resources center, a student center, and a fine arts center that provides spaces for music and drama productions.

LEARNING
The College provides services from a highly qualified full-time faculty complemented by a talented pool of instructors and trainers. Outstanding learner-centered instruction is central to our mission. NVCC prepares students for transfer to other institutions and for the world of work. A strong core of general education gives students a broad background that prepares them to change or modify career direction or to transfer to other institutions of higher education.

Degree and certificate programs include computer training, writing and research. For those who come to the College unprepared for its rigors, a developmental skills program supports critical thinking, writing, and math competency to help students succeed.

The College involves all students in mathematics, reading, and writing and provides students with supportive services in counseling, tutoring, testing, and individualized assistance.

The College has a number of liaisons with area elementary and secondary schools. The College Career Pathways prepares students in high school for direct entry into college curricula. The Connecticut Pre-Engineering Program for middle school students and the Kids-on-Campus Summer Program for elementary and secondary students enrich both the College and the community.

NVCC offers additional supportive student services including advising, financial aid, health services, peer tutoring, services for veterans, minority student services, a bookstore, student government, student organizations and activities.

There are a number of collaborative Community College System initiatives including the Center for Teaching, the College of Technology, the Basic Skills Testing and Placement Program, and the Business and Industry Services Network.

PUBLIC (COMMUNITY) SERVICE
Art, dance, drama, film and music presentations are regular offerings at the college as the instructors develop student and community potential in the performing and fine arts. The magnificent stages, workshops, dance and music studios provide the faculty, students, and community with settings that make the classrooms come alive with sight and sound.

The Traurig Learning Resources Center provides the citizens of the region with one of its best libraries with an online patron access catalog and electronic access to numerous databases including WESTLAW, Academic Index, NEWSBANK, Applied Science and Technology Index, and the Connecticut Occupational Information Service, a program which provides information on colleges and regional job opportunities.

STRATEGIC PLANNING
NVCC is currently operating under a three-year Strategic Plan. It is published on the college website. The plan covers the academic years from September 2010 to May 2013.

THE NVCC MISSION
Naugatuck Valley Community College offers quality, affordable education and training in response to evolving community needs by providing opportunities to individuals and organizations to develop their potential.

THE NVCC VISION
At NVCC, the word "community" is central and our students are considered our most sacred trust and our finest asset. Collaboration within and outside the confines of our immediate surroundings defines our actions and is the base for the rich intellectual, educational, cultural and civic-minded experiences we provide our students.

FIVE GOALS
1. At NVCC, students achieve their goals.
2. NVCC faculty and staff make a difference—at the college, in the community, in their fields of study and in the lives of students.
3. NVCC programs meet and beat industry standards.
4. NVCC is an engine of change within Waterbury and the broader community.
5. NVCC is an effective, performance-based institution.

In addition to these five goals, the Plan outlines 15 strategic initiatives—what we will do to meet these goals.

TEN ANTICIPATED OUTCOMES: WHAT WILL BE DIFFERENT BY 2013
1. FTE enrollment will increase by 30%.
2. Retention rate will increase by 20%.
3. Graduation rate will increase by 100%.
4. Certificate completion rate will increase by 100%.
5. Job placement rate for NVCC's graduating class will increase by at least 25% each year.
6. Grant funding will increase by 25%.
7. The number of employers visiting NVCC's campus will increase by 25% each year.
8. The number of community residents retrained for jobs via our programs will increase by 25%.
9. The transfer rate will increase by 15%.
10. The average annual income of associate degree completers will increase by at least 25% within a year of graduation.

ACCREDITATION STATEMENT

Naugatuck Valley Community College is accredited by the New England Association of Schools and Colleges, Inc. through its Commission on Institutions of Higher Education.

Accreditation of an institution of higher education by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer review process. An accredited college or university is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the accreditation status by the New England Association should be directed to the administrative staff of the institution. Individuals may also contact:

NEASC

NEW ENGLAND ASSOCIATION OF SCHOOLS AND COLLEGES
ACCREDITED MEMBER

Commission on Institutions of Higher Education
New England Association of Schools and Colleges
209 Burlington Road • Bedford, MA 01730-1433
(781) 271-0022   E-Mail: cihe@neasc.org

The College is also accredited by the Connecticut Board of Governors for Higher Education.

In addition to comprehensive accreditation by the New England Association of Schools and Colleges, some degree and certificate programs have the following specialized accreditations:

    American Association for Paralegal Education
    Committee on Accreditation for Physical Therapy Education
    Commission on Accreditation for Respiratory Care
    Joint Review Committee on Education in Radiologic
       Technology
    National Association for the Education of Young Children
    National Institute for Automotive Service Education (ASE)
    National Automotive Technicians Education Foundation
       (NATEF)
    National League for Nursing Accrediting Commission, Inc.
    Professional Landcare Network (PLANET)
    Technology Accreditation Commission of the Accreditation
       Board for Engineering and Technology (TAC of ABET),
       Accreditation Director for Engineering Technology,
       Accreditation Board for Engineering and Technology,
       111 Market Place, Suite 1050, Baltimore, MD 21202.

STATUTORY MANDATE

The legislative mandate for community-technical colleges, as provided in Public Act 92-126, Section 27(a) states:

a. The primary responsibilities of the regional community-technical colleges shall be:
    1. to provide programs of occupational, vocational, technical and technological and career education designed to provide training for immediate employment, job retraining or upgrading of skills to meet individual, community and state man-power needs;
    2. to provide programs of general study including, but not limited to, remediation, general and adult education, and continuing education designed to meet individual student goals;
    3. to provide programs of general study for college transfer representing the first two years of baccalaureate education;
    4. to provide community service programs as defined in subsection 5(b) of this section;
    5. to provide student support services including, but not limited to, admissions, counseling, testing, placement, individualized instruction and efforts to serve students with special needs.

b. As used in this section, "community service programs" mean educational, cultural, recreational and community-directed services which a community-technical college may provide in addition to its regular academic program. Such community service programs may include, but shall not be limited to:
    1. activities designed to enrich the intellectual, cultural and social life of the community;
    2. educational services designed to promote the development of skills for the effective use of leisure time;
    3. activities and programs designed to assist in the identification and solution of community problems; and
    4. utilization of college facilities and services by community groups to the extent such usage does not conflict with the regular schedule of the college.

NONDISCRIMINATION STATEMENT

The Community-Technical College System of the State of Connecticut will not discriminate against any individual on the grounds of race, color, religious creed, sex, age, national origin, ancestry, present or past history of mental disorder, marital status, mental retardation, sexual orientation, learning disability, physical disability, including, but not limited to blindness, or prior conviction of a crime, unless the provisions of sections 46a-60(b) or 46a-80(b) or 46a-81(b) of the Connecticut General Statutes are controlling, or there is a bona fide occupational qualification excluding persons in one of the above protected groups. With respect to the foregoing, discrimination on the basis of sex shall include sexual harassment as defined in section 46a-60(8) of the Connecticut General Statutes. Although it is recognized that there are bona fide occupational qualifications which provide for exception from employment prohibitions, it is understood these exceptions are to be applied pursuant to section 46a-68-33 of the Administrative Regulations. Further, the system will not discriminate against any person on the grounds of political beliefs or veteran status or sexual preference.

Any person having questions concerning Naugatuck Valley Community College's compliance with the regulations implementing Title Vl, Title IX, or Section 504 is directed to contact the College's Affirmative Action Officer.

THE NAUGATUCK VALLEY
COMMUNITY COLLEGE FOUNDATION, INC.

The NVCC Foundation, Inc., a private non-profit governed by a volunteer Board of Directors, raises funds in support of NVCC students, programs and services. Its scope and operations are subject to a variety of state and college regulations and Foundation Board policies.

The College's Office of Community Engagement (OCE) works closely with the Foundation to plan and implement development activities. Its director serves as liaison to the Foundation and collaborates with NVCC faculty, staff, students and alumni on support to help achieve college goals. Donors who wish to support the Foundation should contact the OCE director.

ADMISSIONS INFORMATION

ADMISSION POLICY

Naugatuck Valley Community College is an open admission institution with selective placement into some programs and courses. Acceptance to any degree or certificate program requires that an applicant be a graduate of an approved secondary school or have earned either a State High School Equivalency Diploma or a General Educational Development (G.E.D.) diploma. Graduating high school seniors are accepted into a degree or certificate program and permitted to register prior to their date of high school graduation under the condition that they submit proof of high school completion by July 7 of the year in whch they graduated high school. Failure to do so will result in the student being emoved from their program of study and switched to non-degree status.

Admission to the College does not necessarily mean admission to all courses and programs. Several degree and certificate programs have specific admissions criteria. Please refer to the Programs of Study section of the catalog for specific admission requirements.

Students who do not have a high school diploma or its equivalent may enroll at the College as non-degree seeking students. **Non-degree students are not eligible for financial aid, but may take advantage of the Connecticut Tuition Payment Plan.**

High school students who demonstrate sufficient scholastic ability and who present written approval from their high school principal or a designated representative may register for courses as non-degree students on a space available basis.

Students may gain admission to Naugatuck Valley in either the fall semester (August) or spring semester (January). In some programs, admission is specifically for the fall or spring semester only.

Classes are offered days, evenings and weekends, as well as online Distance Learning. Part-time students enroll for a maximum of 11 credits; full-time students enroll for a minimum of 12 credits. Courses vary in the amount of credit they carry; however, most courses are worth three (3) credits.

Admission to English as a Second Language Courses

The **E**nglish as a **S**econd **L**anguage (ESL) courses at Naugatuck Valley Community College are designed to serve the needs of non-native speakers of English. The ESL Department offers a multi-level program to increase students' proficiency in English in all four areas: reading, writing, listening and speaking.

In addition to the basic application procedures, a writing sample and the ACCUPLACER® as a Second Language Placement Test must be completed before students can register for the courses. The English placement for non-native speakers of English is determined by the ESL office and is based primarily on these tests.

Admission to Nursing and Allied Health Programs

Applicants to the **Physical Therapist Assistant Program** must apply by **October 15** for the following spring. All prerequisites must be completed by October 15, except for the Anatomy and Physiology I prerequisite, which must be completed no later than the fall semester.

Applicants to the **Radiologic Technology and Respiratory Care Associate Degree Programs** must apply by **January 15** of the year they are seeking admission and prerequisites must be completed by January 15.

Applicants to the **Associate Degree Nursing Program** must apply by **February 1** and all prerequisites must be completed by February 1, except for the Anatomy and Physiology II prerequisite, which must be completed no later than the spring semester.

Each program has specific admission criteria which can be found in the Programs of Study section of the catalog. Admission to these programs is highly selective and based on academic record and assessment testing. A program application for admission must be submitted in addition to the College Application.

Admission to Technology Degree and Certificate Programs

In addition to the standard requirements necessary for admission to the College, students applying for admission to technical degree and certificate programs should possess a solid background in science and mathematics. Refer to the programs of study section of the catalog for details.

APPLICATION DEADLINES

The College admits students on a first-come, first-served basis. For the fall semester, which begins in late August or early September, preference is given to applications received by **June 1.** For the spring semester, which begins in January, preference is given to applications received by **December 15.** Applicants will be accepted after these dates provided openings are available.

Applications for the Physical Therapist Assistant Program are available in **April** and must be submitted by **October 15.** Applications for Radiologic Technology and Respiratory Care Programs are available in **October** and must be submitted by **January 15.** Applications for Nursing are available **November 1** and must be submitted by **February 1.**

APPLICATION PROCEDURES

New Students

The following procedures apply to all individuals planning to enroll in degree or certificate programs for the fall or spring semesters:

- Complete an Application for Admission and submit it with the non-refundable $20.00 application fee to the Admissions Office, Naugatuck Valley Community College, 750 Chase Parkway, Waterbury, Connecticut 06708. (Checks should be made payable to NVCC.) Students may also apply online at **www.nvcc.commnet.edu/admissions** using a credit card to pay the $20.00 application fee.

- Request that an **official** copy of the high school transcript with date of graduation be sent directly to the Admissions Office from the Guidance Department at the high school or supply a copy of your high school diploma.* Equivalency Diploma recipients must submit a copy of the equivalency diploma or G.E.D. results.

    Applicants who are presently in high school may submit their completed application form and $20.00 application fee directly to their high school guidance office. The Guidance Office will forward the application, fee and high school transcript directly to the Admissions Office.

- New immunization requirements: All new degree seeking students born after 12/31/56 are required by state law to submit immunization documentation for two (2) doses of measles, mumps and rubella (MMR). Those born as of 1/1/80 also need to submit documentation for (2) doses of varicella (chicken pox).

    All transfer students born after 12/31/56 are required by state law to submit immunization documentation for two (2) doses of measles and one (1) dose of rubella (See specific guidelines listed in this section under **Immunization Requirements**.)

Note: Changes in the immunization requirements for transfer students are pending. We anticipate transfer students will need to meet the same criteria as new students for fall 2011. See our website for the latest changes.

Placement Test (ACCUPLACER®)

All new and transfer students enrolling in degree or certificate programs are required to take the placement test. NVCC uses the ACCUPLACER ® computerized adaptive placement test to assess basic skill levels in English, reading and mathematics. Advisors will use the results of this assessment to make decisions about the level of courses students are prepared to take. This is not an admission test. Prior to taking the test, students *must* be accepted to the college. An exemption to testing may be granted to students who:

- have completed coursework in a college level English and/or math with a grade of "C" or better; or
- have achieved a score of 550 or higher on the math portion of

the SAT exam and /or 450 or higher on the critical reading or writing portion; or
- have taken the ACCUPLACER® test at another community college or university; or
- have appropriate Advanced Placement (AP) or College-Level Examination Program (CLEP) scores.

Appropriate documentation (transcript, final semester grade report, SAT score report, ACCUPLACER® score report, AP scores, CLEP scores) must be submitted to the Admissions Office for review to determine if the requirements for exemption are met.

Students are encouraged to schedule their test as soon as possible to ensure availability of classes at the time of registration. Appointments to take the test can be scheduled through the Admissions Office.

Transfer Students

- Transfer students who have not previously attended Naugatuck Valley must follow the procedures for New Students.

- Students who are interested in receiving credit for course work completed at another institution must request that an official copy of their college transcript be sent to the Admissions Office at Naugatuck Valley. Students who have attended institutions outside Connecticut should also provide course descriptions for the courses they would like to transfer.

  Transfer credit may be granted for comparable courses completed at accredited colleges and universities. The total amount of transfer credit granted may not exceed 75 percent of the credits required by the College in a specific program. Transfer credits will not be used in the calculation of grade point averages. For more information see *"Transfer Courses"* section.

- Placement testing may be waived for transfer students who have earned an associate's degree or higher or who have completed college level English and/or mathematics with grade "C" or better. SAT scores may also be acceptable.

IMMUNIZATION REQUIREMENTS

By law, all higher education institutions in Connecticut require each full-time or matriculating student born after December 31, 1957 to provide proof of adequate immunization before permitting the student to enroll.

New Students

If you were born after December 31, 1956, Connecticut State Law requires that all full-time (degree seeking and non-degree/non-matriculating) and part-time matriculating students enrolled in postsecondary schools be adequately protected against measles, mumps and rubella (MMR). In addition, all full-time and matriculating students, except those born in continental United States prior to January 1, 1980, must provide proof of immunization against varicella (chicken pox). Students must have two (2) doses of each vaccine administered at least one (1) month apart to insure adequate immunization.

Transfer Students

By law, all higher education institutions in Connecticut require each full-time or matriculating transfer student born after December 31, 1957 to provide proof of adequate immunization against measles and rubella. Students must have two (2) doses of the measles vaccine administered at least one (1) month apart and one (1) dose of rubella.

MEASLES: The State Department of Public Health requires two doses of measles vaccine to ensure adequate immunization.
- First dose given on or after first birthday, and given after January 1, 1969
- Second dose given after January 1, 1980   **OR**
- Two doses given 28 days apart and after January 1, 1980

RUBELLA (German Measles): One dose of vaccine is considered adequate for all students.
- Given on or after the first birthday.

Note: Changes in the immunization requirements for transfer students are pending. We anticipate transfer students will need to meet the same criteria as new students for fall 2011. See our website for the latest changes.

Exemptions: Any student (new or transfer) who (1) presents a certificate from a physician stating that in the opinion of the physician such immunization is medically contraindicated; (2) provides a written statement that such immunization would be contrary to their religious beliefs; (3) provides a laboratory report documenting immunity; or (4) provides a physician's statement of confirmation of disease.

If students are unable to provide the above data due to a documented medical condition, an explanatory statement on office letterhead from an attending physician must be submitted to the college. Students may present serologic (blood test) evidence in place of the vaccination to verify immunity. An actual laboratory report must be presented documenting immunity.

The law also allows for exemption due to religious beliefs. A student requesting a religious exemption must submit a written statement that such immunization would be contrary to his/her religious beliefs.

Failure to comply with these guidelines will prevent course registration, release of transcripts, and eligibility for financial aid.

In the event of an outbreak of measles, mumps, rubella or varicella on this campus, students who are not in compliance (including a medical or religious exemption), will be excluded from classes for a minimum of 18 days per incubation period or until their immunizations are complete.

INTERNATIONAL STUDENT ADMISSIONS

Students who are not citizens or permanent residents of the United States, but who are interested in studying at Naugatuck Valley Community College may do so by applying as an international student.

Application Deadlines for F-1 Applicants

Students are admitted for fall and spring terms. We recommend that international students apply by the following dates:

The fall term begins in August; the application deadline is June 15.

The spring term begins in January; the application deadline is November 1.

International students planning to attend Naugatuck Valley on an F-1 student visa must present the following documents:

Admission Application and Fee
A Naugatuck Valley Community College application and non-refundable $20 fee are required. The application form is available as a downloadable PDF file at **www.nvcc.commnet.edu** and requires Acrobat Reader or you can request it by mail from the Admissions Office. The college's web application process is not designed for use by international students. You must mail your application along with your check or money order for $20 (converted to U.S. currency and payable to NVCC). Do not send currency.

You must present the following documents with your completed application form:

Academic Records
Proof of your graduation from high school or university, in the form of a diploma or transcript (translated to English). You may be asked to use a foreign transcript evaluation service, such as the following:

ADMISSIONS INFORMATION

World Education Services
P.O. Box 5087
Bowling Green Station
New York, NY 10274-5087
Phone (212) 966-6311 or (800) 937-3895
Fax (212) 739-6120
www.wes.org

American Association of Collegiate Registrars
& Admissions Officers
Office of International Education Services
One Dupont Circle, NW, Suite 520
Washington, D.C. 20036-1135
Phone (202) 296-3359
www.aacrao.org/international

Immunization Records
Proof of immunization must be provided. See section on immunization requirements.

Evidence of English Proficiency
International students are required to submit proof of English proficiency. Preferably, applicants should take the TOEFL test and achieve a score of 500 on the paper test, 173 on the computer-based test, or 61 on the Internet-based test. Enrollment in English as a Second Language coursework may be required until a higher level of English proficiency is attained.

Forms and Documentation Needed for Form I-20
International students who are in F-1 visa status, or who need F-1 visa status, must work with the international student advisor to obtain the Form I-20. In order to receive the Form I-20, international students must prove that they have the funds available to pay for the first year of tuition and living expenses. To apply for the I-20, students must submit the forms and documentation listed below.

1. International Student information sheet.
2. Certification of Finances: This form contains a summary of the student's financial resources and ability to pay for tuition, fees, and living expenses.
3. Promise of Cash Support signed by the sponsor and notarized: This form states that the sponsor will assume some or all responsibility for the student's expenses during his/her stay in the U.S. The form must be supplemented by bank documentation proving availability of the promised funds.
4. Promise of Free Room and Board: This form is necessary if a local sponsor is providing the student's housing and food.
5. Copy of passport identity pages.
6. Students who are already in the U.S. should provide copies of the I-94 and visa stamp. Students applying from outside the U.S. will need to bring these documents to the international student advisor upon arrival.

The Form I-20 will not be issued until all of the above items have been received and the applicant has been admitted. Students will then be advised on how to pay the $200 SEVIS fee required by the Department of Homeland Security. Please contact the International Student Advisor with any questions or concerns: (203) 575-8010.

Housing
There are no dormitories on campus. International students must arrange for their own housing.

Transportation
NVCC is a commuter college and students are expected to make arrangements for transportation to and from the College. There is no public transportation in the evening and international students may not be immediately eligible for a Connecticut driver's license.

Tuition, Fees and Living Expenses for 2011-2012

Tuition and Fees*	$ 10,430
(Based on 12 credits per term)	
Books and supplies	1,300
Room and Board	12,000
Transportation	1,000
Personal Expenses	3,000
Health Insurance (optional)	800
Total	**$ 28,530**

Subject to change

Out-of-State Fees
The above is only an estimate. Many students take 15-18 credits each term to complete their degrees sooner. International students with families need to add $1500 per dependent accompanying them. All holders of temporary visas (e.g. F, J, and H) will be charged the out-of-state tuition rate, unless and until they present evidence of an approved or pending change to permanent residency, as well as evidence that establishes Connecticut residency in accordance with state law.

Transferring In for International Students
If you are transferring to Naugatuck Valley from another school in the United States you must follow these steps:
1. Provide a copy of your current I-20
2. Notify the DSO (Designated School Official) at your current school that you plan to transfer to NVCC and ask him/her to:
   a. Enter into the SEVIS information system your "intent to transfer."
   b. Enter into SEVIS a "transfer release date."
   c. Complete the bottom portion of the Transfer Verification Form (available from the NVCC International Student Advisor).

NON-DEGREE STUDENTS
Students who are interested in enrolling in individual credit courses, but who are not interested in pursuing a degree or certificate program, may elect to enroll as a non-degree seeking student. Non-degree students complete an Application Form at the time of registration and pay the one-time $20.00 Application Fee. In some cases, non-degree students may be required to take academic skills assessment tests in English or mathematics and/or provide proof that prerequisites for specific courses have been met. Non-degree students are not eligible for financial aid but may take advantage of the Connecticut Tuition Payment Plan. Non-degree students are not permitted to register for a full-time course load (12 credits or more).

UNDERAGE STUDENTS
All students under the age of 18 must complete the following prior to registering for classes. Application form and $20.00 Application Fee, Secondary Education Validation Form and the ACCUPLACER® Assessment Test before their interview with the Director of Admissions. The interview is mandatory. Students who will be turning 18 years of age during their year of graduation from high school do not need to complete the secondary education form or meet with the director. At Naugatuck Valley Community College, Family Educational Rights and Privacy Act (FERPA) rights belong to the student, regardless of age. A "student" is a person who attends an educational institution that maintains educational records or personally identifiable information. Parents of community college students do not have a right to access their children's student records. In accordance with this regulation, students' college records will be released to parents only with the observed written consent of the student.

SENIOR CITIZENS
The application fee and all general fees are waived for any Connecticut resident 62 years of age or older who has been accepted for admission. Tuition is waived for Connecticut residents 62 years of age or over on a space available basis. Special fees

other than the application fee must still be paid. Registration under this waiver begins on the first day of the semester and is restricted to classes with available seats.

VETERANS

In addition to completing the basic application procedures, veterans should contact the Veterans' Affairs Office at the College prior to registering for classes. Once registered, the Veterans' Affairs Office will certify enrollment to the Veterans' Administration. To expedite the process of applying for benefits, the veteran should bring a DD214 (separation papers).

According to the Dependent Educational Assistance Act, wives and children of totally disabled veterans, widows and children of deceased veterans, and 100 percent totally disabled veterans are eligible to receive educational assistance while attending school. To expedite the process of applying for benefits, supporting documentation such as a marriage or birth certificate should be brought to the Veterans' Affairs Office. Veterans who served on active duty during specific periods of conflict may be eligible for tuition waivers. For more information, call Veterans' Affairs.

NVCC Office of Veteran Affairs offers a Veterans' Room where they can meet, network, and share experiences. The Veterans' Oasis is located in S411.

ADMISSION WITH ADVANCED STANDING
Academic Credit for Military Experience

Veterans may obtain transfer credit for courses successfully completed in the United States Armed Forces schools, provided that such courses are judged the equivalent of, and are applicable toward, degree requirements. Three credits in physical education are also granted for the completion of Basic Training.

Academic Credit for Work/Life Experience

Naugatuck Valley promotes the practice of awarding credit in recognition of learning acquired through life experiences such as employment, volunteer activities, military training, special seminars and other methods. Students may apply for the evaluation of prior learning through one or more of the procedures listed:

- **Credit by Examination -** Students may elect to have prior learning evaluated by either of the following examination options:

  a) **C**ollege **L**evel **E**xamination **P**rogram (CLEP)
     The College Level Examination Program (CLEP) allows individuals to earn college credit for what they already know. NVCC awards credit for successful scores on CLEP exams. CLEP tests may be taken at Naugatuck Valley through the Testing Center.

  b) Credit by Examination - Some divisions and departments of the College produce their own examinations. Please contact Program Coordinators and Chairpersons.

Academic Credit for College Career Pathways (Tech Prep)

A high school graduate who was registered as a CCP student at their high school through the CCP program can apply their earned college credits toward a program of study at Naugatuck Valley Community College. A qualified high school student had to successfully complete approved articulated courses in 11th and/or 12th grade with a grade of "C" or better. The CCP student may be required to take the placement tests at the College. Parents of students under the age of 18 may be required to sign a parental consent form. For more information, contact the Academic Dean's Office.

Advanced Placement

Degree credit will be granted on the basis of scores on the Advanced Placement Examinations administered by the College Entrance Examination Board. Students who earn scores of 3 or higher receive credit for the courses for which the examinations are stipulated as measures.

NEW ENGLAND BOARD OF HIGHER EDUCATION (NEBHE) RECIPROCAL PROGRAM

Naugatuck Valley Community College is authorized to participate in the NEBHE Reciprocal Program which is designed to encourage interstate enrollments in publicly supported degree granting institutions. A reciprocal agreement has been arranged among the six New England states to implement this program. Under this agreement, students enrolled in the NEBHE program pay tuition and fees which are substantially less than those listed for out-of-state residents.

A New England resident is eligible to participate in the program provided:

- The program of study is not offered at an in-state institution.
- The program of study is offered at both in-state and out-of-state institutions and the out-of-state institution is closer in traveling time to the applicant's legal residence.

Applicants must meet the admission requirements of the College and fall within the quota arrangements of the program. All other out-of-state applicants are required to pay the non-resident tuition and fees.

ADMISSION TO NON-CREDIT PROGRAMS

Non-credit programs are open to all citizens in the region for professional and personal development. Formal college application is not required. Registration is accepted for all courses. Certification programs have specific requirements that should be understood prior to registering. Customized programs are specially tailored for organizations and companies that address workforce demands/needs. Lifelong learning staff are available to provide information.

REGISTRATION PROCEDURES

New Students

Applicants who have been admitted to a degree or certificate program will be invited by mail to register for courses by the Admissions Office at a specified date and time.

Continuing Students

Continuing students and readmitted students may register during the current semester for the following semester. Times and locations for registration are announced by the registrar.

Former Students Seeking Readmission

Readmit students are those who have previously been accepted and who have attended Mattatuck Community College, Waterbury State Technical College, Naugatuck Valley Community-Technical College or Naugatuck Valley Community College, but who have been away from the College for two years or more.

A student to be readmitted to the college should:

- Obtain a Readmission Form (available from the Records Office or program advisor/coordinator or online: **www.nvcc.commnet.edu/admissions**).
- Meet the advisor/program coordinator to review the program's current requirements, and plan course selection.
- Unless previously tested, make arrangements to take the placement test through the Testing Center.
- If required, provide written documentation regarding proof of measles, mumps, rubella, and varicella (chicken pox) immunization to the Health Office (unless previously provided).
- Contact the Naugatuck Valley Community College Records Office to ensure that official copies of high school and college transcripts are still on file, especially if the student has been away from the College for five years or longer.
- Submit official college transcripts if the student has attended another college or university while away from Naugatuck Valley Community College, to the Records Office.

- The advisor/program coordinator may advise the student to invoke the **Fresh Start Option.** This option is only available to students with a cumulative GPA less than 2.0 and after an absence of two or more years. A student may invoke a Fresh Start Option only once at Naugatuck Valley Community College and must do so prior to or during the semester of readmission.

Readmit Students - Fresh Start Option

A student readmitted to Naugatuck Valley after an absence of two or more years (four semesters, not including summer) may return without the handicap of a grade average of less than 2.0 earned previously at Naugatuck Valley Community College. To do so, the student must invoke the **Fresh Start Option**. This Option permits previous grades to be removed from the grade point average. Credit is kept for all courses passed with grades of "P", "C-", or higher. There is no credit for previous courses in which grades of "D+" or lower were earned. All courses and grades remain on the record.

A student may invoke Fresh Start Option only once at Naugatuck Valley Community College and must do so prior to or during the semester of readmission. Since Naugatuck Valley is an "open admission/selective placement" college, neither the use of Fresh Start Option nor repeat poor performance precludes further readmission(s) of the student.

The Fresh Start Option does not apply to any completed degree or certificate. A student must complete a minimum of 15 credits after returning to college under the Fresh Start Option to be eligible for a degree or certificate and for graduation honors.

Note: For purposes of grade point average, credit, and Fresh Start Option, courses previously taken at Waterbury State Technical College and/or Mattatuck Community College are considered to be courses taken at Naugatuck Valley Community College.

LIFELONG LEARNING REGISTRATIONS (Non-credit)

Learners taking non-credit certificates or individual courses should refer to the most current semester catalog of courses for up-to-date information, registration methods, and dates. Generally, citizens may register in person, by mail, by phone, by fax, and on the web. Registration is ongoing. Check the start-up date for your course and register early. Courses are filled on a first-come, first-serve basis. Formal college admission is not required.

TRANSFER COURSES

Students may take courses at another college to be transferred to Naugatuck Valley Community College for credit. It is the student's responsibility to have an official transcript of the course work sent to the Record's Office of NVCC for evaluation purposes. This transcript will be evaluated by the associate registrar and acceptable courses will be posted to the student's academic record. Students are encouraged to consult the associate registrar to ensure the transferability of a course from another institution before enrolling in the course. Transfer credit shall be awarded for comparable courses completed at other regionally accredited higher education institutions. Only credits for courses with grades of "C" or better or a grade of "P" are accepted in transfer only if transcript legend defines "P" as representing a grade of "C" or better. The letter grade(s) assigned by the other institution shall not be recorded or included in the computation of the student grade point average.

Notwithstanding the number of degree credits which shall be granted in accordance with the foregoing, the student must complete at least 25 percent of the minimum credit requirements for the degree through coursework at the college awarding the degree.

When a student seeks transfer credit for technical or specialty courses into a program that is also accredited by a national or regional specialized accrediting agency, such credits must be from a comparably accredited program. In the case of a request for transfer credit for technical or specialty courses from a non-specially accredited program, the college shall provide appropriate means for the validation of the student's competency in the technical specialty course areas.

CROSS REGISTRATION

Full time students (12 or more credits) may be able to take up to two additional courses for no cost at another state-supported institution of higher education (including the Connecticut State Universities and the University of Connecticut) on a space-available basis if the course is not offered at NVCC.

COURSE OVERLOADS

Course overloads will not be granted. However, in extenuating circumstances, division directors, with the approval of the Dean of Academic Affairs, may authorize overloads to courses that have reached their limit (closed).

REGISTRATION BETWEEN CONNECTICUT COMMUNITY COLLEGES

Tuition and fees for students who register for general fund/tuition account courses at multiple colleges within the community-technical college system shall be charged as follows:

- Full-Time Students - Students who have paid the tuition and fees of a full-time student at their "home" institution shall be exempt from further charges. Copies of the student tuition and fee receipt from the "home" institution should be accepted by the "host" institution in lieu of payment.

- Part-Time Students - The charges for students who have paid the tuition and fees of a part-time student at their "home" institution and register for additional courses at a "host" institution shall not exceed the amount charged for a full-time student, if the student's combined registration at the "home" and "host" institutions would classify them as a full-time student. Copies of the student's tuition and fee receipt from the "home" institution should be accepted by the "host" institution, and the "host" institution should charge the difference between the full-time charges for tuition and fees and amount paid to the "home" institution as indicated on the "home" institution receipt. The "host" institution must notify the "home" institution of the multiple college registration. Any changes in student status which warrant a refund of tuition and fees will be based on the combined registration at the "home" and "host" institutions. Students who register at multiple colleges whose combined student status is less than full-time shall be charged tuition and fees as a part-time student for the semester credits registered at each of the respective colleges.

SUMMER SESSION

Day and evening courses are offered by the College during the summer. Naugatuck Valley Community College welcomes students from other colleges and universities who wish to make up a course or earn advanced standing at their home institution. Credits earned at Naugatuck Valley Community College are generally acceptable at other colleges, but students are advised to consult their home institutions for information regarding transfer of credit.

Naugatuck Valley Community College students may attend the summer session to lighten their study load during the regular academic year or to reduce the time needed to earn their degrees or certificates. Students are encouraged to check the appropriateness of their course selection with their advisors. Summer session brochures are available in late March and may be viewed online or printed from the College website at **http://nvcc.commnet.edu**.

STUDENT RECORDS

Notification of Rights under the Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords

students certain rights with respect to their education records. These rights include:

1. **The right to inspect and review the student's education records within 45 days of the day the College receives a request for access.** Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The College official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the College official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. **The right to request amendment of an education record that the student believes is inaccurate.** Students may ask an appropriate College official to amend a record that they believe is inaccurate. The student should write to the College official, clearly identify the part of the record he or she wants changed, and specify why he/she believes it is inaccurate. The College will notify the student of the decision. If the College decides not to amend the record as requested by the student, the College will advise the student of his or 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.
   NOTE: FERPA is not intended to provide a process to question substantive judgments that are correctly recorded. For example, the right of challenge does not allow a student to contest a grade in a course because the student believes that a higher grade should have been assigned.

3. **The right to consent to disclosure of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.** FERPA permits disclosure without consent to school officials with legitimate educational interests. A "school official" includes but is not limited to the following: a person employed by the College in an administrative, supervisory, academic, research or support staff position (including law enforcement and security personnel, counseling and health staff); a person or company with whom the College has contracted (such as an attorney, auditor, collection agent or official of the National Student Clearinghouse); a person serving on the Board of Trustees who is authorized to act on its behalf; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities.

   FERPA also permits disclosure of education records without consent in connection with, but not limited to:
   • To comply with a judicial order or a lawfully issued subpoena;
   • To appropriate parties in a health or safety emergency;
   • To officials of another school, upon request, in which the student seeks or intends to enroll;
   • In connection with a student's request for or receipt of financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid, or to enforce the terms and conditions of the aid;
   • To certain officials of the U.S. Department of Education, the Comptroller General, to state and local educational authorities, in connection with certain state or federally supported education programs;
   • To accrediting organizations to carry out their functions;
   • To organizations conducting certain studies for or on behalf of the College;

• The results of an institutional disciplinary proceeding against the alleged perpetrator of a crime of violence to the alleged victim of that crime with respect to that crime.
• Directory information as defined in the policy of the Board of Trustees.

4. **The right to refuse to permit the College to release directory information** about the student, except to school officials with a legitimate educational interest and others as indicated in paragraph 3 above. To do so, a student exercising this right must notify the Office of Registrar in writing. Once filed, this notification becomes a permanent part of the student's record until the student instructs the College, in writing, to remove it.

5. **The right to file a complaint with the U.S. Department of Education concerning alleged failures by Colleges to comply with the requirements of FERPA.** The name and address of the office that administers FERPA is:

   Family Policy Compliance Office
   U.S. Department of Education
   400 Maryland Avenue, SW
   Washington, DC 20202-4605

Directory Information
The Board of Trustees has designated the following as directory information: student names and addresses, dates of attendance, full vs. part-time student status, awards and honors and graduation date. For purposes of access by military recruiters only, telephone listings and, if known, age, level of education and major are also designated as directory information.
Colleges may disclose directory information without prior consent, unless a student has exercised the right to refuse to permit the College to release directory information in accordance with paragraph 4 above.

GRADE REPORTS
Semester grades will be available via the web approximately one week after the exam period. To view your grades online go to **http://my.commnet.edu**. Students unable to access the web may request a grade report. This request must be in writing and must include your student ID number and/or social security number. Forms are available in the Registrar's Office, K516.

TRANSCRIPTS
Official transcripts are free of charge. Official transcript requests as well as unofficial transcripts can be accessed through self-serve also at **http://my.commnet.edu**. Transcript requests must be in writing and should include your name, maiden name if applicable, address, phone number, social security number, birth date, student identification number, dates of attendance, the complete address of where you want your transcript sent and your signature. Mail or fax your request to the attention of the Records office at the College's address. The fax number is (203) 575-8085.

ENROLLMENT VERIFICATION REQUESTS
Enrollment Verifications are available approximately three weeks after the start of each semester. .Enrollment Verifications are supplied through the National Student Clearinghouse. Students can print their own Enrollment Verification Certificate via the internet. By using their 8-digit student ID number and PIN, students can log onto **http://my.commnet.edu**, follow the prompts from Student Services and Financial Aid to Student Records. They will connect directly to the National Clearinghouse. Enrollment verifications are available approximately three weeks after the start of each semester.

DUPLICATE NON-CREDIT CERTIFICATES
Starting with Summer 2010, official non-credit transcripts will be available to all registered students. Certificates will be provided for selected programs only. Information will be provided in your class. For courses prior to Fall 2009 semester and for selected programs thereafter, Naugatuck Valley Community College issues initial non-

credit certificates at no cost to you upon successful completion of all your program requirements. You are responsible for the safekeeping of this certificate. A duplicate or replacement certificate may be obtained for a processing fee of $15. To comply with FERPA laws, all requests must be in writing and signed by the student to whom the certificate was issued. The following information must be included:

> Full name
> Name at the time of the course
> Current mailing address
> Current phone number
> Student ID or Social Security number
> Course or program name
> Semester and year course or program was completed
> Signature (original, not electronic) and current date

This process requires verification of successful program completion and may take up to three weeks. Mail the requests to:

> Naugatuck Valley Community College
> Kinney Hall, Room K404
> Attention: Duplicate Certificate Request
> 750 Chase Parkway, Waterbury, CT 06708

FINANCIAL AID POLICIES

Financial aid is monetary assistance provided to undergraduate students who seek higher education. The cost of education beyond high school is expected to be paid by the student and/or the student's family. When the cost, however, is greater than the student's or the family's ability to pay, financial assistance is available. Most assistance programs are administered on the basis of "need" which is defined as the difference between the cost of attending a particular college and the family's ability to pay that cost. Cost includes tuition and fees, books and supplies, transportation, room and board, and miscellaneous expenses. The student's or the family's ability to pay is calculated through a needs analysis system approved by the United States Department of Education, Office of Student Financial Assistance.

The Financial Aid Office incorporates various types of financial aid into a "Financial Aid Package" for each student in an effort to help the student meet particular educational goals. The success of the student in college reflects the success of the Financial Aid Office.

Policy of Determination and Treatment of Student Financial Awards

If qualified, Naugatuck Valley students can receive financial assistance for direct educational costs such as tuition, fees, books and supplies. Student status will be measured as follows:

6-8 credits	1/2 time
9-11 credits	3/4 time
12 credits and above	Full-time

Financial Aid Awards shall be prorated based on student status as recorded by the Record's Office at the time a payment list is generated. If an overpayment has been made, the aid dollars shall be replaced in the appropriate accounts in the reverse order of the draw, with up to full restoration in each program in reverse order. The order is as follows:

- self-help dollars will be restored to accounts.
- student help and college work study dollars will be returned to appropriate accounts.
- loan dollars will be returned either to the College account or to the bank/Loan Foundation if a Perkins Loan is involved, or to the federal government if a Direct Subsidized Stafford Loan, Direct Unsubsidized Stafford Loan, or Direct Plus Loan for Undergraduate Students is involved.

The cost of attending Naugatuck Valley Community College will vary depending on a number of factors: how many courses the student is taking, how far away and with whom the student lives,

and whether the student has dependent or independent status. The expenses listed below are typical for a broad category of students attending Naugatuck Valley:

ANNUAL BUDGET

Tuition	$3096
Fees	394
Books	1600
Transportation and Miscellaneous Expenses	3720
Total	**$8810**

Note: The budget is pro-rated for less than full-time students. (Costs subject to change.)

Eligibility for Financial Assistance

Common to all federal funding, to be eligible for financial assistance a student at the College must:

- be a United States citizen or an eligible non-citizen.
- have financial need as assessed by an eligible needs analysis system.
- be enrolled as a matriculated student at Naugatuck Valley Community College.
- be working towards a degree or certificate.
- maintain satisfactory academic progress.
- not be in default on any federal educational loan or owe a repayment on any federal grant at any institution.
- certify registration for Military Selective Service (if applicable).
- have completed high school or have earned the GED.
- Students seeking Ability to Benefit (ATB) in order to qualify for Federal Financial Aid shall be tested, at a minimum, in the reading comprehension, sentence skills and arithmetic sections of the ACCUPLACER® Test.
- Non-credit course work does not qualify for federal financial aid.

HOW TO APPLY FOR FINANCIAL AID

A student may apply for financial assistance at Naugatuck Valley Community College by completing the Free Application for Federal Student Aid (FAFSA) form for the year in which the student intends to attend the College. This form will establish the "financial need" of the student.

You must apply for a pin # first at **www.pin.ed.gov**. The pin number is required for use in signing the on-line application.

You should complete the FAFSA on the web at **www.FAFSA.ed.gov**.

There is usually a two week waiting time before a student receives the federal Student Aid Report (SAR) which is generated from the FAFSA. The student must then bring the following to the Financial Aid Office if they are selected for verification:

- completed and signed current IRS income tax return, including all schedules and W2's or other documents verifying income provided on the Application.
- the completed verification form provided.
- the eligible non-citizen card (I-94, I-151, I-181, I-181a, or I-181b), if the student is an immigrant or has a certificate of naturalization.

Anticipate that the complete application process should take approximately two months. If the student adheres to the following deadlines, he or she will be assured of an answer concerning eligibility before the semester begins.

- Fall Semester - Submit FAFSA by February 1, bring documents to office by June 1.
- Spring Semester - Submit FAFSA by November 1, bring documents to office by December 1.

The deadline to apply for financial aid assistance is no later than mid-March of any academic year, provided the College still has funds to give. Pell recipients have until May 1 each year to present

all their paperwork to the Naugatuck Valley Community College Financial Aid Office.

TYPES OF FINANCIAL AID

Once eligibility has been established, the student will receive an Award Letter by e-mail or mail, which will explain the "Financial Aid Package" comprised of all the funds the student will receive. The student may receive aid from one or many programs depending upon the student's need and the availability of funds. The available programs include:

Grants

These are gift aid programs. Funds are not required to be repaid.

- **Federal Pell Grant** This grant is the foundation of all federal aid programs. It is money provided to help undergraduate students pay for their education beyond high school. The amount of money the student can receive through this program will depend upon the program funding for the year, the information the student provides on the application, and whether the student is enrolled full-time or part-time. The student must be enrolled for at least three credit hours in a program of six months in length or longer. The student is eligible for this grant until a first bachelor's degree is earned.

- **Federal Supplemental Educational Opportunity Grant (SEOG)** This is a federal grant for undergraduate students who have completed high school and have a financial need. The minimum amount a student may receive is $100 per year and the maximum is $4,000.

- **Connecticut Aid for Public College Students (CAPS)** This state grant is for Connecticut residents who demonstrate financial need. Annual awards may not exceed the recipient's unmet financial need.

- **Naugatuck Valley Grant** Connecticut law provides for a waiver of tuition at each of the state colleges of 15 percent of the tuition and fees collected from students enrolled in any given semester. Dependent students whose parental contribution is less or independent students whose own contribution is less than one-half of the student's school expenses for the whole semester may be eligible.

Awards and Scholarships

Students are recognized for academic excellence, citizenship, and service to the College at a variety of college functions, including the College's Annual Honors Night and the Student Activities Leadership Banquet. Numerous scholarships are offered through the Office of Financial Aid and the NVCC Foundation. Applications are available for some scholarships, while other recipients are selected by faculty and staff. These funds are not required to be repaid.

A complete list of credit scholarships and awards is available in the Office of Financial Aid. A separate application is required for scholarships. Scholarships for non-credit programs are limited. For information and applications call the Financial Aid Office.

Loans: These funds must be repaid.

- **Need Based Loans**
  Direct Loan Program
  The Direct Loan Program is a loan subsidized by the federal government. The loan is given based on the criteria of need; the Financial Aid Office awards the loan. The loan must be used for reasonable educational expenses.

  The maximum grace period before payment becomes due is six months after graduation or withdrawal from school. Effective 7/1/11, the interest rate will be 3.4 percent fixed on new federal student loans.

  A total of up to 1 percent of the loan may be deducted as a processing fee by the federal government before the check is issued. All students applying for a loan must fill out a FAFSA

in order for the Financial Aid Office to determine the need. The borrower has up to 10 years to repay this loan.

The loan can be canceled only if the borrower becomes totally and permanently disabled, or if he or she dies. Borrowers who do not repay their loans go into default. If this occurs, the guarantee agency can require the borrower to repay the entire amount immediately, including all interest and penalty charges or it can sue to collect the amount of the loan. Credit bureaus will be notified of the default, and this may adversely effect the borrower's future credit rating. Also, the Internal Revenue Service can withhold the borrower's income tax refund and apply it to the loan. If the borrower has difficulty repaying the loan, he or she should notify the lender immediately.

The borrower must notify the school if he or she graduates or withdraws from school, transfers to another school, drops below half-time status, or changes name, address, or social security number.

Three branches of the military offer repayment plans for Direct Federal Stafford Student Loans as an enlistment incentive: the Army, the Army Reserve, and the Army National Guard.

- **Non-Need Based Loans**
  Unsubsidized Direct Loan
  The annual and aggregate loan limits, as well as the interest rate calculation for the Direct Unsubsidized Federal Stafford Loan, are identical to the Direct Federal Subsidized Stafford Loan.

  Borrower eligibility is determined by subtracting the financial aid package from the cost of attending the College (including any Federal Stafford Loan the borrower will receive). Family contribution is not included.

  The first payment is due six (6) months after the month in which the borrower ceases to be enrolled on at least a half-time basis at an eligible institution.

  Interest accrues during the in-school period and the period of authorized deferment. The interest may be paid monthly or quarterly or, if agreed to by the borrower, capitalized no more frequently than quarterly.

  Entrance and exit counseling are required for both the Direct Subsidized and Unsubsidized Stafford Loan. Interest on Unsubsidized loans are currently fixed at 6.8 percent.

Direct Parent Loan to Undergraduate Students

Direct Parent Loan to Undergraduate Students provides additional funding for educational expenses. The Federal Direct PLUS loan is for parent borrowers. The maximum interest rate changes periodically. The interest is set annually at 3.10 percent above the T-Bill rate with a nine percent cap. Like the Direct Stafford Loan, these loans are originated and disbursed by the Federal Government. The current rate for the DPLUS loan is 7.9 percent fixed.

DPLUS enables the parents to borrow up to the cost of attendance less other financial aid for each child who is enrolled at least half-time and is a dependent student. Parents apply for this loan in the same way students apply for direct subsidized and unsubsidized loans; however, the borrower does not have to show need. The borrower will undergo a credit analysis. Payment begins 60 days after disbursement; however, the principal can be deferred while the student is enrolled by applying for a deferment with the Department of Education. A FASFA Application is required for a PLUS Loan.

Federal Perkins Loan

The Federal Perkins Loan Program is for students who are enrolled at least half-time (six credits or more) and who need a loan to meet educational expenses. Students may borrow up to $2,000 per academic year for a total of $4,000 while attending Naugatuck Valley Community College. Repayment begins after a six-to-nine month grace period following graduation or upon leaving the College for other reasons. Students may be allowed up to 10 years to repay the loan.

FINANCIAL AID INFORMATION

- **Work-Study**
  Federal
  The Federal College Work-Study Program (FWS) is part of the "Financial Aid Package" which provides jobs for undergraduate students who need help earning funds for some of their educational expenses. Awards vary according to financial need and the availability of funds. Generally, a student will work 10 to 20 hours weekly at the prevailing rate. Students must be enrolled at least part-time (six credits).

- **Additional Education Assistance Program**
  Veterans: Many veterans and some of their dependents are eligible for educational assistance. Connecticut veterans who served on active duty during certain periods of conflict may be eligible for a waiver of tuition. Complete details are available from the Veterans' Affairs Office.

  Social Security: In some cases, the dependents of deceased or disabled persons are eligible to receive Social Security benefits while attending college. Contact your local Social Security Administration for information.

ACADEMIC STANDARDS FOR FINANCIAL AID RECIPIENTS
**Satisfactory Academic Progress Policy
for Student Financial Aid Recipients**
A student receiving Federal Title IV financial aid or other financial aid directly administered or certified by the college must maintain satisfactory academic progress towards the completion of a certificate or degree program of study. Satisfactory academic progress for financial aid recipients is measured by both quantitative and qualitative standards and is an assessment of a student's cumulative academic record at the college.

A student must complete successfully two-thirds (66.66%) of the credits (earned credits/attempted credits) s/he attempts. All attempted credits resulting in either an academic grade or administrative transcript notation will be included in the quantitative calculation. Incomplete courses, course withdrawals, course repetitions, and noncredit remedial courses (with appropriate credit equivalency evaluation) will be included in this assessment. Transfer credits will be counted as attempted and earned credits in the calculation for determining satisfactory academic progress. A student must also maintain a cumulative minimum grade point average as noted below to be making satisfactory academic progress and be eligible to receive financial aid.

Earned Credits	Minimum GPA
≤ 15.99	1.50
≥ 16.00	2.00

A student's cumulative academic history will be evaluated prior to each term's financial aid disbursement. This policy will be used to evaluate full-time and part-time students. Failure to attain the average and completion rates as stated above will automatically put the student on financial aid warning or terminate the student from receiving aid the following semester. Students put on financial aid warning will be given aid for one more semester but must show academic progress and a 66 percent completion rate. Students terminated will lose all financial aid and can only be reinstated if they meet the academic progress standards within the next semester. Academic progress is considered to be a 2.0 grade point average or better for the semester along with a 66 percent completion rate of all classes taken. Furthermore, any student who receives financial aid in a given semester and receives I's, R's, X's, N's, W's, N (no credit) for the majority or all courses is automatically ineligible to receive financial aid for the next semester. By enrolling in college, the student accepts responsibility to take full advantage of his/her educational opportunity. The student is expected to meet all academic obligations or assume the risks incurred by failure to do so.

Examples of 66 percent completion rate:

Credits Attempted	Credits Completed
1-6	all
7-8	5
9	6
12	8
15	10
30	20
45	30
60	40

Financial Aid Warning Period
Any student who fails to meet the minimum satisfactory academic progress standard will be placed on Financial Aid Warning once. The warning period will be the student's next semester of enrollment at the college. The college will communicate the warning status to the student and inform the student that s/he must meet the academic progress standard by the end of the warning period in order to maintain eligibility to participate in the financial aid program at the college.

Termination
Any student who fails to meet the minimum satisfactory academic progress standard at the end of the warning period will be dismissed from the financial aid program at the college. The College will communicate the termination status to the student and inform the student of the reinstatement and appeal process available to the student.

Maximum Credit Hours
A student may receive student financial aid for any attempted credits in his/her program of study that do not exceed 150% of the published length of the student's educational program at the College. For example, a student enrolled in a 60-credit degree program may receive financial aid for a maximum of 90 attempted credit hours. Similarly, a student enrolled in a 30-credit certificate program may receive financial aid for a maximum of 45 attempted credit hours. Any attempted credits at the College must be included in the calculation. This 150% maximum credit hours rule is applicable to students who change majors or who pursue a double major.

Reinstatement
Reinstatement after termination from financial aid can be accomplished with successful completion of the same amount of credits of non progress (not necessarily the same classes) with at least a 2.0 grade point average at the student's own expense, and overall completion record of 66 percent of all classes attempted. Reinstatement cannot be accomplished without both of these steps. The student will be notified in writing of the decision of the Financial Aid Director.

Appeal Process
A written letter of appeal to the Appeals Committee, along with any necessary documentation, must be received in the Financial Aid Office at least 30 days before the semester of desired re-enrollment.

Withdrawal From Classes
Students who plan to withdraw from any classes must report to the Financial Aid Office prior to the actual course withdrawal for counseling and/or adjustment to their award. Students who do not follow this procedure may be placed on warning or terminated from financial aid depending upon completion of the rest of their courses and the grades earned for those courses.

FINANCIAL AID – SUMMER SESSION
There are Pell Grants available for those who qualify for the summer session. Satisfactory academic progress requirements

are identical to semester requirements. For further information, please call the Financial Aid Office.

FEDERAL TAX CREDITS FOR
EDUCATIONAL EXPENSES

The Taxpayer Relief Act of 1997 created two nonrefundable education tax credits entitled the **Hope Scholarship Credit** and the **Lifetime Learning Credit.** *See details on page 21.*

RIGHTS AND RESPONSIBILITIES
OF STUDENTS RECEIVING FINANCIAL AID

You have the right to ask the College:
- The names of its accrediting organizations.
- About its programs and faculty; its instructional, laboratory, and other physical facilities.
- What is the cost of attending; what are the policies regarding refunds to students who withdraw.
- What financial assistance is available, including information on all federal, state, local, private, and institutional financial aid programs.
- What the procedures and deadlines are for submitting applications for each available financial aid program.
- What criteria is used to select financial aid recipients.
- How financial need is determined. This process includes how costs for tuition and fees, room and board, travel, books and supplies, personal and miscellaneous expenses, etc. are considered in a student's budget. It also includes what resources (such as parental contribution, other financial aid, assets, etc.) are considered in the calculation of financial need.
- How much financial need, as determined by the institution, has been met.
- How and when will financial aid be distributed.
- An explanation of each type and amount of assistance in the financial aid package.
- What the interest rate is for a student loan, the total amount that must be repaid, the length of time for repayment, the date to begin repayment, and any cancellation and deferment provisions that apply.
- Those involved in the College's Work Study Program have the right to know the type of jobs available, hours of work, duties, rate of pay, and payment schedule.
- For a reconsideration of the aid package if you believe a mistake has been made or if your enrollment or financial circumstances have changed.
- For an explanation regarding the criteria used to determine satisfactory progress.
- What special facilities and services are available to students with disabilities.

It is your responsibility to:
- Review and consider all information about the College's programs before enrollment.
- Pay special attention to your application for student financial aid, complete it accurately, and submit it on time to the proper office. Errors can prevent or delay the receipt of financial aid.
- Provide all additional documentation, verification, corrections and/or new information requested by either the Financial Aid Office or the agency to which you submitted your application.
- Read and understand all forms that you are asked to sign, and retain a file copy.
- Accept responsibility for the promissory note and all other agreements that you sign. If you have a loan, notify the Department of Education of changes in your name, address or school status.
- Perform in a satisfactory manner the work that is agreed upon in accepting a college work-study job.
- Know and comply with the deadlines for application or reapplication for aid.
- Know and comply with the College's refund procedures.

PAYMENT OF TUITION AND FEES

Payments of tuition, the college services fee, the student activities fee and applicable mandatory usage fees are expected in accordance with deadlines published in the credit and non-credit tabloids each semester. Special fees and charges must be paid as designated by the College.

All holders of temporary visas (e.g. F, B, J, and H) will be charged the out-of-state tuition rate, unless and until they present evidence of change to permanent resident which may be demonstrated by presentation of the "Notification of Action" form from U.S. Citizenship and Immigration Services verifying the student's change of status, or the actual "green card" as well as evidence that establishes Connecticut residency in accordance with state law.

Failure to Pay

The College reserves the right to cancel student registrations for non-payment, but students are responsible for the applicable charges should they fail to formally drop the class(es) from their schedule or withdraw from the College. The College also reserves the right to freeze the records of any students with incomplete payment plans or other obligations to the College.

Students presenting bad checks must replace them (plus $25.00) with cash, money order or bank check within seven (7) days (one week) of the College's receipt of such notification.

The applicable charges are subject to change but are expected to be as shown below and on the following pages. Charges for non-credit courses are variable by course.

Installment Payment Plan

An installment payment plan is available to students enrolling for 3 credits or more in the fall and/or spring semesters and select non-credit programs. This plan allows students to defer the payment of tuition beyond the normal due dates, for a fee of $25.00 each semester. Specific information is available in the Cashiers Office, Kinney Hall.

Special Fees

These include:
1. An application fee charged to all first-time applicants for admission and first-time non-matriculating students at any Connecticut Community College $20.00
2. A program enrollment fee charged to all students applying for matriculation into an academic program except if an application fee has been paid $20.00
3. Late payment fee charged for any tuition and fee payment received after the established date $15.00
4. Replacement of a lost library/ID card fee is charged to defray the cost of replacing a student's ID card..$1.00
5. Returned check fee charged for any checks which are not honored by a banking institution.....$25.00
6. College Level Examination Program (CLEP) ...... $15.00 *(In addition there is a $70 fee payable to The College Board)*
7. Academic evaluation fee charged to students taking college-produced examinations for the awarding of course credit......................................$15.00
8. Portfolio assessment fee $50.00
9. TV course fees charged for the support of promotional and other expenses ....$ 7.25

Students enrolled in tuition fund courses and/or educational extension fund credit courses carrying 12 semester hours or more will be classified as full-time for general fee purposes.

TUITION and FEES

WAIVER OF FEES
Fees may be waived under the following conditions:
- Application fee waiver for students with severe financial need.
- Fee waivers for special programs for students rendered incapable of paying the fees or benefiting from the services.
- Fee waivers for students taking TV courses only and who will not use the College facilities.

WAIVERS OF TUITION
Tuition waivers apply to general fund courses only unless otherwise noted.

Dependent Children of Certain Police/Firefighters
Tuition is waived for any dependent child of a police officer, as defined in section 7-294a of the CT General Statutes, or a supernumerary or auxiliary police officer, or firefighter, as defined in section 7-323j, killed in the line of duty.

Persons 62 Years or Older
The application fee and all general fees are waived for any Connecticut resident 62 years of age or older who has been accepted for admission.

Tuition is waived for Connecticut residents 62 years of age or over on a space available basis which is determined the first day of class. Special fees other than the application fee must still be paid. Non-credit courses do not qualify for this waiver.

VETERAN'S AND NATIONAL GUARD BENEFITS
The Veteran's Administration provides educational benefits under the following programs:

- Chapter 30: The Montgomery G.I. Bill
- Chapter 31: Vocational Rehabilitation
- Chapter 32: Post Vietnam Veterans Educational Assistance Program (VEAP)
- Chapter 33: Post 9/11 G.I. Bill
- Chapter 35: Survivors' and Dependents' Education
- Chapter 1606: Selected Reserve Program
- Chapter 1607: Reserve Educational Assistance Program (REAP)

Students are advised to make their initial application for VA benefits well in advance of their first semester. Veterans may use their GI Bill benefits during spring, summer and fall semesters.

Eligible students may use VA benefits to pursue a degree or certificate program approved by the CT State Approving Agency and must be enrolled in that program. Once a student has registered and paid the appropriate charges for a given semester, the College will certify the student's enrollment to the VA, which will then pay the appropriate benefits to the student.

Continued certification by the College is contingent on the student's maintaining satisfactory academic progress toward the completion of program requirements.

Further information on VA benefits available in the Veteran's Affair Office located within the Financial Aid Office in K512.

Connecticut Veteran's Tuition Waiver
Under Section 27-103 of the CT General Statutes, the Board of Trustees for the State of Connecticut Community Colleges shall waive the tuition at any community college for eligible CT veterans with military service during time of war. For the purpose of granting a tuition waiver, a veteran is anyone who has served at least 90 days of active duty and has been released from active duty honorably or under honorable conditions.

To use the waiver, a veteran should complete the application in the Veteran's Affairs Office in K512, present a CT driver's license and Member 4 copy of the DD-214. Additional information will be provided at that time. The CT Veteran's Tuition Waiver can not be used for summer classes and does not cover fees or book charges.

National Guard Tuition Waiver
Members of the Connecticut Army and Air National Guard who are in good standing are eligible for a tuition waiver. The waiver can be used during spring and fall semesters only and does not cover fees or book charges.

Guard members must apply for a Certificate of Eligibility from their unit. Members are encouraged to apply early to their unit for the semester they wish to attend. The Certificate of Eligibility is good for one semester only. All guard members must be prepared to make payment arrangements at time of registration if no Certificate of Eligibility is on file with the Veteran's Affairs Office.

VETERANS OASIS
The Veterans Oasis is located in S411 and is open Monday through Friday, 7 am - 10 pm; Saturdays, 7 am - 6 pm; and Sundays, 11 am - 6 pm. The Oasis is open to all veterans (all guests must be accompanied by an NVCC veteran student). The Oasis provides a quiet area for networking, homework, and veteran related activities. There are computers and wireless internet available also. For further information, please contact Debbie DiCicco in K512.

Dependent Child or Surviving
Spouse of Specified Terrorist Victim
Tuition for General Fund courses are waived for any Connecticut resident who is a dependent child or surviving spouse of a specified terrorist victim who was a resident of Connecticut. A list of said victims is maintained by the State Department of Higher Education.

Dependent Children of Veterans
Dependent children of veterans missing in action or former prisoners of war will have a complete waiver of tuition.

FEDERAL TAX CREDITS
FOR EDUCATIONAL EXPENSES
The Taxpayer Relief Act of 1997 created two non-refundable education tax credits entitled the **Hope Scholarship Credit** and the **Lifetime Learning Credit.** A nonrefundable tax credit allows a taxpayer to subtract from the total amount of taxes owed, the value of the credit that he/she is eligible for. "Nonrefundable" means that you must owe taxes to get the value of the credit (i.e. if you owe $500 in taxes and are eligible for a $1,000 tax credit, you can subtract $500 from the taxes owed).

Hope Scholarship Credit is a non-refundable tax credit that can be claimed for 100 percent of the first $1,000 of out of pocket expenses for each student's qualified tuition and related expenses, plus 50 percent of the next $1,000. For example, the maximum is a $1,500 tax credit for each student ($2,000 in out-of-pocket expenses).

Credits can also be claimed for other students in the family (a dependent or spouse) who qualify (i.e., a parent goes to school and claims the credit for himself/herself and a child who is a dependent that is also attending a school). The credit is based on a per student basis. As long as the student is eligible, there is no limit on the dollar amount a particular family can be eligible.

Lifetime Learning Credit is a non-refundable tax credit that can be claimed for 20 percent of the first $5,000 of out-of-pocket expenses for a family's qualified tuition and related expenses. For example, the maximum is a $1,000 tax credit for the entire family. In the year 2003, the amount increases to 20 percent of the first $10,000 ($2,000).

Credits can be claimed for more than one person in the family but not to exceed $1,000 for the entire family ($2,000 in 2003). This is different than the Hope Scholarship Credit; the amount is based on a per family basis rather than a per student basis. There is a dollar limit that a family can be eligible.

You must meet specific income and enrollment guidelines to be eligible. Consult the Taxpayer Relief Act of 1997 or the Internal Revenue Service for details.

WITHDRAWALS AND REFUNDS
A registered student wishing to withdraw must submit a withdrawal request, in writing, to the Records Office. The effective date of withdrawal is the date the signed withdrawal is received.
Withdrawals can be made:
  • in person at the Records Office K516
  • by mail: NVCC Records Office K516
          750 Chase Parkway, Waterbury, CT 06708
  • Fax: (203) 575-8085
  • On-line: http://mycommnet.edu
   Requests must be received by the deadline within the
   withdrawal period (i.e. requests received by midnight
 prior to the deadline will be honored).

Refunds of Tuition and Fees

  • **Non-refundable Fees**
  The **college services fee** and **student activity fee** paid by all students registering for credit general fund/tuition account
  courses, or credit extension account courses, are non-refundable, except when course sections cancelled by the College would result in a change in fees otherwise due.

  Also, the following usage fees and special fees are
  non-refundable:
  • clinical program fee
  • application fee/program enrollment fee
  • late registration fee
  • replacement of lost ID card fee
  • academic evaluation fee
  • portfolio assessment fee
  • lab/studio fees

  • **Refund of Tuition for General Fund Credit Courses**
  For notice of withdrawal received prior to the first day of college classes for that semester, a refund of 100 percent of total **tuition and lab/studio fees** will be granted for both full-time and part-time students.
    For notice of withdrawal received on the first day of classes and through the 14th calendar day of that semester, both full-time and part-time students will be granted a 50 percent refund of total **tuition and lab/studio fees** applicable to the courses for which they are registered.
    For a reduction in load which occurs on the first day of classes and through the 14th calendar day of that semester, 50 percent of the difference of the **tuition and lab/studio fees** applicable to the original and revised course schedule will be refunded.

  Note: No refund of tuition will be granted for either full-time or part-time students beyond the 14th calendar day of classes.

  • **Refund Schedule for Students Enrolling in the Armed   S e r -**
  vices
  Upon submitting notice in writing of withdrawal accompanied by a certified copy of enlistment papers, 100 percent refund of tuition and fees will be granted to students entering the armed services before earning degree credit in any semester.

  • **Change of Registration**
  When a student has changed his or her course schedule to a different mix of general and extension credit courses, the College may elect not to apply the refund policy which would otherwise be in effect with respect to the course(s) deleted, and may, instead, collect or refund only the net amount due based on the tuition and fee policies applicable to the total student course load.

  • **Refund of Fees for Extension Fund Credit Courses**
  Extension fees may be refunded in accordance with the following:
    A student who withdraws by the last business day before the first class meeting of the course(s) is entitled to a full refund of

all extension account **fees.** A request for withdrawal must be received by the president or his or her designee no later than the end of the last regular business day of the college before the first meeting of the course(s).
    A student reducing his or her extension account course load will be entitled to a full refund of extension account **fees** appropriate to the course(s) dropped, provided the request for refund is received by the president or his or her designee no later than the end of the last regular business day of the college before the first class meeting of the course(s).

 No refund will be made after the first class meeting of the course except in cases of serious illness or other extraordinary circumstances, at the discretion of the college president or his or her designee.

If a class is cancelled, a full refund of all course fees will be made.

  • **Other – Special Waivers**
  The College president is authorized to modify the tuition refund policy for specific students on a case-by-case basis under the following circumstances: severe illness documented by a doctor's certificate; erroneous advisement by the College; and military transfer. Exceptions which are not normally considered include change in job, normal illness, and poor decision or change in mind by a student. Other extenuating or extraordinary circumstances may also be considered upon written request submitted to the president or his/her designee.

  • **Refund Policy for Students Participating in Federal Title I V**
  Student Aid Programs
  Students who receive federal student aid and withdraw from all classes are subject to the Return of Federal Title IV Funds calculation. This calculation, allows you to keep only that portion of federal aid which you earned, based upon the number of calendar days you were in attendance, compared to the number of calendar days in the entire semester.

    (Example: A student received $1200 in Federal Grants, but withdrew after 40% of the semester. He is said to have "earned" 40% of the grants or $480.00. The remainder of the Grants, or $720.00 is said to be "unearned.")

Any balance remaining after this calculation will be your responsibility to pay back to NVCC. Should you fail to complete payment, you will be referred to the U.S. Department of Education for collection and will no longer be eligible for Title IV funds at any institution.

  • **Non-credit Refund Information**
  Withdrawal requests for refund must be received in writing three business days prior to the beginning of class unless stated otherwise in the course description. Refunds are not granted after this deadline.

    Address for refund requests:

    Attn: Non-Credit Refunds
    Naugatuck Valley Community College
    Office of Lifelong Learning Registration, Rm. K510
    750 Chase Parkway, Waterbury, CT 06708
    or e-mail: **continuinged@nvcc.commnet.edu**

 • If there is a course cancellation due to insufficient enrollment, students will be notified by phone and/or letter. Please make sure when registering that your contact information is up-to-date. We would like to offer you the opportunity to transfer to another section, if available, or to another class of your choosing. If we have not heard from you within 7 business days, a refund will automatically be processed. Please allow 2-4 weeks for processing. The person registered in our records system is the person who will receive the refund. When registering for a coupon course, cancellation of one class voids the discounted price.

TUITION and FEE SCHEDULE

Approved by the Board of Trustees
Effective Fall 2011

Subject to change without notice.
Visit www.nvcc.commnet.edu for current tuition and fee schedule.

In-State Resident Students

Semester Hours	Tuition	College Services Fee	Student Activity Fee	Total
1	$129.00	$63.25	$5.00	$197.25
2	$258.00	$68.50	$5.00	$331.50
3	$387.00	$74.00	$5.00	$466.00
4	$516.00	$79.00	$5.00	$600.00
5	$645.00	$92.50	$5.00	$742.50
6	$774.00	$106.00	$5.00	$885.00
7	$903.00	$119.50	$5.00	$1,027.50
8	$1,032.00	$133.00	$5.00	$1,170.00
9	$1,161.00	$147.00	$5.00	$1,313.00
10	$1,290.00	$160.00	$5.00	$1,455.00
11	$1,419.00	$173.50	$5.00	$1,597.50
12.0 or more**	$1,548.00	$187.00	$10.00	$1,745.00
Annual Full-time	$3,096.00	$374.00	$20.00	$3,490.00

Out-of-State Non-Resident Students

Semester Hours	Tuition	College Services Fee	Student Activity Fee	Total
1	$387.00	$189.75	$5.00	$581.75
2	$774.00	$205.50	$5.00	$984.50
3	$1,161.00	$222.00	$5.00	$1,388.00
4	$1,548.00	$237.00	$5.00	$1,790.00
5	$1,935.00	$277.50	$5.00	$2,217.50
6	$2,322.00	$318.00	$5.00	$2,645.00
7	$2,709.00	$358.50	$5.00	$3,072.50
8	$3,096.00	$399.00	$5.00	$3,500.00
9	$3,483.00	$441.00	$5.00	$3,929.00
10	$3,870.00	$480.00	$5.00	$4,355.00
11	$4,257.00	$520.50	$5.00	$4,782.50
12.0 or more**	$4,644.00	$561.00	$10.00	$5,215.00
Annual Full-time	$9,288.00	$1,122.00	$20.00	$10,430.00

New England Regional Program (NEBHE)

Semester Hours	Tuition	College Services Fee	Student Activity Fee	Total
1	$193.50	$94.75	$5.00	$293.25
2	$387.00	$102.75	$5.00	$494.75
3	$580.50	$111.00	$5.00	$696.50
4	$774.00	$118.50	$5.00	$897.50
5	$967.50	$138.75	$5.00	$1,111.25
6	$1,161.00	$159.00	$5.00	$1,325.00
7	$1,354.50	$179.25	$5.00	$1,538.75
8	$1,548.00	$199.50	$5.00	$1,752.50
9	$1,741.50	$220.50	$5.00	$1,967.00
10	$1,935.00	$240.00	$5.00	$2,180.00
11	$2,128.50	$260.25	$5.00	$2,393.75
12.0 or more**	$2,322.00	$280.50	$10.00	$2,612.50
Annual Full-time	$4,644.00	$561.00	$20.00	$5,225.00

Educational Extension Program Credit Courses

Semester Hours	Educational Extension Fee	College Services Fee	Student Activity Fee	Total
1	$139.00	$63.25	$5.00	$207.25
2	$278.00	$68.50	$5.00	$351.50
3	$417.00	$74.00	$5.00	$496.00
4	$556.00	$79.00	$5.00	$640.00
5	$695.00	$92.00	$5.00	$792.00
6	$834.00	$106.00	$5.00	$945.00
7	$973.00	$119.00	$5.00	$1,097.00
8	$1,112.00	$133.00	$5.00	$1,250.00
9	$1,251.00	$147.00	$5.00	$1,403.00
10	$1,390.00	$160.00	$5.00	$1,550.00
11	$1,529.00	$173.00	$5.00	$1,707.00
12	$1,668.00	$187.00	$10.00	$1,865.00
13	$1,807.00	$187.00	$10.00	$2,004.00
14	$1,946.00	$187.00	$10.00	$2,143.00
15	$2,085.00	$187.00	$10.00	$2,282.00

** Excess Credits Tuition Charge: Effective Fall 2011, an additional flat tuition charge of $100 per semester shall apply when total registered credits exceed 17 for the semester.

Mandatory Usage Fees, rates effective Fall 2011:

Laboratory Course Fee	$78.00	Per registration in a designated laboratory course
Studio Course Fee	$84.00	Per registration in a designated studio course
Clinical Program Fee-Level 1	$267.00	Per semester (Fall and Spring only) - Level 1 allied health programs
Clinical Program Fee-Level 2	$191.00	Per semester (Fall and Spring only) - Level 2 allied health programs

All Tuition and Fees are subject to change

CAREER SERVICES CENTER

The Career Services Center offers a variety of services to meet the needs of all students and alumni. Students, prospective graduates and alumni are eligible to apply for any of the job listings posted outside our office or around campus. We offer part-time, full-time and temporary job listings; we announce federal, state and municipal openings and positions available with placement agencies. Whether you are looking for academically related employment or general employment, we can assist you.

Alumni enjoy assistance that provides them with career-related job leads mailed directly to their home. Alumni and students are encouraged to take advantage of the following services:
- resume writing workshops
- interview preparation
- career/employment fairs
- job search assistance
- career advising
- employer/job listing database
- on campus interviews and recruitment (as available)
- career resource library
- computers for resume development and internet exploration

For more information, contact the Career Services Center, located at Kinney Hall Room K520, at 203-575-8223 or e-mail mtiru@nvcc.commnet.edu

WORKFORCE TRANSITION SERVICES

W.I.A. Programs The federal Workforce Investment Act (W.I.A.) offers a comprehensive range of workforce development activities through statewide and local organizations. Naugatuck Valley Community College is a partner with the Northwest Regional Workforce Investment Board. NVCC offers programs that are certified to provide education and training to adults and dislocated workers who have been awarded vouchers under W.I.A., these may include:
- Job Seekers
- Laid-off Workers
- Youth
- Incumbent Workers
- New Entrants to the Workforce
- Veterans
- Persons with Disabilities
- Employers

For more information, or to learn if you qualify, contact your local Department of Labor at **www.CTDOL.state.ct.us**. Once qualified by the D.O.L. students should schedule an appointment to determine an educational plan. Contact:

Lucretia Sveda, Director of Workforce and Transition
183 Main Street, Danbury, CT 06810
Tel. (203) 797-9361
        or
750 Chase Parkway, Room K404
Waterbury, CT 06708
Tel. (203) 575-8221
lsveda@nvcc.commnet.edu

CENTER FOR ACADEMIC PLANNING AND STUDENT SUCCESS (CAPSS)

The counselors in the CAPSS assist students with a variety of career, academic advising, transfer, and personal concerns. Appointments may be made in person in Kinney Hall, K519 or by phone at (203) 575-8025. You can also e-mail **counseling@nvcc.commnet.edu**.

NEW students to the college who want to know about admissions and program requirements should contact the Admissions Office at (203) 575-8040.

RETURNING students to the college should contact their faculty advisor: A list of advisors can found in the CAPSS. See **my.Commnet**.

- **Academic Counseling** Academic counseling is offered to assist students in recognizing the options that are available

for their educational planning, to illustrate the need to plan ahead, to learn the language of educational planning, learn the optimal sequence of courses, identify academic requirements and electives, educational decision making, and develop an overall educational plan.

- **Career Counseling** Career counseling is an educational and developmental process which is dedicated to student self-realization, self-direction, and to assist in developing skills in career decision making. CAPSS offers a variety of career planning opportunities including; a series of individual sessions, a three credit career planning course, a free 6 week career planning seminar, and a computerized career program (SIGI 3).

- **Personal Counseling** The distinguishing characteristic of counseling is a primary concern with the whole human nature of the student. Short term counseling services for personal concerns are provided by professionally trained counselors. Some concerns for personal counseling include but are not limited to; academic issues and dilemmas, making life decisions, developing self-confidence, managing stress, and alleviating personal barriers to success in college. Referrals to outside agencies are made as needed.

- **Transfer Planning** Students intending to transfer to other colleges or universities should meet with their academic advisor, or see a counselor early in their academic studies. Credits that are transferable and applicable vary from college to college, so it is critical that students learn about the college of their choice, and the transfer process for that college. CAPSS annually hosts college transfer fairs for students in which area colleges and universities participate.

TRANSFER INFORMATION

Counselors provide assistance for students who desire to transfer into a four-year college or university. Application forms are available, as well as information on the transfer of credits, scholarships, financial aid, and admission requirements for both in-state and out-of-state colleges and universities. **Note:** It is also important that students consult with receiving institutions to confirm that courses will transfer.

Transfer to the Connecticut State University System

Graduates of the Connecticut Community Colleges with a GPA of 2.0 or higher are guaranteed admission to the university of their choice within the Connecticut State University System. Students must adhere to application deadlines. See the Counseling Center for details.

Special Transfer Compacts have been established between each of the universities in the Connecticut State University System and Naugatuck Valley Community College. These compacts ensure academic advising by both the sending and the receiving institution, and full transferability of coursework. Students must apply through the Counseling Center prior to completing 15 transferable credits and follow designated transfer programs.

Transfer to the University of Connecticut

The University of Connecticut offers the Guaranteed Admission Program, an agreement between the University and the Connecticut Community Colleges. Naugatuck Valley students may apply if they:
- Make application through the Counseling Center prior to completion of 16 transferable credits
- Limit to majors offered in UConn's College of Liberal Arts and Sciences and College of Agriculture and Natural Resources
- Complete a prescribed articulation program at NVCC
- Earn a minimum 3.0 GPA upon graduation from NVCC
- Observe the application procedures and deadlines within the agreement

Other articulations currently exist for programs at UConn's Waterbury Campus:
- Business and Technology
- Urban and Community Studies
- Bachelors of General Studies

NVCC students are free to apply for transfer to any of UConn's many colleges and programs at any time. Many of these programs are very competitive. It is important that the student consult with the academic advisor or the Counseling Center for advisement.

**Legal Assistant Program policy
on the transfer of legal specialty credits.**
Students may take courses at another college to be transferred to the Legal Assistant Program at Naugatuck Valley Community College for credit. It is the student's responsibility to have an official transcript of the course work sent to the Record's Office of Naugatuck Valley Community College and to the coordinator of the Legal Assistant Program for evaluation purposes. This transcript will be evaluated by the registrar and by the Legal Assistant Program coordinator. Acceptable courses will be posted to the student's academic record. Students are encouraged to meet with the coordinator and the registrar to ensure the transferability of a course from another institution before enrolling in the program. Transfer credit will be awarded for comparable courses completed at another regionally accredited higher education institution; however, no more than 12 credits of legal specialty courses may be transferred into the program from another institution.

STUDENT INSURANCE/ACCIDENT REPORTS
Accident insurance is provided for all students while involved in college-related activities; additional 24-hour accident and health insurance may be purchased separately or directly from agents. Injuries acquired as the result of a school related activity must be reported to the faculty or staff member in charge and to the Office of Disability Services within 24 hours of the time of the injury. Accident report forms are available in this office. Failure to report an injury and/or complete an accident report may cause the insurance claim to be delayed or denied. For more information, contact the Office of Disability Services.

OFFICE OF DISABILITY SERVICES
Facilities at this college are uniquely appropriate to meet the needs of students with disabilities. Elevators are available to accommodate students in wheelchairs, making classrooms accessible to these students.

During the admissions process, students with disabilities who may require accommodations are strongly encouraged to identify themselves to counselors in the Admissions Office. This will enable college support staff to provide appropriate assistance with program planning, placement testing, course scheduling and classroom accessibility appropriate to the student's needs.

After submitting appropriate documentation and completing the disabilities disclosure process, students with learning disabilities who may require accommodations must contact the Office For Students with Learning Disabilities. Students with all other disabilities must contact the Office of Disability Services.

Students are then urged to discuss their needs with individual instructors. Discussions with faculty should occur at the beginning of each semester and each time an accommodation is required. Instructors, in conjunction with appropriate college officials, will provide assistance/accommodations only to those students who have completed the disclosure and accommodation process. If a student does not disclose a disability, the College will be unable to provide accomodations. The College reserves the right to determine the nature and extent of appropriate academic accommodations. Students requiring ambulatory assistance are strongly encouraged to identify themselves to the Office of Disability Services so that emergency evacuation plans may be made.

The College makes every attempt to adhere to both the guidelines and spirit of the Americans With Disabilities Act.

ORIENTATION
An orientation program for all new students is designed to assist in the successful transition from high school, home or the workplace to Naugatuck Valley Community College. It is intended to provide entering students with information concerning academic policies, study skills, general college procedures and requirements, the academic expectations of the College, the co-curricular and extra-curricular opportunities, and the available student services. Students should be better able to make reasoned and well-informed choices as a consequence of participation.

STUDENT ACTIVITIES
A variety of more than 45 social and educational clubs and organizations are available for participation by full and part-time students attending the College. These organizations are designed around the needs and interests of the student population. They are continuously being developed by the Office of Student Activities in conjunction with students and members of the College's faculty and staff who serve as advisors. Students are encouraged to join campus organizations as a means of meeting new friends and obtaining experiential learning opportunities outside their regular classroom programs. Funding for all clubs and organizations is provided by the Student Activity Fee and dispersed by the Student Government Association. In addition, students can find academic honor opportunities in the Academic Standards section.

STUDENT GOVERNMENT
The Student Government Association of Naugatuck Valley Community College is the recognized governing body representing the concerns and interests of the College's student community. Membership consists of representatives elected from each of the various student clubs and organizations, senators who have successfully collected petition signatures from fifty (50) members of the general student body, and four (4) officers elected each spring semester. Membership is open to all full and part-time students interested in participating. Regular weekly meetings are open to the campus community. The Student Government is responsible for the recognition and funding of all student clubs and organizations on campus. Operating funds for the Student Government are provided by the Student Activity Fee.

ALUMNI AFFAIRS
Naugatuck Valley Community College offers lifelong education for alumni and their families. We encourage alumni to participate in educational and cultural opportunities, volunteer, and make a contribution to scholarships or programs of interest. Further information is available through the Office of Community Engagement.

PUBLIC SAFETY SERVICES
The Public Safety Department is located in the Core Building, Room C122. The department employs sworn police officers, building and grounds officers and telecommunication operators. Sworn members of this department are empowered with all rights and responsibilities of their position as a police officer.

Parking
Specific parking areas are designated for visitors, students, faculty and staff. Parking permits are required for all faculty and staff and may be obtained at the Public Safety Office located in the Core Building, Room C122.

Students may park on a first-come, first-served basis in D lot, E lot, F lot, and P1/P2 of the core garages, overflow lot, roadways where designated, except in those areas designated as handicapped,

visitors, fire lanes or grass areas, and in those identified by a sign on special occasions. There is NO student parking in C lot or the Ekstrom garage, Monday-Friday, 6:00am – 5:00pm. The lack of parking space does not permit the violation of a parking regulation. Vehicles may be towed if they are in violation of the parking regulations without notice to the owner. The speed limit on the roadways is 15 miles per hour.

The College does not assume responsibility for any motor vehicle, parked or in motion, or its contents.

Services Offered by the Department
The Public Safety Department responds to several types of calls for service including:
- an escort service,
- assistance during emergency evacuations,
- assistance during medical emergencies*,
- lost and found property,
- motor vehicle accidents, and
- any suspected criminal act.
  * **In the event of an emergency, go to the nearest phone and dial 8112 for assistance.**

Report on Campus Crime
In compliance with Connecticut General Statutes section 10a-55a, the Federal Higher Education Act of 1998, concerning campus safety, the Public Safety Department produces a yearly report which identifies the mandated crimes reported and investigated on campus. This report is available on the website, posted throughout campus and in the Public Safety Office.

CHILD DEVELOPMENT CENTER
The Child Development Center is designed to foster the social, physical, emotional and intellectual growth of each child by providing a warm, nurturing and enriching environment. The Center is the academic component of the Early Childhood Education Program and serves as a training center for student teachers. The Child Development Center is accredited and utilizes the Reggio Emilia Approach and the Connecticut State Frameworks. Children must be 18 months of age to enroll in the toddler program and three years of age to enroll in the pre-school program.
The extended-day program is offered:

Monday-Thursday	7:30 am - 4:00 pm
Friday	7:30 am - 12:00 noon

The half-day program is offered:

Monday-Friday	7:30 am - 12:00 noon

Applicants are encouraged to apply as soon as possible. Traditionally, there is a waiting list of two to three years. For more information, contact the Child Development Center at (203) 596-8604.

School Readiness Component
Through the school readiness initiative children may attend the Child Development Center. Children must be 3 years old to attend and residents of Waterbury to apply. Fees are set according to a sliding fee scale. The children may attend 7:30am - 5:30pm, five days per week, 50 weeks per year. For more information contact the Child Development Center at (203) 596-8604.

BOOKSTORE
Textbooks may be purchased at the George D. Yonan Memorial Bookstore located on the Plaza Level of the Joseph V. Cistulli Student Center building or online at www.nvcc.comment.edu. Click on student life/Bookstore. Bookstore hours are:

Monday through Friday 8:30 am - 4:30 pm

Extended hours at the beginning of each semester are printed in the course schedules. Textbooks are arranged alphabetically by COURSE NUMBER. The Bookstore carries required textbooks and course supplies, as well as clothing, backpacks, glassware and gift items.

DINING SERVICES
A full service cafeteria style restaurant is available on the 5th floor of the Student Center. Service hours are anticipated to be:

Monday – Thursday	7:30 am - 6:00 pm
Friday	7:30 am - 1:00 pm

In addition, vending services are available 24 hours a day at:
Student Center Cafeteria
Ekstrom Hall, 5th and 6th Floors
Founders Hall
Kinney Hall, 5th and 7th Floors
Technology Hall, 5th Floor

OTHER SERVICES
An ATM is located on the 5th Avenue Walkway.

CONNCAP
The Naugatuck Valley Community College (NVCC) Connecticut Collegiate Awareness and Preparation (ConnCAP) Program is an early intervention, college preparation program designed to provide educational support services, cultural and social enrichment opportunities, as well as academic, career and personal counseling for students who have the potential to succeed in college but who are "at-risk" for high school graduation and college matriculation due to their socioeconomic status. The Waterbury ConnCAP Program began in 1987 with the participants maintaining a 99% high school graduation rate and a 90% college matriculation rate. ConnCAP graduates have enrolled in colleges and universities throughout the United States.

ASSESSMENT EXPECTATIONS
Students at Naugatuck Valley Community College are expected to spend several hours during their college career in college-wide outcome assessment activities, such as tests, surveys and interviews.

CONNTAC-EOC OFFICE
The Connecticut Talent Assistance Cooperative (CONNTAC) is a state agency funded by the United States Department of Education. A regional CONNTAC Educational Opportunity Center (EOC) is located on the Naugatuck Valley Community College campus. Services offered through the Center include: academic and career counseling, college referral and financial aid planning. For more information, call (203) 574-1140.

DRUGS AND ALCOHOL POLICY

The Board of Trustees of Community-Technical Colleges endorses the statement of the Network of Colleges and Universities committed to the elimination of drug and alcohol abuse, which is based on the following premise:

> American society is harmed in many ways by the abuse of alcohol and other drugs—decreased productivity, serious health problems, breakdown of the family structure, and strained social resources. Problems of illicit use and abuse of substances have a pervasive effect upon many segments of society—all socio-economic groups, all age levels, and even the unborn. Education and learning are especially impaired by alcohol abuse and illicit drug use.

The Board recognizes that education regarding alcohol and substance abuse is an appropriate and even necessary part of contemporary college life. Since the unauthorized use of controlled substances, in addition to the potential harmful effect it may have on students and employees, is contrary to state and federal law and regulation, it must be prohibited in any college activity, on or off the college campus. The conditions of alcohol and drug dependency may be considered disabilities or handicaps under state and federal law and regulation, and under Board of Trustees policy, and employees and students will not be discriminated against because they have these disabilities. All students and employees, however, are considered to be responsible for their actions and their conduct.

These provisions shall apply to all colleges under the jurisdiction of the Board:

1. No student or employee shall knowingly possess, use, distribute, transmit, sell, or be under the influence of any controlled substance on the college campus, or off the college campus at a college-sponsored activity, function or event. Use or possession of a drug authorized by a medical prescription from a registered physician shall not be a violation of this provision.

2. All colleges shall develop and enforce policies regarding the sale, distribution, possession, or consumption of alcoholic beverages on campus, subject to state and federal law. Consistent with previous Board policy, the consumption of alcoholic beverages on campus may be authorized by the president subject to the following conditions, as appropriate:
   a. when a temporary permit for the sale of alcoholic beverages has been obtained and dram shop act insurance has been purchased;
   b. when a college permit has been obtained;
   c. when students bring their own beverages;
   d. when alcoholic beverages are provided by a student organization and no fee is charged for attendance or for said beverages.

3. All colleges shall provide educational programs on the abuse of alcohol and other drugs and referral for assistance for students and employees who seek it. Colleges are encouraged to establish campus-wide committees to assist in development of these programs in response to particular campus needs and identification of referral resources in their respective service planning regions.

4. This policy shall be published in all college catalogs, faculty/staff manuals, and other appropriate literature.

5. Failure to comply with this policy will result in invocation of the appropriate disciplinary procedure and may result in separation from the college and referral to the appropriate authorities for prosecution.

PERSONS WITH DISABILITIES POLICY

The Board of Trustees of Community-Technical Colleges and all of the colleges under its jurisdiction are committed to the goal of achieving equal educational opportunity and full participation for people with disabilities in the Community-Technical Colleges. To that end, this statement of policy is put forth to reaffirm our commitment to ensure that no qualified person be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity on a community-technical college campus or in the central office of the Board of Trustees.

The Board recognizes that a physical or functional impairment is a disability only to the extent that it contributes to cutting the person off from some valued experience, activity or role. Higher education is, therefore, especially important to people with disabilities, since it aims to increase every student's access to valued experiences, activities, and roles. Improving access for students and employees means removing existing barriers that are physical, programmatic and attitudinal. It also means taking care not to erect new barriers along the way.

The efforts of the Community Colleges to accommodate people with disabilities should be measured against the goals of full participation and integration. Services and programs best promote full participation and integration of people with disabilities when they complement and support, but do not duplicate the regular services and programs of the college.

Achieving the goal of full participation and integration of people with disabilities requires cooperative efforts within and among higher education institutions. The Board of Trustees will work with the Board of Governors to achieve a higher level of services and appropriate delivery methods at all Connecticut Community Colleges.

This statement is intended to reaffirm the Board's commitment to affirmative action and equal opportunity for all people and in no way to replace the equal opportunity policy statement.

STUDENT DISCIPLINE POLICY

Policy Statement

The Board of Trustees of Community-Technical Colleges adopts this policy on student discipline for the system of community colleges in recognition of the need to preserve the orderly processes of the College as well as to observe the students' procedural and substantive rights. As used herein, student means any person who is registered for any/all community college course or program.

5.2.1 Policy on Student Conduct

Section 1: Student Conduct Philosophy

Academic institutions exist for the transmission of knowledge, the pursuit of truth, the development of students and the general well-being of society. This policy is intended to ensure that members of the College community are able to pursue their goals in an atmosphere free from unreasonable interference or threat of interference.

This policy is also intended to foster the development of important values, including accountability, responsibility, fairness, respect for self and others, appreciation of personal freedoms and a recognition of the importance of physical safety in the College community. Compliance with the policy provides an opportunity to develop and practice skills in leadership, group process, decision making and ethical and moral reasoning. Students who demonstrate these values and possess these skills are more likely to find success and fulfillment in their academic, professional, family and personal endeavors.

This policy sets forth a number of expectations for student conduct and prescribes procedures for enforcement. Since students are assumed to be at various stages of moral and social development, sanctions imposed should attempt to assist students

in their growth and development, wherever possible. However, the paramount consideration must always be to protect members of the College community and the educational process from harm.

Section 2: Application of the Student Conduct Policy
This Policy applies to student conduct on campus and on other property or facilities owned, controlled or used by the College. It also applies to student conduct on premises not owned, controlled or used by the College if the off-campus conduct impairs College-related activities or affairs of another member of the College community or creates a risk of harm to any member or members of the College community.

Conduct on or off College premises that are prohibited by federal, state or local law, codes and ordinances are also covered. Students who engage in behavior prohibited by law may be subject to civil or criminal sanctions as well as to the sanctions of this Policy.

Additionally, where a court of law has found a student to have violated the law, a College has the right to impose the sanctions of this Policy even though the conduct does not impair the College-related activities of another member of the College community and does not create a risk of harm to the College community. The decision to exercise this right will be in the sole discretion of the President or his/her designee.

For purposes of the policy on Student Conduct, a "student" is any person who has registered for at least one (1) course, credit or non-credit, at the College. Student status continues in effect for two (2) calendar years after the conclusion of the last course in which the student was registered, unless the student has formally withdrawn from the College, graduated or been expelled.

Section 3: Expectations for Student Conduct
Consistent with the Student Conduct Philosophy set forth in Section 1 of this Policy, students are expected to:

1. Demonstrate respect for the College community by acting in accordance with published Board policies and College rules and regulations;

2. Demonstrate academic integrity by not engaging in conduct that has as its intent or effect the false representation of a student's academic performance, including but not limited to:
   a. cheating on an examination,
   b. collaborating with others in work to be presented, contrary to the stated rules of the course,
   c. plagiarizing, including the submission of others' ideas or papers (whether purchased, borrowed or otherwise obtained) as one's own,
   d. stealing or having unauthorized access to examination or course materials,
   e. falsifying records or laboratory or other data,
   f. submitting, if contrary to the rules of a course, work previously presented in another course, and
   g. knowingly assisting another student in any of the above, including an arrangement whereby any work, classroom performance, examination, or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed;

3. Demonstrate respect for the property of the College and of others by not damaging or destroying or attempting to damage or destroy such property, and by not possessing or attempting to possess such property without authorization, including unauthorized entry to or use of College premises;

4. Demonstrate respect for others by:
   a) refraining from conduct that constitutes a danger to the personal health or safety of other members of the College community and guests or licensees of the College, including intentionally causing or attempting to cause injury;
   b) refraining from conduct that obstructs or seriously impairs or attempts to obstruct or seriously impair College-sponsored or College-authorized activities; and
   c) refraining from harassment, which is defined as conduct that is abusive or which substantially interferes with a person's pursuit of his or her customary or usual affairs;

5. Demonstrate respect for others by refraining from sexual misconduct (see the Sexual Misconduct and Relationship Violence Statement);

6. Be truthful in all matters and not knowingly make false statements to any employee or agent of the Board or the College with regard to a College-related matter, nor forge, alter or otherwise misuse any document or record;

7. Comply with the directions of College staff members acting within the scope of their employment responsibilities;

8. Contribute to a safe and healthy learning and working environment by refraining from the unauthorized possession or use of weapons or dangerous instruments as defined by law and pursuant to Board Policy, and by refraining from possessing or using other objects in a manner that causes harm, threatens or endangers oneself or others;

9. Respect oneself and others in the community by refraining from knowingly possessing, using, transferring, selling or being under the influence of any controlled substance, as defined by law, or possessing or consuming alcoholic beverages unless specifically authorized, pursuant to Board Policy. Use or possession of a drug authorized by prescription from a licensed medical practitioner is not covered by this statement;

10. Refrain from any unauthorized use of electronic or other devices to make an audio or video record of any person while on College premises without his/her prior knowledge or without his/her expressed consent;

11. Conduct oneself in a civil and respectful manner, both within and outside the College.

Students may be sanctioned for behavior that is not in accordance with the above-stated expectations.

Section 4: Sanctions
The prior conduct record of a student shall be considered in determining the appropriate sanction for a student who has been found to have violated any part of Section 3 of this Policy. Sanctions shall be progressive in nature; that is, more serious sanctions may be imposed if warranted by the prior conduct record of the student.

A "sanction" may be any action affecting the status of an individual as a student taken by the College in response to a violation of this Policy, including but not limited to the following:

1. "Expulsion" is a permanent separation from the College that involves denial of all student privileges, including entrance to College premises;

2. "Suspension" is a temporary separation from the College that involves denial of all student privileges, including entrance

to college premises for the duration of the suspension, and may include conditions for reinstatement;

3. "Removal of College privileges" involves restrictions on student access to certain locations, functions and/or activities but does not preclude the student from continuing to pursue his/her academic program;

4. "Probation" is a status that indicates either (a) serious misconduct not warranting expulsion, suspension or removal of College privileges, or (b) repetition of misconduct after a warning has been imposed;

5. A "Warning" is a written notice to the student indicating that he or she has engaged in conduct that is in violation of Section 3 of this Policy and that any repetition of such conduct or other conduct that violates this Policy is likely to result in more serious sanctions;

6. "Community restitution" requires a student to perform a number of hours of service on the campus or in the community at large.

Section 5: Procedures
The following procedures shall govern the enforcement of this Policy:
1. Information that a student may have violated this Policy should be submitted to the Dean of Students or other designee of the President (hereinafter referred to as "the Dean"), normally within thirty (30) days of the date of a possible violation or within thirty (30) days of the date that the facts constituting a possible violation were known.

2. Upon receipt of information relating to a possible violation, the Dean may immediately place restrictions on or suspend a student on an interim basis if, in the judgment of the Dean, the continued presence of the student at the College or continued participation in the full range of college activities poses a danger to persons or property or constitutes an ongoing threat of disrupting the academic process.

a. "Interim restrictions" are limitations on the student's participation in certain College functions and activities, access to certain locations on campus or access to certain persons, that do not prevent the student from continuing to pursue his/her academic program. A student upon whom the Dean has placed interim restrictions shall be afforded written reasons for the restrictions, as well as the time period during which the interim restrictions shall apply. The decision of the Dean regarding interim restrictions shall be final.

b. "Interim suspension" is the temporary separation of the student from the College that involves the denial of all privileges, including entrance to College premises. Prior to imposing an interim suspension, the Dean shall make a good faith effort to meet with the student. At this meeting, the Dean shall inform the student of the information received and provide the student an opportunity to present other information for the Dean's consideration. Based upon the information available at that time, the Dean shall determine whether the student's continued presence on campus poses a danger to persons or property or constitutes an ongoing threat of disrupting the academic process. A student suspended on an interim basis by the Dean shall be provided written reasons for the suspension and shall be entitled to an administrative

conference or a hearing as soon as possible, normally within ten (10) business days from the date the interim suspension was imposed. The decision of the Dean regarding an interim suspension shall be final.

3. Following the imposition of interim restrictions or interim suspension, if any, the Dean shall promptly investigate the information received by meeting with individuals who may have knowledge of the matter, including the accused student, and by reviewing all relevant documents. If upon the conclusion of the Dean's investigation, the Dean determines that there is insufficient reason to believe the student has committed a violation of any part of Section 3 of this Policy, the Dean shall dismiss the matter and shall so inform the student in writing.

4. If, upon the conclusion of the Dean's investigation, the Dean determines that there is reason to believe the student has committed a violation of any part of Section 3 of this Policy and, after considering both the possible violation and the prior conduct record of the student, that a sanction of less than suspension or expulsion is appropriate, the Dean shall schedule an administrative conference with the student. The student shall be given reasonable notice of the time and place of the conference. At the administrative conference, the student shall have the opportunity to present information for the Dean's consideration. At the conclusion of the administrative conference, the Dean shall determine whether it is more likely than not that the student has violated the Policy and, if so, impose a sanction less than suspension or expulsion. The Dean shall provide the student with a written explanation for the determination. The decision of the Dean shall be final.

5. If, upon the conclusion of the Dean's investigation, the Dean determines that there is reason to believe the student has committed a violation of any part of Section 3 of this Policy and, after considering both the violation and the prior conduct record of the student, that a sanction of suspension or expulsion is appropriate, the Dean shall provide the student with reasonable written notice of a meeting and shall inform the student that his/her failure to attend the meeting or to respond to the notice may result in the imposition of the maximum permissible sanction. At the meeting, the Dean shall provide the student with a written statement that shall include the following:
a. a concise statement of the alleged facts;
b. the provision(s) of Section 3 that appear to have been violated;
c. the maximum permissible sanction; and
d. a statement that the student may resolve the matter by mutual agreement with the Dean, or may request a hearing by notifying the Dean in a writing, which must be received by 5:00 pm on the following business day.

6. If the student requests a hearing, he/she is entitled to the following:
a. to be heard, within five (5) business days, or as soon as reasonably possible, by an impartial party or panel whose members shall be appointed by the Dean;
b. if the Dean appoints an impartial panel, to have a student on the panel, if requested by the student;
c. to appear in person and to have a non-lawyer advisor. However, if there is pending at the time of the hearing a criminal matter pertaining to the same incident that is the subject of the hearing, a lawyer may be present for the sole purpose of observing the proceedings and advising the student concerning the effect of the proceedings on the pending criminal matter;

d. to hear and to question the information presented;

e. to present information, to present witnesses and to make a statement in his or her behalf; and

f. to receive a written decision following the hearing.

(See Section 6 for additional procedures regarding sexual misconduct.)

7. As used herein, the term "impartial" shall mean that the individual was not a party to the incident under consideration and has no personal interest in the outcome of the proceedings. Prior to the commencement of the hearing, the student who is subject to the hearing may challenge the appointment of an impartial party or panel member on the ground that the person(s) is (are) not impartial. The challenge shall be made in writing to the Dean and shall contain the reasons for the assertion that the person(s) is (are) not impartial. The decision of the Dean shall be final.

8. The written decision of the impartial party or panel shall specify whether, based on the information presented, it is more likely than not that the student committed the violation(s) reported and shall state the sanction to be imposed, if any. The written decision shall be provided to the student.

9. Sanctions imposed by an impartial party or panel are effective immediately. The President may, for good cause, suspend imposition of the sanctions imposed by the impartial party or panel to allow the student time to prepare a written request for review. If a written request is received, the President may continue to suspend imposition of the sanctions until he has reviewed and acted on the student's request.

10. A written request for review of the decision of the impartial party or panel must be received by the President within three (3) calendar days after the student is notified of the decision and must clearly identify the grounds for review. The review by the President is limited to the record of the hearing, the written request and any supporting documentation submitted with the request by the student. The decision of the impartial party or the panel shall be upheld unless the President finds that:

a. a violation of the procedures set forth herein significantly prejudiced the student; and/or

b. the information presented to the impartial party or panel was not substantial enough to justify the decision; and/or,

c. the sanction(s) imposed was (were) disproportionate to the seriousness of the violation.

11. Decisions under this procedure shall be made only by the College officials indicated.

Section 6: Additional Hearing Procedures for Sexual Misconduct Cases
In any hearing conducted pursuant to Section 5, paragraph 6 of this Policy and involving allegations of sexual misconduct, the accuser and the accused student shall each have the right to:

a. be accompanied by a support person during the hearing (see Section 5, paragraph 6c of this policy regarding limited right to have a lawyer present.); and

b. receive a written report from the Dean indicating the determination of the impartial party or panel and the sanction(s) imposed on the accused student, if any.

Section 7: Miscellaneous
The written decision resulting from an administrative conference or a hearing under this Policy shall become part of the student's educational record and shall be subject to the provisions of the Family Educational Rights and Privacy Act (FERPA). While student educational records are generally protected from disclosure by FERPA, there are a number of exceptions to this rule. Students should be aware that a record concerning his/her behavior while a student at the College may be shared with other colleges or universities to which the student may subsequently wish to transfer or be admitted. Similarly, prospective employers may require a student to provide access to his/her College records as part of the employment application process. A record of having been sanctioned for conduct that violates Section 3 of the Policy may disqualify a student for admission to another college or university, and may interfere with his/her selection for employment.

Any question concerning the interpretation or application of this Policy on Student Conduct should be referred to the President or his/her designee.

Section 8: Publication of Student Conduct Policy
This Policy shall be published in College catalogs and student handbooks and should be distributed in other ways that are likely to ensure student awareness of the Policy.

Section 9: Policy Review
Five years following adoption of this Policy, and as often thereafter as the Chancellor shall deem appropriate, the Chancellor shall designate a committee to review the Policy on Student Conduct, as necessary.

Sexual Misconduct and Relationship Violence Statement
To insure that each member of the Connecticut Community College community has the opportunity to participate fully in the process of learning and understanding, the Connecticut Community Colleges strive to maintain a safe and welcoming environment free from acts of sexual misconduct and relationship violence. It is the intent of the Colleges to provide safety, privacy and support to victims of sexual misconduct and relationship violence.

Sexual Misconduct is defined as:

• Non-consensual sexual intercourse, which includes any sexual intercourse (anal, oral, or vaginal), however slight, with any body part or object, by a man or a woman, without effective consent.

• Non-consensual sexual contact, which includes sexual touching, however slight, with any object, by a man or a woman, without effective consent.

• Sexual exploitation, which includes non-consensual, unjust or abusive sexual advantage taken by a student of another, for his or her own advantage or benefit, or to benefit or advantage any one other than the one being exploited, and that behavior does not otherwise constitute non-consensual sexual intercourse, non-consensual sexual contact or sexual harassment. Examples of sexual exploitation include, but are not limited to: prostitution, videotaping consensual sex without a partner's consent, peeping tommery and knowingly transmitting sexually transmitted infections without a partner's knowledge.

Definition of Consent
Consent must be informed, freely and actively given, involving an understandable exchange of affirmative words or actions, which indicates a willingness to participate in mutually agreed upon sexual activity. It is the responsibility of the initiator to obtain clear and affirmative responses at each stage of sexual

involvement. The lack of a negative response is not consent. Consent may not be given by a minor or by any individual who is incapacitated, whether voluntarily or involuntarily, by drugs and/or alcohol. Past consent of sexual activities does not imply ongoing future consent.

Stalking is defined as:
Any behaviors or activities occurring on more than one (1) occasion that collectively instill fear in the victim and/or threaten her/his safety, mental health and/or physical health. Such behaviors or activities may include, but are not limited to, whether on or off campus, non-consensual communications (face to face, telephone, e-mail, etc.), threatening or obscene gestures, surveillance or being present outside the victim's classroom or workplace.

Relationship Violence is defined as**:**
- Physical abuse, which can include but is not limited to, slapping, pulling hair or punching.

- Threat of abuse, which can include but is not limited to, threatening to hit, harm or use a weapon on another (whether victim or acquaintance, friend or family member of the victim) or other forms of verbal threat.

- Emotional abuse, which can include but is not limited to, damage to one's property, driving recklessly to scare someone, name calling, threatening to hurt one's pets and humiliating another person.

- Sexual harassment, which can include any unwelcome sexual advance or request for sexual favors, or any conduct of a sexual nature when submission to such conduct is made either explicitly or implicitly a term or condition of an individual's education; submission to or rejection of such conduct by an individual is used as a basis for academic decisions affecting the individual; or such conduct has the purpose or effect of substantially interfering with an individual's academic performance or creating an intimidating, hostile or offensive educational environment. Examples of conduct which may constitute sexual harassment include but are not limited to:

  ♦ sexual flirtation, touching, advances or propositions
  ♦ verbal abuse of a sexual nature
  ♦ pressure to engage in sexual activity
  ♦ graphic or suggestive comments about an individual's dress or appearance
  ♦ use of sexually degrading words to describe an individual
  ♦ display of sexually suggestive objects, pictures or photographs
  ♦ sexual jokes
  ♦ stereotypic comments based upon gender
  ♦ threats, demands or suggestions that retention of one's educational status is contingent upon toleration of or acquiescence in sexual advances.

The definitions contained in this statement are in addition to any applicable provisions of state law.

Confidentiality
While the College will treat reports of sexual misconduct and relationship violence seriously and with sensitivity for all concerned, the College can not assure complete confidentiality in all instances with respect to such information, particularly when that information pertains to an offense or an alleged offender that may affect the safety of others on campus or is mandated to be reported.

Time for Reporting
Normally reports must be received by the Dean of Students or other designee of the President within thirty (30) days of the date of a possible violation or within thirty (30) days of the date the facts constituting a possible violation were known. However, the College recognizes that the decision to file a report of sexual misconduct or relationship violence is difficult and may take some time. Because memories may fade and witnesses may become inaccessible, the sooner information is gathered, the greater is the ability of the College to effectively investigate and resolve the matter fairly to all parties concerned.

Adopted October 18, 1976; amended February 19, 1979, April 20, 1981, July 20, 1981, November 16, 1987, and February 26, 1990, and entirely replaced *February 26, 2007*.

Clery Act
Jeanne **Clery** Disclosure of Campus Security Policy and Campus Crime Statistics **Act** Report In compliance with Section 486(e) of Public Law: 105-244 available at **www.nvcc.commnet.edu** by accessing Public Safety.

STUDENT RIGHTS POLICY
Naugatuck Valley Community College adheres to the Board of Trustees of Community-Technical Colleges non-discrimination policy as stated in the General Overview section of this catalog.

Students are entitled to an atmosphere conducive to learning and to impartial treatment in all aspects of the teacher-student relationship. The student should not be forced by the authority inherent in the instructional role to make particular personal choices as to political action on his or her own part in society. Evaluation of students and the award of credit must be based on academic performance, regardless of personality, race, religion, degree of political activism, or personal beliefs. Students are free to take reasoned exception to the data or views offered in any course of study, but they are responsible for learning the content of the course of study as defined by official college publications.

Community college students are both citizens and members of the academic community. As citizens they enjoy the same freedom of speech, peaceful assembly, and right of petition that other citizens enjoy, and as members of the academic community they are subject to the obligations which accrue to them by virtue of this membership.

STUDENT GRIEVANCE PROCEDURE
Definition
A grievance is an allegation by a student that an agent of the College has violated Board or College policies relating to students other than assignment of grades or other academic evaluation (see also Section 3: Review of Academic Standing).

How to File a Grievance
A grievance is to be submitted in writing to the Dean of Student Services or such other college official as the President may designate (hereinafter, the Dean of Student Services), within thirty (30) days of the date the grievant knew or reasonably should have known of the alleged violation. The written grievance shall specify the right claimed to have been violated and state briefly the underlying facts.

Procedure for Grievance Resolution
The Dean of Student Services shall investigate the grievance and WITHIN THIRTY (30) DAYS FROM THE TIME THE GRIEVANCE WAS SUBMITTED, recommend to the President a disposition of the grievance, except as provided hereinafter:

- in the course of each investigation, the Dean of Student Services shall consult with the director responsible for the area of the college operations in which the grievance arose,

- in the case of a grievance alleging discrimination based on race, color, religious creed, sex, age, national origin, ancestry, present or past history of mental disorder, marital status, mental retardation or physical disability, prior conviction of a crime, political beliefs, veteran status, or sexual preference, the Dean of Student Services shall consult with the College's affirmative action person during the course of the investigation, and

- in the case of a grievance against a Dean, the grievance shall be filed with the President.

The President may accept or reject the recommendation, or direct such further investigation as he or she deems appropriate. The President shall notify the student of the final disposition of the grievance WITHIN FIFTEEN (15) DAYS OF RECEIVING THE RECOMMENDATION, EXCEPT FOR GOOD CAUSE OR AS PROVIDED BELOW.

Advisory Committee
The President may establish an advisory committee of students and staff which may be charged with the responsibility of making recommendations at either the level of the Dean or the President. The President may appoint and remove members of the committee. IF AN ADVISORY COMMITTEE IS APPOINTED, THE PRESIDENT SHALL ESTABLISH A REASONABLE TIME FRAME WITHIN WHICH THE COMMITTEE MUST MAKE RECOMMENDATIONS.

**VIOLENCE PREVENTION AND
RESPONSE POLICY AND PROCEDURES**
In accordance with Governor's Executive Order No. 16 signed on August 4, 1999, which instituted a "zero tolerance" policy for workplace violence and in an effort to provide a safe environment for employees, students, visitors and guests while on the premises of the Community Colleges, the Board of Trustees of Community-Technical Colleges has adopted and expanded the application of the Governor's policy. Executive Order No. 16 is fully incorporated herein.

For the purposes of this policy, "violence" is defined as an overt act or threat of harm to a person or property, or any act that poses a substantial threat to the safety of any person or property. "Premises" is defined as any space owned or leased by the Community Colleges or any of its constituent units, including vehicles and any location where college or system business or activities are conducted. Conduct that may violate this policy includes, but is not limited to, the following:
- Intimidating, harassing or threatening behaviors
- Physical abuse, including hitting, slapping, poking, kicking, punching, grabbing, etc.
- Verbal abuse, including yelling, shouting, use of sexually, racially or ethnically charged epithets, etc.
- Vandalism
- Carrying or possessing weapons or dangerous instruments of any kind on Community College premises, unless properly authorized in accordance with the Board of Trustees and college policy governing weapons on campus

- Using such weapons
- Any other act that a reasonable person would consider to constitute a threat of violence, including oral or written statements, gestures or expressions that communicate a direct or indirect threat of physical harm.

Reporting Threats or Violent Acts
A person who feels that he or she has been subjected to threats or acts of violence as defined herein, or a person who witnesses such threats or acts, must report the incident to a supervisor, manager or to the Human Resources office. Supervisors and managers who receive such reports shall seek advice from the Human Resources office regarding investigating the incident and initiating appropriate action. **Serious incidents or serious threats of imminent danger to the safety of persons or property should immediately be reported to the Public Safety Department.**

Any individual who has applied for or obtained a protective or restraining order which lists the premises of the Community Colleges as protected areas must provide to the Human Resources office and to the Public Safety Department a copy of the petition and declaration used to seek the order, a copy of any temporary protective or restraining order that is granted, and a copy of any protective or restraining order that is made permanent. The sensitivity of the information requested is understood and colleges are responsible for treating such information in a manner that recognizes and respects the privacy of the reporting person.

Enforcement of this Policy
All reported incidents of violence will be taken seriously and will be dealt with appropriately, including prompt evaluation, investigation and response. An individual who makes a substantial threat of violence or commits an act of violence as defined in this policy shall be removed from the premises. Any weapon or dangerous instrument will be confiscated and turned over to appropriate law enforcement/public safety authorities. There is no reasonable expectation of privacy with respect to such items on college premises.

Violations of this policy, including knowingly providing a false report, or failing to cooperate fully with an investigation, may lead to disciplinary action up to and including dismissal from employment or expulsion from the college. Violations may also result in criminal penalties.

WEAPONS ON CAMPUS POLICY
The use or possession of weapons, as defined in section 53-206 of the Connecticut General Statutes, is prohibited on college campuses or at college activities except as authorized by Board or College policies. Colleges are hereby authorized to develop policies which allow for specific exemptions to the extent permitted by law. Sec. 53-206 defines a weapon as BB gun, black jack, metal or brass knuckles, or any dirk knife, or any switch knife having an automatic spring release device by which a blade is released from the handle, having a blade of over one and one-half inches in length, or stiletto, or any knife the edged portion of which is four inches or over in length, or any police baton or night stick, martial arts weapon or electronic defense weapon, as defined in section 53a-3, or any other dangerous or deadly weapon or instrument." Sec. 53a-3(6) adds "any weapon, whether loaded or unloaded, from which a shot may be discharged, or a switchblade knife, gravity knife, billy, blackjack, bludgeon, or metal knuckles."

NVCC Policy Exemptions
(Clarified by College President, July 1998)
The NVCC Policy follows the Board of Trustees' Policy, 4.23 with these specific exemptions that allow the following individuals to use or possess weapons under the specific conditions described:

1. On-duty peace officers with jurisdiction* on campus, in uniform with proper carry device (holster).

2. On-duty police officers with jurisdiction* on campus, in civilian clothing, with proper concealment from view.

   *Jurisdiction is to be recognized as the officer being on official business and having the statutory right of carrying out that business on NVCC properties.

3. The use or possession of a weapon may be approved to illustrate in an educational class, lecture, demonstration, or as part of an approved ceremony or program. This third exemption must have the prior written approval of the Dean of Academic Affairs, the Dean of Administration and the Director of Public Safety. Forms to be used in seeking this approval are available in the Public Safety Department. The Public Safety Department will not take the responsibility of storing, caring for or handling personal weapons in any manner, except in cases of confiscation for a criminal offense or policy violation.

COMMUNICABLE DISEASES/AIDS POLICY

The Community-Technical College System reaffirms its commitment to provide a safe and healthy educational environment, safeguard the rights of individuals, and comply with state and federal anti-discrimination laws and regulations. Sound and compassionate legal, ethical, moral, and educational principles require that students and employees with AIDS, HIV infection, and other communicable diseases be accorded the same rights and assume the same responsibilities as all other members of the community-technical college community. It is recognized that the best method of allaying fears and promoting understanding is education: the dissemination of information based on fact and current scientific knowledge.

1. People with AIDS and other communicable diseases shall be accorded the same rights as all other students and employees. State and federal laws and regulations prohibit discrimination against and harassment of individuals solely because of disability. No individual shall be discriminated against in any college programs, services, or employment solely because of his or her status as AIDS- or HIV-infected or having any other communicable disease.

2. Each college shall provide information and educational programs and activities concerning AIDS and other communicable diseases for students and employees. Such information and programs shall rely on the most current knowledge about such diseases and shall focus on how such diseases are and are not transmitted, how they can be prevented, and the rights of persons with such diseases.

3. Each college president shall designate an individual responsible for coordination, delivery, and evaluation of the college's AIDS education program. A committee representative of the college community should be involved in formulating educational and information activities.

4. Restrictions shall not be placed on admission, programs, services, or employment offered to an individual on the basis of a diagnosis of AIDS, HIV infection, or other communicable disease, except in individual cases when it has been medically determined that there is risk of infection or danger to others or in programs from which individuals with specific communicable diseases are excluded by law or regulation.

5. Colleges shall not require testing of students or employees for AIDS, HIV infection, or other communicable diseases for participation in employment, programs, or services of the college, except as required by law or regulation. Where possible, colleges shall maintain a listing of local referral sources for such testing and shall publish such listing with other educational information.

6. All student or employee information related to inquiries, testing, and disclosure of AIDS, HIV, or other infection status shall be treated confidentially as all other health records. All reasonable steps shall be taken to protect the identity of an individual with AIDS.

7. Students and employees involved in the direct delivery of health care services and those who might otherwise come in contact with blood and other body fluids (such as in science laboratories or allied health practica) shall at all times follow the guidelines regarding precautions to be taken in the handling of such fluids disseminated by the Department of Health Services (January 1987, provided as Appendix A) or other approved guidelines.

8. Violations of any part of this policy shall be dealt with under the appropriate disciplinary procedures for students or employees.

9. This policy shall be published in all college catalogs and student handbooks and shall be made available to all employees.

All questions about this policy may be directed to the Coordinator of College Health Services and Students with Disabilities.

COMPUTER RESOURCES POLICY

The Connecticut Community College (CCC) System provides information technology resources (IT resources) to faculty, staff and students for academic and administrative use. IT resources may also be available to members of the college community through college libraries and websites. This policy applies to all users of IT resources.

IT resources include, but are not limited to, computers and peripheral hardware, software, networks, databases, electronic communications and Internet connectivity. CCC IT resources are the property of the Board of Trustees. Use of such resources is a privilege and is subject to such IT policies, standards and procedures as may be promulgated from time to time.

IT resources shall be used solely for legitimate and authorized academic and administrative purposes, and in furtherance of CCC mission and goals. They shall not be used for personal purposes, including monetary gain. Use of IT resources may be monitored by the appropriate CCC authority to ensure proper and efficient usage, as well as to identify problems or to check for security violations.

Any unauthorized or illegitimate use of IT resources may subject the user to disciplinary action, up to and including dismissal or expulsion, as well as loss of computing privileges. Users must comply with all applicable state and federal laws and may be subject to criminal prosecution for violation thereof under state and federal laws.

The Chancellor is authorized to promulgate necessary and appropriate IT policies, standards and procedures, including but not limited to those affecting acceptable uses of IT resources, electronic communications and network security. Colleges shall ensure that users of IT resources are aware of all IT policies, standards and procedures, as appropriate.

Acceptable Use Policy

This Policy governs the acceptable use of Connecticut Community Colleges (CCC) Information Technology (IT) resources. These resources are a valuable asset to be used and managed responsibly to ensure their integrity, security, and availability for appropriate academic and administrative use.

Users of CCC IT resources are responsible for using those resources in accordance with CCC policies and the law. Use of CCC IT resources is a privilege that depends upon appropriate use of those resources. Individuals who violate CCC policy or the law regarding the use of IT resources are subject to loss of access to those resources as well as to CCC disciplinary and/or legal action. In making acceptable use of CCC IT resources you must:

- Use resources solely for legitimate and authorized administrative and academic purposes.
- Protect your User ID and IT resources from unauthorized use. You are responsible for all activities on your User ID or that originate from IT resources under your control.
- Access only information that is your own, that is publicly available, or to which you have been given authorized access.
- Use only legal versions of copyrighted software in compliance with vendor license requirements.
- Use shared resources appropriately. (e.g. refrain from monopolizing systems, overloading networks with excessive data, degrading services, or wasting computer time, connect time, disk space, printer paper, manuals, or other resources).

In making acceptable use of CCC IT resources you must NOT:

- Use CCC IT resources to violate any CCC policy or state or federal law.
- Use another person's IT resource, User ID, password, files, or data.
- Have unauthorized access or breach any security measure including decoding passwords or accessing control information, or attempt to do any of the above.
- Engage in any activity that might be harmful to IT resources or to any information stored thereon, such as creating or propagating viruses, disrupting services, damaging files or making unauthorized modifications to computer data.
- Make or use illegal copies of copyrighted materials or software, store such copies on CCC IT resources, or transmit them over CCC networks.
- Harass or intimidate others or interfere with the ability of others to conduct CCC business.
- Directly or indirectly cause strain on IT resources such as downloading large files, unless prior authorization from the appropriate CCC authority is given.
- Use CCC IT resources for personal purposes including but not limited to, monetary gain, commercial or political purposes.
- Engage in any other activity that does not comply with the general principles presented above.

No Expectation of Privacy

There is no expectation of privacy in the use of CCC IT resources. CCC reserves the right to inspect, monitor, and disclose all IT resources including files, data, programs and electronic communications records without the consent of the holder of such records.

For the complete version of the Computer Resources policy for the CT Community Colleges, go to this weblink: **http://www. commnet.edu/it/policy**

POLICY ON RACISM AND ACTS OF INTOLERANCE

The Community Colleges have long been committed to providing educational opportunities to all who seek and can benefit from them, as evidenced in the mission statements and policies concerning student rights, affirmative action, and equal opportunity. The board and the colleges recognize that an important part of providing opportunity is creating a welcoming environment in which all people are able to work and study together, regardless of their differentness. At the same time, colleges and universities have traditionally been at the cutting edge of protection of our most cherished freedoms, most notable freedom of speech and non-violent action, which protect even unpopular or divisive ideas and perspectives.

Such constitutionally-protected expression can contribute to an unwelcoming and even offensive social and educational environment for some individuals in the college community, particularly when it concerns race, religion, sex, sexual orientation, disability, national origin, or ethnicity, and the first amendment does not preclude colleges from taking affirmative steps to sensitize the college community to the effects of creating such a negative environment.

Therefore, the Community Colleges recognize that they have an obligation not only to punish proscribed actions, but also to provide programs which promote pluralism and diversity and encourage the college community to respect and appreciate the value and dignity of every person and his or her right to an atmosphere not only free of harassment, hostility, and violence but supportive of individual academic, personal, social, and professional growth.

Acts of racism or harassment directed against individuals or specific groups of individuals will not be tolerated and will be dealt with under the employee affirmative action grievance procedures and the student grievance and disciplinary procedures.

Each college will provide a comprehensive educational program designed to foster understanding of differentness and the value of cultural diversity. This will include plans to (1) promote pluralism, (2) educate the college community about appropriate and inappropriate behaviors to increase sensitivity and encourage acceptance, and (3) widely disseminate this policy statement to the entire college community.

SEXUAL HARASSMENT POLICY

It is the policy of Naugatuck Valley Community College to prohibit "sexual harassment." Sexual harassment is a form of sex discrimination which is illegal under state and federal law and is also prohibited by the Board of Trustees' Nondiscrimination Policy.

Any unwelcome sexual advances or requests for sexual favors or any conduct of a sexual nature when (1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education, (2) submission to or rejection of such conduct by an individual is used as a basis for employment or academic decisions affecting the individual, or (3) such conduct has the purpose or effect of substantially interfering with an individual's work performance or creating an intimidating, hostile or offensive employment environment.

Also prohibited is any romantic/sexual liaison between a professional or classified staff member and a student for whom that staff member has a teaching, advisory or other supervisory responsibility.

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Sexual harassment may be verbal, visual or physical. It may be overt or implicit and may, but need not, have tangible adverse effects on the victim's employment or learning experience. The perpetrator of sexual harassment, like the victim of such conduct, may be a man or a woman. It may involve individuals of the same or opposite sex. This college will not tolerate sexual harassment in any form. All employees shall be responsible and accountable for maintaining an environment free from sexual harassment. Any employee or agent found to have engaged in sexual harassment as defined above will be subject to serious disciplinary action up to and including dismissal.

Employees who feel that they have been sexually harassed have the right to file a complaint. Employees may report incidents of sexual harassment to the Dean of the area of the College in which the individual is involved, the College's Affirmative Action Officer, or to the President of the College. Ronald Clymer is the college's Affirmative Action Officer. His office is located in Kinney Hall, Room K705A, and he may be reached at 203-575-8110. Dr. Daisy Cocco De Filippis is the President of the College, her office is located in Kinney Hall, Room K703B, and her telephone number is 203-575-8044.

SEXUAL HARASSMENT:
(Excerpted from the Board of Trustees policy, via Employee Relations Memorandum 98-2. rev. 12/5/97.)

What is Sexual Harassment?
Sexual harassment is a form of sex discrimination which is illegal under state and federal law and is also prohibited by the Board of Trustees' Nondiscrimination Policy. The Board's policy recognizes that sexual harassment undermines the integrity of employer-employee and student-faculty-staff relationships and interferes with the right of all members of the College community to work and learn in an environment free from harassment. Such conduct will not be tolerated.

Sexual harassment may be described as:

Any unwelcome sexual advance or request for sexual favors, or any conduct of a sexual nature when (1) submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education, (2) submission to or rejection of such conduct by an individual is used as a basis for employment or academic decisions affecting the individual, or (3) such conduct has the purpose or effect of substantially interfering with an individual's academic or work performance or creating an intimidating, hostile or offensive employment or educational environment.

Sexual harassment may be verbal, visual or physical. It may be overt or implicit and may, but need not, have tangible adverse effects on the victim's employment or learning experience.

Examples of conduct which may constitute sexual harassment include but are not limited to:
- sexual flirtation, touching, advances or propositions
- verbal abuse of a sexual nature
- pressure to engage in sexual activity
- graphic or suggestive comments about an individual's dress or appearance
- use of sexually degrading words to describe an individual
- display of sexually suggestive objects, pictures, or photographs

- sexual jokes
- stereotypic comments based upon gender
- threats, demands or suggestions that retention of one's employment or educational status is contingent upon toleration of or acquiescence to sexual advances

The perpetrator of sexual harassment, like the victim of such conduct, may be a man or a woman. Sexual harassment may involve individuals of the same or opposite sex and, in the College environment, may involve an employee and a student, an employee and another employee or a student and another student. Harassment in any of these relationships is a violation of the Board's policy.

Because of the power relationship between faculty and student, and between supervisor and subordinate employee, freedom of choice may be compromised in such relationships. Accordingly, this policy holds that where a faculty member or professional staff member has responsibility for a student through teaching, advising, supervision or other obligation, romantic or sexual liaisons between such persons shall be deemed a violation of this policy.

It should be noted, additionally, that retaliation against a person for complaining or being associated in any way with the resolution of a complaint of sexual harassment also violates Board policy.

What To Do If You Are The Victim of Sexual Harassment
When an employee or student feels that he or she has been the victim of sexual harassment, he or she should report such incident(s) to a College official.

- Employees may report incidents of sexual harassment to the Dean of the area of the College in which the individual is involved, the College Affirmative Action Officer, or another College official who has been designated by the President as a recipient of such complaints.

- Students may report incidents of sexual harassment to the Dean of Students or to such other College official as the President may have designated. Nothing shall prevent students from speaking to a college counselor about their concerns. However, such communication is not a substitute for filing a complaint of sexual harassment with an appropriate College designee.

- A claim that an employee of a third party contractor has engaged in sexual harassment on College premises or in connection with the performance of the third party contract should be reported immediately either to the President or to another appropriate College official as set forth in this document. The President will ensure that appropriate follow-up action is taken.

Depending on the nature of the complaint and the desires of the complainant, the College official to whom the complaint has been made may attempt to resolve the complaint informally. Any informal resolution of a complaint must be approved by the College President. No person shall be forced to pursue informal avenues of resolution before filing a formal complaint of sexual harassment.

If informal resolution is not possible or appropriate, a written complaint should be filed in accordance with the existing Affirmative Action Grievance Procedure for Employees (see Board Policy 2.1.3) or Student Grievance Procedure for students (see Board Policy 5.2.2).

- For employees, a written complaint should be filed within fifteen (15) calendar days of the alleged harassment. This time frame may be extended by up to fifteen (15) additional calendar days if efforts at informal resolution have been made.

- For students, a written complaint should be filed within thirty (30) days of the date the grievant knew or should have known of the alleged harassment. However, a delay in filing a formal complaint will not be a reason for refusing to investigate such complaints. Although the ability to investigate may be compromised by delay, a written complaint will be treated in the manner prescribed by this policy if filed within 180 days of the date the student knew or should have known of the alleged harassment.

When a formal complaint of sexual harassment is received, the College will investigate it. The rights of all persons involved in the investigation shall be respected and every effort will be made to protect the confidentiality of both the alleged victim and the alleged harasser. Toward this end, only persons with a need to know shall be made privy to the complaint. However, complete anonymity cannot be assured, given the College's obligation under law to investigate and take appropriate action in all cases of sexual harassment.

All complaints of sexual harassment shall be taken seriously. It is expected that complaints will be made in good faith, however. Frivolous or vexatious complaints can cause irremediable damage to the reputation of an accused person, even though he or she is subsequently vindicated. Therefore, any person who files a false complaint of sexual harassment shall himself or herself be subject to disciplinary action, up to and including termination, if an employee, or expulsion, if a student.

In addition to invoking the available grievance procedure, an employee who believes he or she has been sexually harassed may file a complaint with the Connecticut Commission on Human Rights and Opportunities, 21 Grand Street, Hartford, CT 06106 and/or with the Equal Employment Opportunity Commission, One Congress Street, Boston, Massachusetts 02114, within 180 days of the date when the harassment occurred. A student who believes he or she has been sexually harassed may, in addition to the available grievance procedure, file a complaint with the Federal Office for Civil Rights, U.S. Department of Education (Region1), John W. McCormack Post Office and Courthouse, Room 222, Post Office Square, Boston, Massachusetts 02109.

Publication of Sexual Harassment Policy
This document shall be distributed to all members of the College community. Notice of the Board's policy against sexual harassment also shall be given to any independent contractor with whom a College has a business relationship, as a mandatory part of that contract.

Training
Training in the implementation of the Board's policy against sexual harassment and in sexual harassment prevention shall be provided for all supervisory employees, in accordance with the provisions of State law. Attendance at such training sessions shall be mandatory. In addition, awareness and sensitivity training for all employees is required and for students is strongly encouraged.

Informal concerns may be brought to the attention of the Dean of Students. Formal complaints of sexual harassment will be addressed according to our established Affirmative Action Student Grievance procedure contained in the Student Handbook, on the College website, in the Learning Resource Center and widely available from college Deans and Division Directors.

A student who believes he or she has been sexually harassed may, in addition to the available student grievance procedure, file a complaint with the Office for Civil Rights, U.S. Department of Education (Region1), John W. McCormack Post Office and Courthouse, Room 222, Post Office Square, Boston, Massachusetts 02109.

All complaints of sexual harassment shall be taken seriously.

ACADEMIC APPEALS POLICY
Good communication between faculty and students will make disputes between them infrequent, but if disagreements occur, it is the College's policy to provide a mechanism whereby a student may formally appeal faculty decisions. When a student uses the appeals procedure, all parties should endeavor to resolve the dispute amicably at the earliest possible stage.

Any student has the right to appeal a decision of a faculty, adjunct faculty, staff, program director, clinical coordinator, or employee of the college. Definition of an academic appeal is an allegation by a student that as to him or her, an employee of the college has violated federal or state laws and regulations, college or department policies, accreditation standards, or the faculty member's own stated policy relating to student's assignment of grades or other academic evaluation.

Types of Appeals
There are two types of Academic Appeals at Naugatuck Valley Community College:

(A) General Academic Appeals are for appeals by students in any program or discipline.
(B) Allied Health/Nursing Clinical Academic Appeals are for those appeals which deal specifically with clinical evaluation judgments.

Copies of the policy and forms may be obtained through the Divisional Offices, Dean of Academic Affairs, or by contacting the Academic Appeals Committee Chairperson.

FACILITIES SCHEDULING AND EVENTS PLANNING
Arrangements for use of campus facilities are made through the Office of Facilities Scheduling and Events Planning. The staff provides assistance and event planning for meetings, workshops, conferences, technical support and information regarding policies, procedures, fees, descriptions of facilities, and logistics management.

FINANCIAL DISCLOSURE POLICY
Individuals can request a copy of the college's most recent audited financial statement or a fair summary thereof by submitting a request in writing to the dean of administration.

SMOKING POLICY

Section 19a-342 of the General Statutes of Connecticut prohibits smoking in any building or portion of a building owned or leased and operated by the state or any political subdivision thereof. Smoking is also prohibited in any vehicle owned or leased by the state. Any person found guilty of smoking in violation of this statute shall have committed an infraction. Violations can result in an infraction being issued by a NVCC Public Safety Department police officer and a minimum fine of $75.00.

Smoking outside campus buildings is restricted to "Designated Smoking Areas" and parking lots marked by signs to alert students, faculty, staff and campus visitors to the policy. Those areas so designated include only the following:

Gazebo Shelters on the Main Campus
• Near the south entrance to Kinney Hall
• Outside Ekstrom Hall parking garage along parking lot D
• Outside the west entrance to Founders Hall

Outside at the Main Campus
• Parking lot C
• Parking lot D
• Parking lot E
• Parking lot F
• Level 3 of the Plaza–south side of Fine Arts Center Building only as designated by signs and striping
• Outside the west entrance to the Fine Arts Center on the Plaza under the overhang
• Under the overhang of the area leading to the boiler room of the Core building on the ground level.

138 Main Street, Danbury, Danbury Center
• Rear Parking lot

Violations (except in buildings) are not considered punitive according to present law and, therefore, are not subject to an infraction being issued by a NVCC Public Safety Department police officer. However, violations will be dealt with as workplace or student discipline matters. Compliance will be monitored by Public Safety, employee supervisors and student services staff. Faculty, staff and students are encouraged to direct smokers to the designated smoking areas and to report persistent violators to the appropriate authority.

USE OF CELLULAR PHONES POLICY

Students are hereby notified that cellular phones and beepers are allowed in class only if they are turned off or turned to a silent mode. Under no circumstances are telephones to be answered in class. Students who ignore this Policy may be asked to leave class. When there are extenuating circumstances that require that a student be available by phone or beeper, the student should speak to the instructor prior to class, so that together they can arrive at an agreement concerning the device.

UNIT OF CREDIT
The unit of credit used by the College is the semester hour. One semester hour of credit is allowed for each hour (50-minute period) of lecture. Laboratory and clinical credit varies according to program of study.

ACADEMIC HONESTY AND PLAGIARISM
At NVCC we expect the highest standards of academic honesty. Academic dishonesty is prohibited in accordance with the Board of Trustees' (BOT) Proscribed Conduct Policy in Section 5.2.1 of the BOT Policy Manual. This policy prohibits cheating on examinations, unauthorized collaboration on assignments, unauthorized access to examinations or course materials, plagiarism, and other proscribed activities. Plagiarism is defined as the use of another's idea(s) or phrase(s) and representing that/those idea(s) as your own, either intentionally or unintentionally.

ACADEMIC LOAD
PART-TIME Students registered for eleven (11) or fewer credit hours in a semester are considered to be part-time students. Students have the responsibility to take the correct courses to meet graduation requirements in their academic programs, but students should seek the advice of their faculty advisor, counselor, or program coordinator. Students desiring to deviate from the recommended courspe sequences must review such plans with their faculty advisor, counselor, or program coordinator. Financial aid students must contact this office to discuss deviations from their program of study.

FULL-TIME Students registered for twelve (12) or more credit hours in a semester are considered to be full-time students. Students have the responsibility to take the correct courses to meet graduation requirements in their academic programs, but students should seek the advice of their faculty advisor, counselor, or program coordinator. Students desiring to deviate from the recommended course sequences must review such plans with their faculty advisor, counselor, or program coordinator.

The average full-time student carries *five* courses (15-16 credits), depending upon program of study and/or academic preparation. Students who wish to carry more than *sixteen* credits, which is the maximum load allowed, must apply to the Registrar for special permission prior to registration. The initial program of study for all students is developed at the time of entry to the College under the direction of the Director of the Center for Academic Planning and Student Success (CAPSS).

COURSE CHANGES
During the first five class days of each semester, students may ADD and DROP courses. Students who wish to make course or schedule changes may do so without penalty on a space-available basis through the Records Office. The Records Office publishes a course change schedule each semester.

If space is not available, students who want to add/drop courses or change their schedule must obtain permission from the Division Director.

No student will be allowed to enter a course after the first week of classes without permission of the Division Director.

CLASS ATTENDANCE
Classroom attendance is an integral part of the college experience. The faculty of the College believes that regular class attendance is necessary for a student to derive the maximum benefit from the learning experience and the overall value of the classroom instruction.

For absences due to extenuating circumstances, it is the responsibility of the student to contact the instructor. Specific attendance and grading policies will be included in the syllabus for each class.

There are some degree and certificate programs which have special attendance policies which must be satisfied due to licensing requirements. Students should refer to the program handbooks for these specific requirements.

MAKE-UP WORK
Academic work missed during class absences should be discussed with the individual instructor immediately upon the student's return to class. It is the student's responsibility to seek out the instructor in this case during office hours or at a mutually convenient time. Specific make-up policies are at the discretion of the instructor.

GRADING SYSTEM
Credit Courses
For the purpose of computing numerical credit point averages, grades are evaluated as follows for each semester hour of credit:

Numeric Grade	Acceptable Letter Grade Range to be used by the Instructor	Description
90-100	A- to A	Excellent
80-89	B-, B, B+	About Average
70-79	C-, C, C+	Average
60-69	D-, D, D+	Below Average
Below 60	F	Failing

The symbols of "AU", "I", "M", "P", "TR", "W", are not included in the GPA.

Developmental grades do not count in the GPA. These grades will appear on the record with the # to designate their status. Note: since they do not count in the GPA, they will not contribute to academic warning, probation, or suspension.

Combined Academic Standing
The earned grades (GPA) will generate a status of Good Standing, Written Warning, GPA Probation, or Suspension. The record of credits completed is called Progress Evaluation, and will generate status of Good Standing of Progress Probation. The Combined Academic Standing (CAST) will include both of these evaluations.

Administrative Transcript Notations
The College uses a number of administrative transcript notations, apart from the grading system, to describe various situations. They are as follows:

- **Incomplete (I) - No Quality Points**
  At the discretion of the *instructor,* the notation "I" may be assigned if a student, for extenuating circumstances, has not completed all course requirements. The faculty member who assigns an "I" (incomplete) shall file a system report form. This notation will not be allowed for excessive absences. Usually, an "I" would be changed to a letter grade by the end of the next semester; however, the instructor has the option of establishing the completion date. If a grade change is not submitted to the Records Office by the instructor by the end of the semester following that in which the "I" was assigned, the "I" will be converted to a "F".

- **Withdrawal (W) - Student Initiated**
  No Quality Points
  The College recognizes the potential for a student to withdraw from a course or to withdraw from college. Students have the right to formally leave a course or the College, and they also have the right to receive counseling and assistance in order to maintain enrollment in courses. Students are advised that course withdrawal may alter progress toward program completion. Students are strongly encouraged to discuss their decision with the instructor and their counselor or advisor when contemplating a decision to withdraw.

• Withdrawal from Course(s)
It is strongly recommended that students considering withdrawal from a course seek the advice of the instructor and a counselor or advisor. Students will be permitted to withdraw with a "W" notation no later than two weeks preceding the last Monday-Friday regularly scheduled class day. The last date for withdrawal will be listed in the Credit Course Schedule.

Withdrawals (with signature) can be made:
• in person at the Records Office K516
• by mail: NVCC Records Office K516
     750 Chase Parkway
     Waterbury, CT 06708
• Fax: (203) 575-8085
• On-line: http://mycommnet.edu

Requests must be received by the deadline within the withdrawal period (i.e. requests received by midnight prior to the deadline will be honored).

Note: A withdrawal from a course(s) may jeopardize your financial aid status, car insurance coverage, health insurance coverage and other benefits.

• Maintaining Progress (M)
An administrative transcript notation used only for developmental courses to indicate that the student is maintaining progress but not at the usual rate. It may be given to a student for a course only twice.

• Audit (AU) - No Quality Points
See "Auditing Courses" .

• Pass (P)
An administrative transcript notation for successful completion of courses taken on a pass/fail basis. Students failing will receive a grade of "F".

• Transfer (TR)
An administrative transcript notation in lieu of grades for courses accepted for credit from other colleges and universities.

Non-credit Courses
Non-credit classes, seminars, workshops and programs all meet The Non-Credit Program Development Quality Standards. Certification coursework and programs meet or exceed industry or professional standards. Continuing Education Units (CEU's) are awarded based on recognized international, national, or state standards. Letter or number grades are assigned by college instructors and trainers based on demonstrated knowledge attainment and/or skill achievement.

AUDITING COURSES
Students who do not wish to earn course credit may be permitted to audit by notifying the Records Office of their intent at the time of registration or by the end of the add/drop period. Students must pay the regular tuition and college fees for each course audited.

The privileges of an auditor in a course are specifically limited to attending and listening. The auditor assumes no obligations to do any of the work of the course and is not expected to take any of the time of the instructor. The auditor does not submit any work and is not eligible to take any tests or examinations, nor to receive grades on all or any part of the course. Audited course(s) will be shown on the student's transcript with the symbol "AU" in the grade column and will not carry any credit hours or quality points. An audited course does not earn any credit toward graduation.

INDEPENDENT STUDY
Faculty members in some subject areas permit qualified students to apply for Independent Study for credit and a grade when it has been proven that the student has the necessary background and qualifications to pursue this type of instruction.

The established syllabus in each independent course requires the student propose in writing the specific objectives and procedures of the independent study project. No more than one independent study may be taken in an academic year.

Before registration, a Request for Independent Study form (available from an academic division as well as the Records Office, Kinney Hall, Room K516) must be filled in with appropriate documentation and approved by the academic dean, division director and the faculty member with whom the student will work. The proposal and the agreement become part of the student's permanent record.

BOT POLICY ON REPEATING COURSES
Naugatuck Valley Community College has policies regarding repeating courses multiple times. The Board of Trustees for the Community-Technical Colleges policy states:

"No course may be repeated more than twice. The highest grade received will be used in calculating the student's academic average. This does not apply to those courses that are designed to be repeated for additional credit.* College standards will be included in appropriate college publications and communications. These standards shall not be applied retroactively to the academic record of any student. A request for waiver of these standards shall be based on special circumstances and be approved by the college president, and be reported to the chancellor."

*Courses such as music lessons, chorus, physical education, and wine and viticulture.

1. After the freeze date the Registrar provides the Dean of Academic Affairs with a list of students who are taking a course for the 3rd, the 4th or more times.

2. Students who are taking a course for the 3rd time are sent a warning letter from the Dean of Academic Affairs.

3. Students who are taking a course for the 4th time are sent a letter from the Dean of Academic Affairs and asked to make an appointment with the Dean's office. The Dean's office will contact a department chair, coordinator, or division director to assist the student with tutoring, etc. so that the student will not repeat the course for an additional time.

SATISFACTORY ACADEMIC PROGRESS
Satisfactory completion of fifty percent of the credits attempted (this phrase means actual continued enrollment beyond the add/drop period) will be the minimum standard of good standing. Students receiving Federal Title IV financial aid must successfully complete two-thirds (66.66% earned credits/attempted credits) of the attempted credits.

Students who have completed 11 or fewer credits whose Cumulative Grade Point Average (CGPA) falls below 1.5 will be given a written warning. Students who have completed between 12 and 30 credits inclusive whose CGPA falls below 1.7, and those who have completed 31 or more credits whose CGPA falls below 2.0, will be given a written notice that they are placed on academic probation.

ACADEMIC PROBATION
Students placed on academic probation are required to seek counseling and will have a restricted credit load. They will be required to see an advisor prior to registering for the next semester.

Students who, after being placed on academic probation for one semester and after having a restricted credit load, fail to attain the required CGPA as shown above will be notified in writing that they are suspended for one semester.

After a period of suspension, students may be reinstated, either as regular or probationary students, upon application to the college.

A student may request a review of academic status by the Dean of Academic Affairs. Students are required to seek counseling, reduced course load, and or special tutoring, before returning to the college.

ACADEMIC STANDARDS

Veterans who drop below the required 2.0 GPA will be placed on academic probation for one semester. If, at the end of the semester, the veteran has not raised his/her GPA to the required 2.0, veteran benefits will be terminated and the Veterans Administration will be notified. Once the veteran has returned to good academic standing, his/her benefits will be reinstated.

ACADEMIC ADVISING
In addition to the Center for Academic Planning and Student Success, the College has a faculty advising system. Most students who have formally enrolled in a degree program and have taken the placement test are required to have academic advising. First semester and readmitted degree and full time non-degree students must meet with an assigned counselor or faculty advisor prior to registering for the following semester.

ACADEMIC HONORS
Honor societies representing several curriculum disciplines exist to recognize specific academic achievement. Student chapters of several professional societies are also available. The honors policy at Naugatuck Valley Community College is as follows:

> **Semester Honors:**
>
> **Dean's List - A 3.4 grade point average for the semester** (Part-time students enrolled in three credits or more are eligible for semester honors)
>
> Please note: An official Withdrawal or Incomplete notation for any class during the semester will make the student ineligible for semester honors. However, once a grade is assigned upon completion of the coursework in accord with specific guidelines, and a new grade point average calculated, any honors for which the student is eligible may be entered on the student's academic record retroactively.
>
> **Phi Theta Kappa -** Students with a semester grade point average of 3.50 or higher.
>
> **Alpha Beta Gamma -** Business Major students with a cumulative grade point average of 3.0 or higher and completion of at least 15 College credits.

Alpha Beta Gamma
Alpha Beta Gamma is an international business honor society established in 1970 to recognize and encourage scholarship among college students in business curricula at community, junior and technical colleges. The Society has over 35,000 members from 140 member colleges. To achieve this goal, Alpha Beta Gamma provides an opportunity for the development of leadership and service, an intellectual climate for the exchange of ideas and ideals, lively fellowship for business scholars, and the stimulation of interest in continuing academic excellence. The lives of members, chapter advisors and support administrators have been enriched by the Alpha Beta Gamma experience. Alpha Beta Gamma exists to honor the superior student in business programs.

Lambda Epsilon Chi (LEX)
LEX is a national Legal Assistant/Paralegal Honor Society. Students who have superior academic performance and complete two-thirds of the program requirements are eligible to be inducted.

Phi Theta Kappa
Phi Theta Kappa is a nationwide honor society for community college students. The criteria for invitation are a 3.50 or above grade point average with at least 24 completed credits, including all majors. The achievements and future plans of its members are focused to promote continued honors behavior and to maximize their educational attainment. These goals are accomplished by numerous articulation and transfer scholarships with many colleges and universities. A Faculty Honors Advisor offers guidance and assistance to the Phi Theta Kappa members who represent approximately the top three percent of the student body. Membership is a lifetime honor.

The President's Circle at NVCC
Membership into the President's Circle represents the highest honor a student may receive while matriculating at the college. These students represent a select group of outstanding achievers who serve as the college's student ambassadors. Circle ambassadors have the opportunity to attend major college, community and government events with the President and/or her cabinet, and lend voice to their experiences as NVCC students. They are given platforms to directly engage with community leaders, officials, alumni, and friends. Overall, membership represents an opportunity for these students to make connections, build networks, and further their roles as active citizens and leaders. Following two semesters of service, each Circle ambassador receives a scholarship to help defray the cost of textbooks (whether at NVCC or their 4-year transfer institution), as well as a letter of recommendation from the President of NVCC. Ambassadors are required to attend events, class schedules permitting, throughout their term of ambassadorship. They are expected to conduct themselves ethically, morally, and academically in a manner befitting a representative of the college.

Eligibility: Students should have completed at least 12 credits at NVCC at the time of application with a minimum 3.40 cumulative GPA and will have completed at least 2 semesters before their term as Ambassadors begins. Students must be enrolled in a credit program. Selection is based upon academic achievement and potential; work, leadership, and service experiences both on and off the campus; enthusiasm for NVCC; ability to articulate future plans and goals; and overall communication skills. The application includes 4 components:

- Personal Statement
- Transcript (3.40 cumulative GPA)
- Resume and a list of on-campus leadership and work experience, extracurricular activities, and volunteer work
- Letter of recommendation from an NVCC faculty member

For information, contact the Academic Center for Excellence: Ekstrom Hall Room E500, **ace@nvcc.commnet.edu**, (203) 596-8717.

GRADUATION HONORS
Board of Trustees' Medallion - Students with a final cumulative grade point average of 4.0 at time of graduation. Students must complete 50% of their degree requirements at NVCC.

Honors recognition at graduation time is based on the following cumulative grade point averages:

3.90 to 4.00	summa cum laude
3.70 to 3.89	magna cum laude
3.40 to 3.69	cum laude

Students who, in order to fulfill their degree program requirements, need to complete no more than two courses in the Summer Session after final examinations in May, will be considered for honors recognition at commencement. If the cumulative grade point average changes when the grades for summer courses are recorded and honors status is affected, the official college transcript will reflect that change.

Grades received for developmental courses may be used to determine eligibility for semester honors. However, they cannot be used to determine eligibility for graduation honors.

GRADUATION REQUIREMENTS
Degree/Certificate Eligible Students
The College awards the degrees of Associate in Arts and Associate in Science. To be eligible for an associate's degree, the student must have fulfilled all of the following:
- been accepted into a degree program at the College.
- satisfactorily completed the courses required in the curriculum for the degree. In addition to the degree requirements, students are strongly urged to take advantage of courses available which will broaden their personal and professional lives.

- completed a minimum of 25 percent of all academic requirements for the degree at Naugatuck Valley Community College.

- earned a minimum cumulative grade point average of 2.0.

- been recommended for graduation by a vote of the Professional Staff of the College or an affirmative recommendation from the Division Director, Department Chairperson or the Program Coordinator.

- complete the graduation application which may be obtained from the Records Office or online at **http://my.commnet. edu** and submit by **December 1** for January conferral or **March 1** for May or **July 1** for August conferral. *There is no application fee.*

- paid to the College all bills incurred, and must have returned or paid for all materials loaned by the College, including library books, audiovisual and athletic equipment.

DEVELOPMENTAL COURSES
Credit Courses Which Do Not Apply to Electives or the Degree
The following credit courses do not satisfy the elective or degree requirements in any program except where specifically listed.

> CWE-H100 - Portfolio Preparation
> ENG*H043, 053, 063
> ESL*H012, 013, 015, 017, 022, 023, 025, 027, 132, 135,
>   137, 139, 142, 145, 152, 155, 157, 162**
> MAT*H073, 075, 095
> HLT*H093

**Note: ESL students may use up to six credits of Intermediate and Advanced levels of ESL courses to fulfill the Modern Language requirements.

Earning a Second Degree

- A student who already holds an academic degree may earn a second degree in a different curriculum at a community college. Such a student shall be treated similarly to a transfer student with respect to the minimum number of credits he or she must take for the second degree. This will require that a student meet all program requirements and earn at least 25 percent of the minimum requirements for the new curriculum at the college through which the second degree is to be conferred.

- A student may earn two degrees simultaneously at a community college by fulfilling all requirements stated above.

- Requests for additional degrees beyond the second require prior approval from the academic dean. Students who receive approval must then complete all program requirements, including earning at least 25 percent of the minimum requirements for the new curriculum at the college through which the degree is to be conferred.

- Completion of the requirements of an additional program option does not constitute a different degree.

Certificate Requirements
Students who complete the requirements for a credit certificate are expected to follow the same procedures described for degree students. Individuals completing non-credit certification programs (e.g., Certified Nurse Aide, Emergency Medical Technician) should check with the Continuing Education Department to verify their completion of, and compliance with, all state-mandated regulations.

PARTICIPATION IN COMMENCEMENT EXERCISES
Students who, in order to fulfill their degree program requirements, need to complete no more than two courses in the Summer Session following the spring semester may participate in Commencement Exercises; however, such students will not be considered as having graduated until all graduation requirements are completed. Students must have met all criteria stated in the section on *GRADUATION*

REQUIREMENTS.
The December grade point average will be considered for honors recognition for the May commencement. If the grade point average changes when the grades for spring courses are recorded and honor status is affected, the official college record will reflect the changes.

POLICY CHANGES
Naugatuck Valley Community College reserves the right to change requirements, courses, prerequisites, regulations, tuition, fees and other policies without prior notice. Waivers of these policies, due to extenuating circumstances, may be made by the President of the College upon written request.

LIBRARY SERVICES
The Max R. Traurig Learning Resources Center Library
The Learning Resources Center serves Naugatuck Valley Community College. The Center, formed in 1989, merged the resources and services of the Roy T. D'Arcy Arts and Sciences Library and the Helen Hahlo Technical Library and made them available to the community. For more information, visit our website at: **www. nvcc.commnet.edu/Library**.

The library is centrally located in the main campus building L Building. The main entrance, on level five, houses circulation, reference services, Library Reserves and computer workstations. Level four is home to quiet study spaces, current periodicals, an electronic classroom and staff offices.

The library boasts over 40,000 items and subscribes to approximately 350 periodicals. The library holds a collection of CDs, DVDs, and videos. Flash drives, laptops, and head phones may also be checked out for circulation.

Library materials may be borrowed as follows: Books circulate for a period of three weeks and may be renewed for a period of three weeks; CDs, DVDs and videos may be borrowed for one week; periodicals may be used in the library.

Reserve materials typically circulate for two hours.

• *Electronic Classroom*   The Learning Resources Center's Electronic Classroom is on the fourth level and offers 32 computer workstations that have access to the campus network as well as selected applications. They may be used for researching and writing assignments when they are not being used for Library Instruction classes.

• *Photocopy Facilities*   Copy machines are available on the fourth and fifth levels of the library.

• *Interlibrary Loans*   The Library assists patrons who need to request materials from other libraries if the required materials cannot be found at the College.

• *Borrower's Card*   All Connecticut residents are welcome to use the Max R. Traurig Library at Naugatuck Valley Community College. The registration process is free, easy, and quick .Library services are provided at no cost to the following:

> NVCC Students
> NVCC Faculty and Staff
> Community Members
> Students at Other Colleges
> Faculty and Staff form Other Colleges.

Interested individuals are invited to register at the main Circulation Desk on the 4th floor (L410). There is no charge to borrow library items (books, CDs, DVDs, Videos, Flash Drives), to use computers at the library (including wireless and laptops), or to use library magazines and journals.

The registration form can be filled out in person or online First-time users will be asked to show identification. Those who register online will be asked for a signature and identification the first time they borrow library materials.

• *Collaboration Studio*   Located on the fifth floor of the library in L524, the Collaboration Studio has three workspaces with room

for up to six students and their laptops at each one. Students may check out a laptop at the circulation desk for use in the Collaboration Studio or for use anywhere in the library.

Community Libraries
Community Libraries include:

University of Connecticut Waterbury Campus Library
99 East Main Street, Waterbury
Hours: Call (203) 236-9900

Nature of Collection: A basic college library collection of approximately 40,000 volumes.

Rules and Regulations:
- Student must provide proper identification (ID card)
- Students and faculty members are requested to make use of the library after 2:30 PM
- Members of the faculty and students are requested to make use of the on-street parking

Danbury Library
107 Main Street, Danbury, CT
Hours: Call (203) 797-4505 for schedule

Haas (WCSU) Midtown Library
181 White Street, Danbury, CT
Hours: Call (203) 837-9100 for schedule

Silas Bronson Library
Central Library, 267 Grand Street, Waterbury
Hours: Call (203) 574-8225 for schedule

Nature of Collection: A general public library collection of approximately 240,000 books.

Rules and Regulations: A valid library card from a town library is needed to take out materials.

Waterbury Bar Library
Waterbury Court House, 300 Grand Street, Waterbury
(203) 591-3338; Hours: Monday-Friday, 9:00 AM–5:00 PM

Nature of Collection: A non-circulating specialized law library collection of approximately 40,000 volumes and 38 periodicals.

The Traurig Library
Post University, 800 Country Club Road, Waterbury
Hours: Call (203) 596-4562 for schedule.

Nature of Collection: A basic college library collection of approximately 45,000 volumes, 30,000 government documents and over 500 periodicals.

ACADEMIC CENTER FOR EXCELLENCE
The Academic Center for Excellence (ACE) is dedicated to helping Naugatuck Valley Community College students succeed and achieve academic success. The ACE is a complementary campus resource providing tutorial services in various subjects including math, writing, science, ESL, computer software applications, and accounting. Students can walk in and receive help from one of our dedicated, experienced and friendly professional or peer tutors who focus on students and their success. In addition, the ACE is where students can come for individual and group study, research assistance, exam proctoring, college success tip sheets, academic workshops and ACCUPLACER® preparation assistance. There are more than 45 computers in the ACE for student use. Statistics show that students who frequently visit the ACE improve their overall grades and successfully complete their courses at higher rates than students who do not take advantage of the ACE. Located in Ekstrom 500, all students are encouraged to use their very own invaluable campus resource.

What You Can Expect from an ACE Tutor

- Encouragement
- Motivation
- Respect for Your Learning Style
- Tips on How to Study for a Test
- Assistance with Understanding Course Content
- Patience

What ACE Tutors Expect from You:

- To attend class on a regular basis
- To have specific questions
- To bring information regarding course content and assignment details
- Use tutoring as assistance is needed—not just before a test

Math Tutoring
The math lab offers a quiet, convenient environment for students to work on their math homework and projects. A collection of textbooks, solution manuals and calculators are available for use and tutors are available to assist students through the process of problem solving. All computers in the ACE are equipped with interactive computer tutorials. We also offer access to MyMathLab®, a comprehensive software system designed to help students with basic mathematics through calculus with internet-based assignments and tests.

Writing Center
In the writing center, students can expect to receive assistance with a written assignment with the tutor paying particular attention to thesis development, argument, and organization. Our tutors help the student identify writing problems and develop possible strategies to correct them. The tutor helps in the brainstorming process when the student is just beginning a writing project. The tutor helps the student understand the purpose of an assignment. In the case of grammar or punctuation problems, the tutor reviews the rules and makes sure the student understands the details. The student is ultimately responsible for completing the assignment and correcting his or her work. Students can usually expect a twenty minute session with a writing tutor and they should limit their sessions to two or three per assignment.

Science Exploration Zone
In Fall 2010, the ACE welcomed the science exploration zone, where students can receive science tutorial assistance in chemistry, anatomy and physiology, biology, and physics. The zone is equipped with computers, complete with science simulation software, microscopes, videos and textbooks. Students have use of anatomical models including full-body skeletons, skulls, and vertebrae sets to aid learning and bring material to life.

Computer Assistance
Whether assistance is needed with designing a PowerPoint presentation, developing an Excel spreadsheet or learning the latest Microsoft Office version, tutors are available. Our peer tutors are experienced and eager to help students.

Placement Testing Preparation
Students are encouraged to review basic concepts in grammar, reading, arithmetic, trigonometry and algebra before taking the placement test, especially if they have been away from school for more than a year. The ACE offers a number of resources to help students prepare, including study guides, practice tests and tutors available to help strengthen skills.

Come see for yourself how the ACE and its many resources can help you succeed! Don't delay—be proactive and take advantage of the ACE. We're in Ekstrom Hall, Room 500; 203-596-8717 if you have any questions, or utilize our website at: **http://www.nvcc.commnet.edu/Student-Life/Tutoring** or follow us on Facebook.

PROGRAM ADMINISTRATION

The academic programs of the College are administered by instructional divisions. It is important for students to be aware of the division in which their program of study resides.

The following are the instructional divisions and the courses or program designations for which they are responsible:

Credit Programs

Allied Health/Nursing/Physical Education
Nursing, Physical Education, Physical Therapist Assistant, Radiologic Technology, Respiratory Care.

Arts and Humanities
Art, Communications, Dance, Digital Arts Technology, English, English as a Second Language, Humanities, Modern Languages, Music, Philosophy, Photography and Theater Arts.

Behavioral and Social Sciences
Anthropology, Behavioral Science, Child Development Center, Child and Family Services, Connecticut State Legislative Internship Program, Criminal Justice/Public Safety, Disabilities/Mental Health, Drug and Alcohol Rehabilitation Counselor, Early Childhood Education, Geography, Gerontology, History, Human Services, International Education, Political Science, Psychology, Social Work, Sociology and Study Abroad.

Business
Accounting, Business Administration - Business Computer Applications, Business Finance, Computer Information Systems Technology,

Hospitality Management/Hotel Management, Legal Assistant/Paralegal, Management, Marketing, Medical Insurance Specialist, and Microcomputer Networking Specialist.

Counseling Center
Career Planning, General Studies, Liberal Arts and Sciences, and non-degree credit seeking students, Academic Advising and Mentoring.

Engineering Technologies
Automated Manufacturing, Automotive Technician, College of Technology, Computer-Aided Drafting/Design, Electronic, Fire Technology and Administration, and Mechanical.

Learning Resources Center
Library, Media Services, and Multimedia.

Mathematics/Science
Astronomy, Aviation Science, Biological Sciences, Chemistry, Environmental Science, Geology, Horticulture, Mathematics, Meteorology, Physics, and Wastewater.

Non-credit/Lifelong Learning Programs

The mission of the Naugatuck Valley Community College Community and Economic Development Unit is to support community and economic development by affecting positive change in our communities. We collaborate with community partners to respond actively to the changing workforce needs of our region. We empower individuals and businesses through quality education and training. We enrich lives with lifelong learning, personal, and professional development opportunities. Some of these opportunities include:

Automotive Careers
Baking
Bartending
Basic Computer Proficiency Certificate
Basic Computer Skills for the Workplace
Boating Safety
Business Writing
Career Development and Job Search Strategies
Catering & Events Certificate
Certified Nurses Aide
Certified Wedding Planner
Construction Courses
Dance
English as a Second Language (ESL)
Essentials of Human Resource Management
   Certificate
Gardening and Landscaping
Health Unit Coordinator
Interior Design
Introduction to GIS for Non-Users
Jewelry Creation
Leed Green Associate
Lifelong Learning for Fun and Leisure
Manufacturing:
   Blueprint Reading
   Geometric Dimensioning and Tolerancing
   Statistical Process Control
   Math and Manufacturing

Medical Coding and Billing Specialist
Medical Transcription
Motorcycle Rider Education
MS Office Software
Musical Arts
Online Learning with Ed2go and Gatling
   Education Services
Patient Care Technician
Personal Fitness Trainer
Phlebotomy Technician
Photography Proficiency Certificate
Professional /Senior Professional in Human
   Resources Certification Exam Preparation
Project Management
QuickBooks
Real Estate Licensing Exam Preparation and
   Continuing Education
Real Estate Appraisal Preparation
   and Continuing Education
Security Officer Training
Sewing
Solar PV
Solar Thermal
Studio Arts
Substitute Teaching Preparation
Supervisory/Leadership/Soft Skills
   Customer Service
   Conflict Management
   Accountability That Works

Adaptive Leadership
Becoming Positively Assertive
Coaching For Improvement
Coaching For Success
Conducting Effective Municipal Meetings
Deal Positively with Challenges
Dealing with Difficult Citizens
Delegating for Results
Developing an Action Plan for Creating
   Improvement
Essentials of Leadership
Getting Started as a New Leader
Interviewing Skills Workshop
Legal Aspects of Performance Appraisals,
   Evaluations and Discipline for Municipal
Employees Including Non-Certified
   School Employees
Motivating Others
Resolving Conflict
Reviewing Performance Progress
Setting Performance Expectations
Sexual and Other Forms of Harassment
   in the Workplace
Team Building: Working More Effectively
   Together
Train the Trainer
Web Design
Welding
Youth and Family

PROGRAMS OF STUDY

Naugatuck Valley Community College offers associate degrees, credit certificates and non-credit certificate programs. Curricular patterns are designed to implement the overall general and specific objectives of the College and lead to the degrees of:

Associate in Arts (A.A.)   Associate in Science (A.S.)

Degrees

- Accounting (A.S.) – HA03
- Automotive Technician (A.S.) – HA24
- Automotive Technician Management (A.S.) – HC23
- Aviation Science (A.S.) – HB97
- Aviation Science Management (A.S.) – HC21
- Behavioral Science (A.S.) – HC20
- Business Administration - Business Computer Applications (A.S.) – HA54
    with areas of focus in: Accounting, Finance, Management, Marketing
- Business Finance (A.S.) – HA57
- Business Management (A.S.) – HA68
- Computer Information Systems Technology (A.S.) – HA76
    with areas of focus in: Management Information Systems, Client/Server Systems, Microcomputer Networking Administration, Object-Oriented Programming
- Criminal Justice/Public Safety (A.S.) – HB04
- Criminal Justice - Computer Crime Deterrence (A.S.) – HC16
- Criminal Justice - Corrections (A.S.) – HC13
- Criminal Justice - Forensics (A.S.) – HC17
- Criminal Justice - Law Enforcement (A.S.) – HC14
- Criminal Justice - Security (A.S.) – HC15
- Digital Arts Technology - Audio/Video Option (A.S.) - HC25
- Digital Arts Technology - Graphics/Animation Option (A.S.) - HC26
- Digital Arts Technology - Multimedia/Web Authoring Option (A.S.) - HC27
- Drug and Alcohol Recovery Counselor (A.S.) - HF10
- Early Childhood Education (A.S.) – HB93
- Electronic Engineering Technology (A.S.) – HB11
- Engineering Technology (A.S.) – HB83
- Engineering Technology - Automated Manufacturing (A.S.) – HB84
- Engineering Technology - Computer-Aided Drafting/Design (A.S.) – HB86
- Engineering Technology - Mechanical (A.S.) – HB85
- Environmental Science - Biology (A.S.) – HB88
- Environmental Science - Environmental Systems (A.S.) – HB89
- Fire Technology and Administration (A.S.) – HF05
- Hospitality Management (A.S.) – HB16
- Foodservice Management (A.S.) – HB16
- General Studies (A.S.) – HB25
- Horticulture (A.S.) – HB37
- Hotel Management (A.S.) – HB94
- Human Services (A.S.) – HB34
- Legal Assistant/Paralegal (A.S.) – HB56
- Liberal Arts and Sciences (A.A.) – HB57
- Marketing (A.S.) – HB61
- Mathematics & Science (A.A.) – HB44
- Mathematics & Science - Chemistry (A.A.) – HC12
- Nursing (A.S.) – HF30
- Physical Therapist Assistant (A.S.) – HB71
- Radiologic Technology (A.S.) – HB73
- Respiratory Care (A.S.) – HB74
- College of Technology - Engineering Science (A.S.) – HB12
- College of Technology - Technology Studies - Computer-Aided Design Option (A.S.) Progam code pending.
- College of Technology - Technology Studies - Engineering Technology Option (A.S.) - HF12
- College of Technology - Technology Studies - Lean Manufacturing and Supply Chain Management (A.S.) – HF20
- College of Technology - Technology Studies - Technology and Engineering Education Option (A.S.) - HF13
- Visual and Performing Arts - Visual Art (A.A.) – HC28
- Visual and Performing Arts - Dance (A.A.) – HC29
- Visual and Performing Arts - Digital Design (A.A.) – HC33
- Visual and Performing Arts - Music (A.A.) – HC31
- Visual and Performing Arts - Theater Arts (A.A.) – HC32

Certificates

- Accounting – HJ05
- Administrative Support – HJ81
- Advanced CADD Modeling – HJ03
- Advanced Engine Performance – HJ12
- Advanced English Proficiency – HJ80
- Alternative Energy Systems Technology – HJ82
- Applied Behavior Analysis – HJ88
- Athletic Coaching – HJ22
- Audio/Video Production – HK01
- Automotive Fundamentals – HJ24
- Business Management – HJ38
- CADD Modeling 3D – HJ02
- Child & Family Services – HJ14
- Client/Server Systems – HK24
- CNC Machining – HJ04
- Computer Crime Deterrence – HK26
- Computer-Aided Drafting 2D – HJ01
- Construction Technology – HJ08
- Criminal Justice – HJ75
- Culinary Arts – HJ77
- Dance – HK28
- Dietary Supervision – HJ65
- Disabilities/Mental Health – HJ11
- Drug and Alcohol Recovery Counselor – HJ10
- Early Childhood Education – HJ89
- Electronic Music and Audio Production – HJ06
- Engineering Technologies Exploratory – HJ73
- Environmental Systems – HK15
- Family Child Care Provider – HJ68
- Finance – HJ70
- General Automotive Services – HK10
- Gerontology – HK11
- Graphics & Animation – HJ09
- Health Career Pathways – HK55
- Horticulture – HK18
- Landscape Design - HK30
- Lean Manufacturing – HN13
- Legal Studies/Paralegal – HJ69
- Management Information Systems – HJ13
- Manufacturing – HK19
- Marketing Electronic Commerce – HJ63
- Microcomputer Networking Customer Support – HK27
- Microcomputer Networking Specialist – HJ42
- Modern Manufacturing Design – HJ15
- Multimedia/Web Authoring – HJ07
- Object-Oriented Programming – HK23
- Sales Support & Service – HJ64
- Supply Chain Management – HN14
- Technical Communications – HJ61
- Visual Art – HJ78
- Wastewater – HN03

Non-degree
Non-credit Proficiency Certificates are available.
See the most current course schedule
- Non-Degree – HZ99

COMMON CORE OF GENERAL EDUCATION

THE PHILOSOPHY AND REQUIREMENTS
Naugatuck Valley Community College considers general education an important component of its degree programs. While an appropriate level of mastery in occupations and technologies is clearly essential, students are better prepared to live in the world and use this mastery only if they are also capable of understanding fundamental theory, weighing values, and forming independent judgments.

The College defines General Education as follows:
General Education embodies the acquisition and demonstration of those skills, abilities and values which allow a person to function as a free and responsible citizen. These include the capacities to read and listen with understanding, to communicate clearly in speech and writing, to perform basic mathematical computations, to reason logically, and to apply these skills, abilities, and values to the demands of living and working.

This definition and the philosophy behind it are embodied in the Common Core of General Education. It is a term which refers to courses as listed under Groups I, II, III, and IV of Naugatuck Valley Community College's "Common Core of General Education" which the faculty of the College considers essential to its degree programs. These courses have already been incorporated into programs. The outline below will assist in understanding the categories of knowledge.

Placement testing results and course prerequisite requirements prevail before students may register for courses. Transfer credits will be handled on an individual basis.

GENERAL EDUCATION OUTCOMES
The outcomes of general education courses are listed in each course syllabus which are distributed to students each semester. The degree and certificate outcomes are listed next to each program outline in the following pages. The specific outcomes of the General Education categories are listed as follows:

Group I - Communication Skills
> English - After successful completion of ENG*H101, students will be able to write clear, coherent, focused, well-developed, error-free essays and a documented research paper.
> Communications - After successful completion of COM*H100, students will be able to express themselves orally in interpersonal, small and large-group situations and demonstrate an awareness of communication barriers and breakdowns.

Group II - Mathematics and Science
> Mathematics - After successful completion of mathematics courses, students will be able to solve problems and make reasoned decisions in their personal and professional lives.
> Science - After successful completion of science courses, students will be able to appreciate and apply the scientific method in describing, creating, and understanding natural phenomena.

Group III - Behavioral and Social Sciences
> Behavioral Sciences - After successful completion of a behavioral science elective, students will be able to demonstrate knowledge of the major theories in the behavioral sciences, understand and apply the scientific methodology used for behavioral science research; demonstrate an understanding of basic psychological processes, such as memory and learning; critically analyze the effects of social forces on the perceptions, roles and behaviors of individuals and groups; evaluate the causes and consequences of perceived inequality among groups of people. Demonstrate an understanding of the range of psychological and social functioning among different people across the lifespan and across situations; demonstrate an understanding and appreciation for the development and range of social structures such as marriage and the family, the arts, political organization, and religion across cultures; develop a conceptual framework for the origin of man and the development of culture.
> Social Sciences - After successful completion of a social science elective, students will be able to conduct an inquiry in the social sciences using a variety of resources to gather and evaluate information; evaluate the interdependence of local, national and global communities; appreciate the relevance of the social sciences to social, political, and economic institutions and behaviors; critically analyze the reciprocal influence of Western and non-Western institutions and ideas in the developing global community; demonstrate competence in accessing, ordering, interpreting and evaluating new information; demonstrate knowledge of both the strengths and weaknesses of the types of research employed in the social sciences, and, in addition, develop an appropriate conceptual framework for analyzing current world issues.

Group IV - Arts and Humanities
> English - Literature - After successful completion of ENG*H102, students will be able to demonstrate awareness of relationships between literature and society, as well as understand social and multicultural perspectives in literature. Students will also be able to form and express logical opinions about literature both in discussion and writing.
> Arts - After successful completion of an arts elective, students will have developed an aesthetic knowledge of the arts through classroom activities, practical application, and related cultural experiences.
> Humanities - After successful completion of a humanities elective, students will have critically examined the development of values, the roles of creativity, spontaneity and discipline in human life, and the essential spirit of communication.

Special Note on Computer Literacy- Word processing skills are expected of all incoming students. Computer technology is integrated into most courses at the College. Students are urged to master basic computer skills prior to enrolling at the College or to take computer courses during the first semester of the college experience.

GENERAL EDUCATION COMPETENCY AREAS

1. ANALYTICAL THINKING

This objective will develop skills & abilities to solve problems, & evaluate the logic, relevance & validity of data. Students will demonstrate information literacy & critical thinking skills.

NVCC graduates will/will be able to:

1.1 Select appropriate methods, employ a variety of strategies, & explore alternative approaches for problem analysis.
1.2 Interpret, compare, evaluate & integrate information & data.
1.3 Apply scientific methods including inductive, deductive, empirical & theoretical reasoning.

2. APPLIED KNOWLEDGE

This objective will develop intentional learners that possess self-awareness of the learning process. Students will draw from a wide range of learning experiences to work effectively with others & make personal decisions.

NVCC graduates will/will be able to:

2.1 Recognize the necessity of lifelong inquiry & learning.
2.2 Understand the interactions among science, technology & society & apply their understanding to an interdisciplinary approach to problem solving.
2.3 Recognize how individual values shape issues and apply their understanding to working effectively with others.
2.4 Connect theory to practice.

3. CREATIVE EXPRESSION

This objective will expand knowledge of the human condition & human cultures as experienced through their participation, imagination & inspiration.

NVCC graduates will/will be able to:

3.1 Produce, design, respond to, or participate in works of creative expression.
3.2 Identify, analyze, interpret & evaluate the unique & common elements of creative expression.
3.3 Apply innovative strategies across disciplines.

4. EFFECTIVE COMMUNICATION

This objective will develop the ability to read & think critically, & to write & speak thoughtfully, clearly, coherently & persuasively. Students should demonstrate their knowledge of the process of communication.

NVCC graduates will/will be able to:

4.1 Demonstrate ability to construct cogent messages & to defend them.
4.2 Demonstrate proficiency in the writing & speaking processes including planning, organizing, composing, revising & editing.
4.3 Analyze & evaluate oral & written texts by listening & reading critically for elements that reflect understanding of the situation, audience, purpose, & diverse points of view.
4.4 Make written & oral presentations employing correct diction, syntax, usage, grammar & mechanics.
4.5 Recognize the use of evidence, analysis, & persuasive strategies, including basic distinctions among opinions, facts & inferences.
4.6 Use quantitative & qualitative models & symbols as a means of representing information with clarity, accuracy & precision.

5. ETHICS

This objective will promote the ability to value knowledge & an awareness to act within personal capabilities, & to be able to recognize injustice & discrimination & to resolve ethical dilemmas. Students should be motivated to realize their potential & act in accordance with their environment.

NVCC graduates will/will be able to:

5.1 Analyze & resolve an ethical dilemma, & defend their decision.
5.2 Engage in acts of responsible citizenship & recognize their impact on their society & their environment.
5.3 Treat individuals with respect & dignity.
5.4 Develop values & ethical standards.
5.5 Relate to individuals with diverse value systems.

6. SOCIAL AWARENESS & RESPONSIBILITY

This objective will promote full & successful participation in the increasingly interconnected global communities that are found in the work place, schools & mass media. Students will negotiate diverse perspectives, & act as responsible community members & global citizens.

NVCC graduates will/will be able to:

6.1 Analyze, compare & contrast diverse cultural perspectives.
6.2 Recognize & describe forms of injustice & discrimination as well as efforts to bridge differences & build more just communities.
6.3 Appraise how diverse & global communities affect society.
6.4 Engage in community service & service learning opportunities.

7. TECHNOLOGICAL LITERACY

This objective will develop computers & other technological skills. Students will use technological resources for lifelong learning. Students will demonstrate competency within their discipline or area of interest.

NVCC graduates will/will be able to:

7.1 Use technology to facilitate research & learning.
7.2 Access & use technology ethically and legally.
7.3 Evaluate the quality of information for personal, academic & professional use.
7.4 Demonstrate the ability to apply learned skills to accommodate emerging technological tools & software.

COMMON CORE OF GENERAL EDUCATION

Group I

    COMMUNICATION SKILLS   **6 credits**
      ENG*H101   3 credits
      COM*H100   3 credits

Group II

    MATHEMATICS AND SCIENCE   **6 or 7 credits**
      Programs will contain one course from
      Category A and one course from Category B.

    Category A
      Mathematics   **3 or 4 credits**
       MAT*H121†, 135††, 143, 144, 146, 148, 167, 172,
        185, 232, 254, 256, 268
      † (Restricted to Automotive Technician, Business
        Office Technology, Early Childhood Education,
        Hospitality Management, Landscaping and
        Horticulture students.)

      †† Will not satisfy General Education Mathematics
        requirement at Connecticut State Universities

    Category B
      Sciences   **3 or 4 credits**
      AST*H101, 111
      BIO*H105, 110, 111†, 115, 121, 122, 145, 155, 171,
        180/181, 211/ 212, 225, 227, 235, 260/262
      CHE*H111, 121, 122
      GLG*H121
      HRT*H222, 224
      MET*H101
      PHY*H110, 121, 122

      † Restricted to Hospitality Students only.

Group III

    BEHAVIORAL AND SOCIAL SCIENCES   **6 credits**
      Programs will contain one course from
      Category A and one course from Category B.

    Category A
      Behavioral Sciences   **3 credits**
      ANT*H101
      PSY*H111
      SOC*H101

    Category B
      Social Sciences   **3 credits**
      ECN*H101, 102
      GEO*H102, 111
      HIS*H101, 102, 104, 105, 121, 122, 123, 124, 201,
       202, 215, 218, 224, 251
      POL*H105, 111, 112

Group IV

    ARTS AND HUMANITIES   **6 credits**
      Programs will contain ENG*H102 (3 credits)
      and three other credits from this group:
    Arts:
      ART*H101, 102, 111, 121, 131, 141, 151, 160, 161, 167
      DAN*H101, 102, 111, 112, 113
      DAT*H101, 104, 106, 108, 110, 116
      GRA*H150
      MUS*H101, 103, 137, 115, 218
      THR*H101, 110, 190, 210, 290
    Humanities:
      COM*H101, 172, 173, 175, 178, 202
      ENG*H200, 202, 215, 221, 222, 231, 232, 242, 251, 252,
         278, 281, 282
      †ESL*H132, 135, 137, 139, 142, 145, 152, 155, 157, 162
      FRE*H101, 102
      GER*H101, 102
      ITA*H101, 102
      PHL*H101, 111, 112, 116, 151, 150, 180
      POR*H101, 102
      SPA*H101, 102, 201, 202

      †Note: ESL students may use up to 6 credits of
        Intermediate and Advanced levels of ESL courses to
        fulfill the Modern Language and/or Arts and
        Humanities elective requirements. However, transfer
        of ESL credits from NVCC to other institutions or
        from institutions to NVCC is governed by the
        policies of the receiving institution.

Programs of Study

COMMON CORE COURSE DEFINITIONS

The Common Core of General Education is included in most degree programs at NVCC. Any temporary adjustments or exceptions to these requirements will be explained in specific programs to which they apply. The following definitions may be of some assistance:

Directed Electives -
Credit courses that satisfy specific program requirements. These courses are listed with each program area.

Liberal Arts Electives -
All courses listed in the common core under Groups I, II, III, and IV and advanced courses with the same designations.

General Electives -
All credit courses listed in the catalog. Students should consider transferability of courses when choosing general electives.

**DEFINITIONS YOU NEED TO KNOW WHEN
SELECTING YOUR PROGRAM AND COURSES**

1. **Credit Hours (cr.) -** College work is measured in units called credit hours. A credit-hour value is assigned to each course and is normally equal to the number of hours the course meets each week. Credit hours may also be referred to as semester hours.

2. **Contact Hours -** The actual number of hours required in a class or lab.

3. **Lecture Hours (lec.) -** The number of clock hours in the fall or spring semester the student spends each week in the classroom. This time frame is different for the shorter summer sessions.

4. **Laboratory Hours (lab.) -** The number of clock hours in the fall or spring semester the student spends each week in the laboratory or other learning environment. This time frame is different for the shorter summer sessions.

5. **Prerequisite -** A course that must be successfully completed or a requirement such as related life experiences that must be met before enrolling in another course.

6. **Corequisite -** A course that must be taken during the same or earlier semester as the course in which one is enrolling.

7. **Common Core -** A term which refers to courses as listed under Groups I, II, III, IV of Naugatuck Valley Community-College's Common Core of General Education which the faculty of the College considers essential to its degree programs.

8. **Electives -** Courses which may be chosen from items 9, 10, or 11.

9. **Liberal Arts Electives -** All courses listed in the common core under Groups I, II, III, and IV and advanced courses with the same designations, except (HRT) Horticulture.

10. **General Electives -** All credit courses numbered 100 or higher listed in the catalog. Students should consider transferability of courses when choosing general electives.

11. **Directed Electives -** Credit courses that satisfy specific program requirements. These courses are listed with each program area.

12. **Foreign Language Equivalencies -** The following equivalencies satisfy the modern language requirements:

    a) 3 years of high school work in a single foreign language, ancient or modern, or

    b) 2 years of high school work and an added semester of a college course at a more advanced level in a single foreign language, or

    c) 2 semesters of a single foreign language in college.

    Note: Students may also take CLEP (College Level Examination Program) to satisfy the modern language requirements. Information on these tests is available from the Testing Center.

    Note: ESL students may use up to six credits of Intermediate and Advanced levels of ESL courses to fulfill the Modern Language requirements.

13. **Non-Credit -** A course of study that does not apply towards a college degree; college credit is not earned. Typically designed as short courses, workshops and customized programs; non-credit programs focus on knowledge and skills that can be applied directly to the job, or personal and professional growth.

14. **Continuing Education Unit (CEU) Certificates -** CEU certificates are awarded in conjunction with mandatory continuing education requirements across different fields including: teacher professional development, real estate, nursing, allied health, insurance, appraisal. Prior approval from the learner's Local Education Association must be obtained. Typically CEU's are awarded on a 1:10 ratio (i.e., one CEU for every ten hours of qualified instruction).

This College continues to add and adjust courses, course designations, and course numbers to its offerings. The common core and the definitions will be adjusted accordingly.

COOPERATIVE EDUCATION

COOPERATIVE EDUCATION (CO-OP)

What is Cooperative Education?
Cooperative Education at Naugatuck Valley Community College is designed to integrate students' academic learning with career related work experience. The program is designed in the School-to-Career model with three interlinking components:

> **School-based learning -** courses the students must complete in a particular major prior to beginning co-op;

> **Work-based learning -** an employment experience in the student's chosen field of study; and

> **Connecting activities -** students must attend a weekly co-op seminar during their work experience.

Cooperative education provides students with an answer to a common question asked by employers, "What experience have you had?" Upon successful completion of a Co-op experience, students will have an up-to-date resume with hands-on experience in their field of study and three to six academic credits for their work experience.

Who is eligible for Co-op?
Students who have completed a minimum of 24 college credits and have maintained a "C" average overall and in their major, and have a GPA of 2.0 or better are eligible. NVCC graduates are not eligible for Co-op. Students must meet specific curriculum requirements related to their major prior to enrollment in Co-op. In some fields of study, Co-op is required; in others, it is elective. Current majors with a Co-op component include:

(E - Elective; R - Required)

> Accounting (E)
> Automotive Technician (R)
> Automotive Technician Management Option (R)
> Business Computer Applications (E)
> Business Finance (E)
> Computer-Aided Drafting/Design (E)
> Computer Information Systems (E)
> Criminal Justice (R)
> Early Childhood Education (R)
> Electrical Engineering Technology (E)
> Environmental Science (E)
> Fire Technology and Administration (E)
> Horticulture (R)
> Hospitality Management (E)
> Human Services (R)
> Legal Assistant/Paralegal (E)
> Liberal Arts (E)
> Management (E)
> Marketing (E)
> Visual and Performing Arts (E)

How Does Co-op Work?
Students who wish to participate in Co-op should meet with their program coordinator and fill out a Cooperative Education Application. The faculty coordinator will meet with the student to review his/her college transcript to ensure that all mandatory coursework has been completed and to discuss the type of work experience the student is interested in pursuing. The faculty coordinator will contact area employers to assist the student in finding a suitable Co-op placement. Students who enroll in Co-op must attend a professional development workshop on resume writing and interview techniques prior to beginning their work experience. Most Co-op placements require the student to complete 225 hours of paid work experience and register for a Co-op course.

How Is Academic Credit Awarded?
Faculty facilitators supervise the work experience through regular site visits and through the weekly Co-op courses. Granting of college credit is based on the evaluation of the student's learning and job performance by the faculty facilitator in consultation with the employer. The awarding of credit is directly linked to the quality of the work experience and the learning that results.

PRIOR LEARNING EVALUATION
Naugatuck Valley Community College acknowledges its role in assisting adults to learn throughout their lives; therefore, the College enthusiastically supports the functions of continuing education in all divisions. The College promotes "learning as a lifelong process" and believes that everyone should have the opportunity to pursue different interests at convenient times and at different rates of speed.

Prior Learning Evaluation at Naugatuck Valley Community College was accepted by the President's Cabinet in June 1982 as a result of a two-year study which originated within the College's advisory system. The intent is to recognize the varied backgrounds of students coming to the College and to provide them with opportunities to begin their college careers or to make adjustments in their professions without duplicating proficiencies which they may already have attained.

No more than 50 percent of the credits required for a degree shall be awarded for prior learning. The credits must be awarded within the approved curricula of the College.

The student may apply for the evaluation of prior learning through one or both of the following procedures:

Credit by Examination
If the student wishes to have prior learning assessed through examination for select courses, he or she may use:
- College Level Examination Program (CLEP)
- College-Produced Examinations

The assessment verifies that learning has occurred and that the learning is equivalent in level and nature to learning acquired in an approved college course or program. Please contact Division Directors for a list of courses available through credit-by-examination.

Advanced Placement
Degree credit will be granted on the basis of scores on the Advanced Placement Examinations administred by the College Entrance Examination Board. Students who earn scores of 3 or higher receive credit for the courses for which the examinations are stipulated as measures.

Board for State Academic Awards
(Charter Oak State College)
Students may also have their prior learning evaluated by Charter Oak College by calling (860) 832-3846.

DISTANCE LEARNING
The Distance Learning option serves students who need flexibility in course scheduling and learning media. These courses are designed to instruct highly motivated self-learners whose busy schedules make a distance learning course a worthwhile option. Distance Learning courses are offered through a variety of electronic delivery systems including the Blackboard Vista learning management system, the internet and email, and will include media-rich learning objects such as video, audio and digital print. Computer literacy and high speed access to the internet, the ability to produce word processed documents and view electronic presentations are required, as well as specific technical settings on the computer being used. Refer to course description for prerequisites, as each course has different requirements. Distance Learning courses follow the standard academic calendar of the College, are generally not self-paced, and may include face-to-face class meetings. For more information refer to the Distance Learning section of the College website.

Naugatuck Valley Community College offers 3 formats of Distance Learning options:

Online Courses
Online courses take place fully online and do not meet on specific days or times; they generally operate on weekly assignments and due dates.

Online Courses with Campus Requirement
These are courses in which all instruction occurs on-line but also may require on-campus meetings, such as an orientation or testing.

Hybrid Courses
Hybrid courses are defined as courses whose contact hours are split between online and on-ground (in a classroom).

COLLEGE OF TECHNOLOGY PATHWAY PROGRAM

Public Act 92-126 created the "Connecticut College of Technology," (COT). The COT has no buildings or faculty of its own, but rather is a unique pathway curriculum between each of Connecticut's twelve (12) community colleges and a 4-year partner university including: Central Connecticut State University (CCSU) the University of Connecticut (UConn), Charter Oak College (Connecticut's external degree program), the University of New Haven, the University of Hartford and Fairfield University.

The College of Technology's integrated curriculum at Connecticut's public colleges and universities allows individuals to begin their studies at a community college and transfer directly to a choice of the above-listed 4-year partner universities.

The curriculum consists of two distinct pathways — one in engineering, the other in technology. Each pathway provides the initial two years of study at the community college, which can be applied toward a bachelor's degree in technology at CCSU or in engineering at UConn.

For additional information, contact the Engineering Technologies Division at 203-596-8690.

The **Technology Pathway** for entry into CCSU's School of Technology consists of core courses that will serve as the foundation for the bachelor of science degree in engineering technology, industrial technology and technology education. Continuation at CCSU will require a minimum course grade of "C" and sixty-five hours of college credits in specific courses.

The College of Technology, Technology Studies parent program includes an extensive general education component of 38 credits and a 15-credit program core. There are 12 credits of directed and technical electives that can serve as an option to provide a focus for students who desire to concentrate their attention on a particular area. The options available are:
- Computer-aided Design
- Engineering Technology
- Lean Manufacturing and Supply-chain Management
- Technology and Engineering Education

In addition to the above degree program options established by the College of Technology, the following certificate programs are offered:
- Lean Manufacturing
- Supply Chain Management

College of Technology – Technology Studies

Course Type	Course Title	Credits
General Education		
Arts/Humanities		
English	English Composition	3
English	Oral Communications	3
Arts	Elective	3
Humanities	Elective (literature)	3
Humanities	Elective (philosophy or foreign lang)	3
Science		
Chemistry	General Chemistry w/lab	4
Physics	Physics	4
Mathematics		
Mathematics	College Algebra	3
Mathematics	Trigonometric Functions	3
Social Science		
Social Science	Elective (history)	3
Social Science	Elective (economics)	3
Behavioral Science	Elective (psychology or sociology)	3
Total General Education Credits		**38**
Specialized Core		
CAD	Computer-Aided Drafting	3
MEC	Materials Science	3
—	Introduction to Energy	3
CS	Introduction to Computers	3
Mathematics	Principles of Statistics	3
Total Core Credits		**15**
Option Directed Elective Credits		*12*
Total Program Credits		**65**

The Engineering Pathway for entry into UConn's School of Engineering consists primarily of coursework in engineering, math and science classes. In addition to the sixty-four (64) hours of college credits in specific courses, a grade average of "B" with no grade less than "C" is required for continuation at UConn.

College of Technology Engineering Science, A.S.

Course Type	Course Title	Credits
General Education		
Arts/Humanities		
English	English Composition	3
English	Literature & Composition	3
Fine Arts	Elective	3
Humanities	Elective	
	(philosophy & ethical analysis)	3
Humanities	Elective (western culture)	3
Science		
Chemistry	General Chemistry I w/lab	4
Chemistry	General Chemistry II w/lab	4
Mathematics		
Mathematics	Calculus I	4
Mathematics	Calculus II	4
Social Science		
Social Science	Elective	3
Specialized Core		
—	Applied Mechanics I	3
—	Applied Mechanics II	3
Physics	Engineering Physics l	4
Physics	Engineering Physics II	4
Mathematics	Calculus III: Multivariable	4
Mathematics	Differential Equations	3
Computer		
Programming	Directed computer elective	3
Open Electives		
—	Technical or Foreign Language	6
	Total Credits	**64**

SPECIAL INTEREST AND GROUP CONTRACT COURSES

Special credit or non-credit courses can be designed or existing courses tailored to meet specific requirements or needs of individual professional groups, agencies, businesses and industries.

These courses can be offered on an individual fee basis or on a contract basis. Contractual arrangements are possible for individual businesses or agencies to have courses given on campus and also on-site for their management, mid-management, secretarial and other staff to enhance their ability on the job. In the past, these have included nursing home administrators, area hospitals, factories, small business associations, and public service agencies, among others. Costs vary, depending on instructional and administrative fees. For additional information, call the Center for Business and Industry Training Center.

STUDY ABROAD

As a member college in The College Consortium for International Studies, Naugatuck Valley Community College may enroll students for semester abroad programs in the following countries and institutions of higher education:

Bulgaria	University of Ploudiv
China	Nanjing University
Colombia	Universidad Javeriana
Cyprus	Frederick Polytechnic University
Ecuador	Universidad San Francisco de Quito
England	Thames Valley University
France	The Institute for American Universities
Germany	Collegium Palatinum and Schiller International University
Greece	Anatolia College
Ireland	St. Patrick's College, University of Limerick
Israel	University of Haifa and Specialized Schools
Italy	The American University of Rome, Scuola Lorenzo de Medici (Florence)
Japan	Suny/Toyana-Ken
Mexico	Universidad del Valle de Mexico
Portugal	CIAL Centrok de Linguas
Russia	The Institute of Youth, Moscow
Spain	CCIS Institute, The University of Seville
Switzerland	Franklin College

Summer study is also available in England, France, Germany and Italy.

Admission to Study Abroad

Students are evaluated for admission to academic studies abroad according to their academic ability, maturity, motivation, and potential adaptability to a foreign culture. They have usually completed their first year of college. A cumulative grade point average of at least 2.5 is required, and letters of recommendation must be secured from professors who know the student.

Credits, Transcripts, Costs

Students register at Naugatuck Valley Community College and pay the appropriate tuition and fees. Upon successful completion of the formal courses abroad, each student receives a transcript from the college reflecting grades achieved and credits earned.

Most courses taken abroad transfer readily to four-year institutions. A full semester of courses usually earns fifteen (15) credits. Summer session earns six (6) to nine (9) credits. Total program costs range from $4250 to $9000, depending on the country selected. Financial aid is available to qualified students.

For Further Information

Complete details about host institutions abroad, what is covered by the total program cost, and application materials may be obtained from the Behavioral and Social Sciences Division.

As society becomes more complex, trained personnel are needed to interpret and manage the fiscal aspects of business and industry. The curriculum is designed either as a transfer or career program. Career-oriented students are prepared for beginning positions in public and private accounting. Typical positions for which graduates are qualified include: junior account clerk, assistant auditor, cost accounting clerk, and assistant office manager.

Students who plan to transfer to a four-year business program are urged to see a counselor or the division director for guidance regarding the transferability of courses to the four-year program. Courses listed under Naugatuck Valley's business programs may not automatically transfer to a four-year college.

Students have the opportunity to join the ***Accounting/Finance Club*** which is a student chapter of the Institute of Management Accountants. (Co-op available)

Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.

Course No.	Title	Credits
ENG*H101	Composition	3
Elective	Mathematics	3
ACC*H113	Principles of Financial Accounting	3
BBG*H231	Business Law I	3
CSC*H101	Introduction to Computers	3
		15
ENG*H102	Literature and Composition	3
Elective	Behavioral Science (PSY, SOC)	3
ACC*H117	Principles of Managerial Accounting	3
ACC*H123	Accounting Software Applications	3
BBG*H232	Business Law II	3
BBG*H101	Introduction to Business	3
		18
COM*H100	Introduction to Communication	3
Elective	Science	3-4
ACC*H271	Intermediate Accounting I	3
ECN*H101	Principles of Macroeconomics	3
Elective	Accounting/Business/ Computer/Mathematics†	3-4
		15-17
Elective	Arts and Humanities	3
ACC*H272	Intermediate Accounting II	3
ECN*H102	Principles of Microeconomics	3
BBG*H210	Business Communication	3
Elective	Accounting/Business/Computer†	3
		15
	Total Credit Hours	**63-65**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate the use of the concepts and techniques of generally accepted accounting principles in the recording and reporting of financial information.
2. Describe accounting system procedures and techniques.
3. Analyze and use financial reports for decision-making.
4. Explain the use of financial information in controlling and evaluating performance.
5. Use the vocabulary of financial and managerial accounting and economics for communicating.
6. Explain how budgeting, activity-based costing and strategic cost management foster the effective use of resources and help an organization accomplish its goals.
7. Use computerized spreadsheets and accounting software.
8. Apply basic knowledge from history, social sciences, behavioral sciences, arts, literature and science to create solutions to problems that they have not encountered before.
9. Demonstrate reasoning and analytic skills.
10. Work with others, including culturally and intellectually diverse peoples.
11. Demonstrate the ability to acquire, organize and present information effectively, regardless of medium – written, spoken or electronic.
12. Show how organizational dynamics, socio-political and economic environments shape the creation of solutions.
13. Display the traits and attitudes that promote ongoing success and a strong work ethic.

Associate Degree Programs

DIRECTED ELECTIVES
Selection should be made in consultation with Accounting Program faculty.

†Career-oriented students: Accounting or Business selections from: ACC*H241, 231, or 290/291 (Accounting Cooperative Work Experience I & II). Computer Science courses higher than CSA*H105 or Computer Information Systems courses higher than CSC*H101. Mathematics selections from: MAT*H167, 172, 232, or higher.

†Transfer-oriented students: Accounting or Business selections from: BMG*H105, 202. Computer Science courses higher than CSA*H105 or Computer Information Systems courses higher than CSC*H101. Mathematics selections from: MAT*H167, 172, 232, or higher. Math selections in consultation with Mathematics/Science Division.

AUTOMOTIVE TECHNICIAN

The ASE Certified Master Automotive Technician Program is a course of study designed to accommodate both full and part-time students, culminating in an Associate of Science degree. Service of today's complex automobiles requires highly trained technicians who have mastered a wide range of talents and skills. Naugatuck Valley Community College, in cooperation with the National Automotive Dealership Association, the U.S. Department of Labor, local, and national dealership associations, and the major automotive manufacturers, developed the Automotive Technician Program to meet the longstanding need for skilled automotive service technicians.

Students wishing to enroll in the Automotive Technician Program must demonstrate basic mathematics, written English, reading, and mechanical competency as determined by the College Placement Tests. Individuals interested in the Automotive Technician Program should contact the Program Coordinator or the Admissions Office. Students may be admitted to the College prior to admission to the program. The instruction, course of study, facilities, and equipment of Naugatuck Valley Community College, has been evaluated by the National Automotive Technicians Education Foundation (NATEF) and has met the National Institute for Automotive Service Excellence (ASE) standards of quality for the training of automotive technicians as a Master Automotive Technician Training Certification Program. These organizations can be contacted as follows: NATEF, 13505 Dulles Technology Dr., Suite 2 • Hemdon, VA 20171-3413, ASE, 13505 Dulles Technology Dr., Suite 2 • Hemdon, VA 20171-3413.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required.*

Course No.	Title	Credits
ATP*H100	Integrated Automotive Systems	3
ATP*H110	Automotive Electrical Systems	3
ATP*H130	Brakes	3
ENG*H101	Composition	3
Elective	Mathematics†	3
		15
ATP*H120	Engine Repair	3
ATP*H150	Suspension and Steering	3
ATP*H210	Engine Performance	3
COM*H100	Introduction to Communication	3
CSA*H105	Introduction to Software Applications	3
Elective	Social Science	3
		18
ATP*H185	Automotive Service and	
	Parts Department Management	2
ATP*H220	Automotive Emissions	3
ATP*H261	Manual Drive Train and Axles	2
ATP*H290	Co-op Work Experience I	3
ENG*H102	Literature and Composition	3
PHY*H110	Introductory Physics	4
		15
ATP*H140	Automotive Heating & Air Conditioning	3
ATP*H262	Automatic Transmissions and Transaxle I	2
ATP*H291	Co-op Work Experience ll	3
PSY*H111	General Psychology I	
	or	
SOC*H101	Principles of Sociology	
	or	
ANT*H101	Introduction to Anthropology	3
Elective	Automotive†	2
Elective	Arts and Humanities	3
		16
	Total Credit Hours	**66**

DIRECTED ELECTIVES
  †Mathematics
    Career-oriented students: MAT*H121
    Transfer-oriented students: MAT*H135 and above, excluding MAT*H137
  †Automotive
    ATP*H190 or other ATP courses as approved by the program coordinator.

*Note: After completing ATP*H100, all 100 series courses may be taken in any order. Students who need and have not yet completed all basic skills (as determined by placement testing), may take only one ATP course a semester.*

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Apply Language Arts and Communications skills related to the occupation, including but not limited to: reading, writing, and oral communication.
2. Perform Mathematics related to the occupation, including but not limited to: algebraic expressions, arithmetic, decimals and graphs.
3. Use scientific methods and critical thinking to solve problems in Science related to the occupation, including but not limited to: electricity, chemical reactions, heat motion, and hydraulics.
4. Demonstrate Workplace Skills related to the occupation, including but not limited to, preparing a resume, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics and teamwork.
5. Apply knowledge of theory and safety to accomplish certain tasks related to the occupation.
6. Identify and use appropriate tools, testing and measurement equipment to accomplish certain tasks related to the occupation.
7. Use current reference and training materials from accepted industry publications and standards to accomplish certain tasks related to the occupation.
8. Apply knowledge of general engine diagnosis and repair, including but not limited to the engine's: cylinder heads, valve train, block, lubrication, and cooling system.
9. Apply knowledge of general transmission and transaxle maintenance, adjustment, diagnosis and repair.
10. Apply knowledge of suspension and steering systems (including wheel and tire), diagnosis, service, adjustments, alignment and repair.
11. Apply knowledge of general disc and/or drum brake system hydraulics, power assist, and ABS (antilock brakes), maintenance, adjustment diagnosis and repair.
12. Apply knowledge of general electrical/electronic systems, including but not limited to: starting, charging, lighting, wiring, accessories, diagnosis and repair.
13. Apply knowledge of general heating and air conditioning systems and their components, maintenance, adjustment, diagnosis and repair.
14. Apply knowledge of general engine performance, including but not limited to: computer controls, ignition, fuel, exhaust, and emission systems, and their maintenance, diagnosis, adjustments and repair.
15. Apply knowledge of computer applications including word processing, spreadsheets, graphs and other software related to the occupation.

AUTOMOTIVE TECHNICIAN MANAGEMENT

The complexity of the automobile requires more sophisticated technicians and specialists than ever before. The need for qualified personnel has expanded beyond the bay into service and shop management. Until now students had to decide whether to take the Automotive Technician Program Degree or a Business Degree if they aspired towards Automotive Management. The Management Option creates a sensible way for employers to fill management positions. Students will now be able to take Co-op in Automotive Management at one of the many franchises and dealerships in the region and upon graduation have opportunities for employment and career advancement.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required.*

Course No.	Title	Credits
ENG*H101	Composition	3
Elective	Mathematics	3
ATP*H100	Integrated Automotive Systems	3
BBG*H101	Introduction to Business	3
CSA*H105	Introduction to Software Applications	3
		15
COM*H100	Introduction to Communication	3
ACC*H113	Principles of Financial Accounting	3
BES*H118	Small Business Management	3
ATP*H120	Engine Repair	3
ATP*H185	Automotive Service and Parts Department Management	2
ATP*H110	Automotive Electrical Systems	3
		17
ENG*H102	Literature and Composition	3
ACC*H117	Principles of Managerial Accounting	3
ATP*H130	Brakes	3
PHY*H110	Introductory Physics	4
ATP*H290	Co-Op Work Experience I	3
		16
PSY*H111	General Psychology I	
	or	
SOC*H101	Principles of Sociology	3
ECN*H101	Principles of Macroeconomics†	3
BMG*H202	Principles of Management	3
ATP*H150	Suspension and Steering	3
Elective	Arts and Humanities	3
		15
	Total Credit Hours	**63**

† Social Science Elective -ECN*H101
  (Required in Management Option)

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1.   Apply Language Arts and Communications skills related to the occupation, including but not limited to: reading, writing,and oral communication.
2.   Perform Mathematics related to the occupation, including but not limited to: algebraic expressions, arithmetic, decimals and graphs.
3.   Use scientific methods and critical thinking to solve problems in Science related to the occupation, including but not limited to: electricity, chemical reactions, heat, motion, and hydraulics.
4.   Demonstrate Workplace Skills related to the occupation, including but not limited to, preparing a resume, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics and teamwork.
5.   Apply knowledge of Computer Applications including word-processing, spreadsheets, graphs and other software related to the occupation.
6.   Apply knowledge of theory and safety to accomplish certain tasks related to the occupation.
7.   Identify and use appropriate tools, testing and measurement equipment to accomplish certain tasks related to the occupation.
8.   Use current reference and training materials from accepted industry publications and standards to accomplish certain tasks related to the occupation.
9.   Apply knowledge of general engine diagnosis and repair, including but not limited to the engines: cylinder heads, alve train, block, lubrication, and cooling system .
10. Apply knowledge of suspension and steering systems (including wheel and tire), diagnosis, service, adjustments, alignment and repair.
11. Apply knowledge of general disc and/or drum brake system, hydraulics, power assist, and ABS (antilock brakes), maintenance, adjustment, diagnosis, and repair.
12. Apply knowledge of general electrical/electronic systems, including but not limited to: starting, charging, lighting, wiring, accessories, diagnosis and repair.
13. Demonstrate basic knowledge of management, human resources, and organizational development in an entry-level management position.
14. Understand and practice the various functions of management as well as the nature and responsibilities of a manager.
15. Interpret management information from various sources such as financial statements, annual reports, and publications.
16. Demonstrate a responsible attitude in relationships with employers, fellow employees, working groups, and the macro-environment.

Associate Degree Programs

The Aviation Science Degree Program consists of the basic degree in aviation science, and electives that allow students to focus on either a flight curriculum or a management option. Directed Electives from either course of study may be used to fulfill a student's Open Elective requirements.

The Flight Curriculum of the Aviation Science Program is designed to provide any current pilot or college student with the educational background and training required to seek a career in aviation as a professional pilot. This is both an academic degree program and a pilot certification process.

The flight training, simulator training and theory portions of the Flight Curriculum will prepare students to meet the minimum requirements for Federal Aviation Administration (FAA) 141 certification for private, commercial, instrument, multi-engine, and flight instructor ratings for either fixed or rotary wing (helicopter) aircraft.

Prior to enrollment in Flight School courses, applicants must obtain an appropriate Federal Aviation Administration (FAA) flight physical from an authorized Aviation Medical Examiner. All flight training costs are the responsibility of the student.

The Aviation Science Degree Program can also serve as the first two years of a bachelor's degree in Aviation Science for those students interested in transferring to a four-year institution. Students could pursue a bachelor's degree in one of several standard aviation majors: Aviation Management, Air Traffic Control, Aviation Electronics, Aviation Maintenance, and Aviation Computer Science.

Note: The Program consists of twenty-four (24) credit hours of aviation specific specialty courses, 18 credits of which require training specifically designed to enable students to pass FAA Knowledge or Flight Tests. Flight courses required to complete the Flight Curriculum (AVS*H201, 203 and 204) are taught at area flight schools. Students wishing to enroll in the Aviation Science Program should contact the Aviation Science Coordinator for advisement before beginning the Program.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course	Title	Credits
General Education Total:		**25**
ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
PSY*H111	General Psychology I	3
MAT*H167	Statistics with Technology	3
PHY*HI2I	General Physics I	4
Elective	Behavioral or Social Science	3
Elective	Arts & Humanities	3
Specialized Core Total:		**22**
BMG*H202	Principles of Management	3
AVS*H101	Private Pilot Lecture	3
CSA*H105	Introduction to Software Applications	3
MAT*H172	College Algebra	3
MAT*H185	Trigonometric Functions	3
PHY*H122	General Physics II	4
MET*H101	Meteorology	3
Option/Directed Electives Total:		**15**
AVS*H103	Instrument Lecture	3
AVS*H104	Commercial Pilot Lecture	3
AVS*H201	Private Pilot Flight Co-Op	3
AVS*H203	Instrument Flight Training Co-Op	3
AVS*H204	Commercial Flight Training Co-Op	3
Open Elective Total:		**6**
Any AVS*H course(s)		6

AVS*H108 Certified Flight Instructor and
AVS*H208 Certified Flight Instructor Co-Op
are strongly recommended for the helicopter curriculum

Total Credits		**68**

Program Outcomes

Upon successful completion of all program requirements, graduates will:

1. Possess private, commercial, and flight instructor certificates and instrument and multi-engine ratings.
2. Be eligible to apply for employment as a commercial or corporate pilot or as a flight instructor.
3. Have the necessary background to continue their aviation science education at a four-year institution.
4. Be able to demonstrate the following fundamental skills required of all aviators:
   a. Obtain, analyze, and apply current and forecast weather data to visual and instrument flight planning and execution.
   b. Perform calculations necessary for safe flight planning and execution to include wind, aircraft weight and balance, and fuel consumption.
   c. Review and apply aircraft performance characteristics to ensure safe flight operations.
   d. Create and file an appropriate flight plan for any type of flight.
   e. Interpret and use aeronautical charts and publications applicable to visual and instrument operations.
   f. Apply appropriate methods of navigation in order to complete a flight as planned.
   g. Apply basic principles of physical science to aerodynamics and the performance of aircraft in flight.
   h. Evaluate physiological and psychological factors that affect pilots as they relate to flight hazards and pilot risk factors.
   i. Communicate with other crewmembers as well as members of the air traffic system in a clear, concise, and accurate manner.

Mathematics/Science Division
AVIATION SCIENCE *(Management Curriculum)*

The Aviation Science Management Program consists of the basic degree in aviation science, and electives that allow students to focus on a management option. Directed Electives from either flight or management courses of study may be used to fulfill a student's Open Elective requirements.

This degree program is designed to provide students with the knowledge and skills necessary to be successful in a broad range of entry-level aviation management careers including airport operations, land-side/air-side management, aircraft manufacturing, airlines, corporate flight departments, airport authorities, and state and federal aviation regulatory agencies including the Federal Aviation Administration (FAA) and the National Transportation Safety Board (NTSB).

This program can also serve as the first two years of a bachelor's degree in Aviation Science for those students interested in transferring to a four-year institution. Students could pursue a bachelor's degree in one of several standard aviation majors: Aviation Management, Air Traffic Control, Aviation Electronics, Aviation Maintenance, and Aviation Computer Science.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course	Title	Credits
General Education Total:		**25**
ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
PSY*H111	General Psychology I	3
MAT*H167	Statistics with Technology	3
PHY*H121	General Physics I	4
Elective	Behavioral or Social Science	3
Elective	Arts & Humanities	3
Specialized Core Total:		**22**
BMG*H202	Principles of Management	3
AVS*H101	Private Pilot Lecture	3
CSA*H105	Introduction to Software Applications	3
MAT*H172	College Algebra	3
MAT*H185	Trigonometric Functions	3
PHY*H122	General Physics II	4
MET*H101	Meteorology	3
Option/Directed Electives Total:		**15**
AVS*H130	Air Transportation System	3
AVS*H150	Airport Management I	3
AVS*Hl51	Airport Management II	3
AVS*H120	Foundations of Aviation	3
AVS*H140	Aerospace Safety	3
Open Elective Total:		**6**
BUS*H Elective		3
AVS*H Elective		3
	Total Credit Hours	**68**

Program Outcomes

Upon successful completion of all program requirements, graduates will:

1. Communicate clearly using both oral and written communications.
2. Demonstrate a detailed understanding of the National Airspace System Plan (NASP).
3. Understand and interpret Federal Aviation Regulations (CFR 14) applicable to airport and air transport operations.
4. Demonstrate an understanding of aviation history and aviation law and the role of each in shaping the current aviation industry.
5. Have a thorough understanding of airport management issues including financing, revenue/expense sources, safety, security, planning, design, and management of airports in the United States.
6. Have a thorough understanding of air transportation and aerospace issues including air transportation/aerospace history, economics of airlines and general aviation, airline management and organization, forecasting methods, pricing/demand/output determination, airline scheduling, fleet planning, and labor relations.

Associate Degree Programs

BEHAVIORAL SCIENCE

This program is a course of study for students who intend to pursue a Bachelor Degree in one of the Behavioral Sciences (Psychology, Sociology, or Anthropology). It provides the foundation for an education in these disciplines, while also ensuring a more general education in the arts and sciences. The requirements for this degree will allow students to transfer seamlessly to most four-year colleges and to successfully complete their Bachelor Degree in Psychology, Sociology, or Anthropology without loss of credit or time.

Job market trends reveal continued high interest and opportunities in the Behavioral Sciences. This program provides students with the type of educational foundation that is necessary to achieve success in psychology, sociology, or anthropology.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
COM*H100	Introduction to Communication	3
PSY*H111	General Psychology I	3
SOC*H101	Principles of Sociology	3
Elective	Social Science Elective	3
		15
ENG*H102	Literature and Composition	3
PSY*H112	General Psychology II	3
SOC*H201	Contemporary Social Issues	3
ANT*H101	Introduction to Anthropology	3
CSA*H105	Introduction to Software Applications	3
		15
MAT*H167	Statistics with Technology	3
BIO*H105	Introduction to Biology	4
Elective	Modern Language Elective	3
Elective	Behavioral Science Elective	3
Elective	Arts and Humanities Elective	3
		16
BIO*H110	Principles of the Human Body	3
Elective	Modern Language Elective	3
Elective	Behavioral Science Elective	3
Elective	Social Science Elective	3
Elective	General Elective	3
		15
	Total Credit Hours	**61**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Present a well-written research report that demonstrates the ability to think and write critically.
2. Present oral reports before a group.
3. State the major theories, processes, and research methods important in psychology
4. State the major theories, concepts, and research methods important in sociology,
5. Read and explain the presence and importance of behavioral science concepts in literature.
6. Use basic psychological concepts in applied settings and circumstances.
7. Evaluate the causes and consequences of perceived differences and inequalities among groups of people.
8. Describe a conceptual framework for the origin of man and the development of culture.
9. Use microcomputers to complete research in the behavioral sciences.
10. Use statistical methods for behavioral science research.
11. Describe the basic biological processes involved in human genetics, evolution, and physiology.
12. Evaluate the perceived differences among groups of people.
13. Critically analyze the effects of biological forces on the behaviors of groups and individuals.

BUSINESS ADMINISTRATION

Business Computer Applications Option

The goal of the Business Administration - Business Computer Applications program is to prepare students for employment in a job related to their focus area (Accounting, Finance, Management, or Marketing) by providing a theoretical and practical foundation in the focus area subject matter and by equipping them with needed skills in the use of application software that is appropriate to their focus area.

Each Focus is designed to provide the student with a strong background in focus area and related business skills, coupled with a proficiency in the use of computers. The business and focus area courses are selected from the standard college course offerings, while the computer courses supplement the business skills and answer the question, "How do computers relate to business and the focus area?" rather than "How do computers work?". Graduates of the program will be well qualified for focus area related entry-level positions in business and industry. (Co-op available)

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
COM*H100	Introduction to Communication	3
Elective	Behavioral Science	3
ACC*H113	Principles of Financial Accounting	3
CSA*H105	Introduction to Software Applications	3
		15
ENG*H102	Literature and Composition	3
CSA*H135	Spreadsheet Applications	3
ACC*H117	Principles of Managerial Accounting	3
MAT*H167	Statistics with Technology	3
Elective	Focus Area†	3
		15
CSA*H205	Advanced Applications	3
ECN*H101	Principles of Macroeconomics	3
Elective	Science	3-4
Elective	Focus Area†	3
Elective	Focus Area†	3
		15-16
ECN*H102	Principles of Microeconomics	3
Elective	Arts and Humanities	3
Elective	Focus Area†	3
Elective	Focus Area†	3
Elective	Focus Area†	3
		15
	Total Credit Hours	**60-61**

† See Directed Electives list for appropriate choices based on focus area.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate a level of mathematical skill appropriate for employment in a business environment.
2. Read, understand and prepare standard types of business communications.
3. Demonstrate an understanding of basic theory and practice in his/her focus area.
4. Possess skills appropriate to his/her focus area in the following software:
   - operating system
   - word processor
   - electronic spreadsheet
   - presentation software
   - internet browser
   - database management system
     (for management and marketing focus areas)
   - general ledger accounting system
     (for accounting focus)
   - other software as appropriate to the student's focus area
5. Use the Internet for business purposes, including research, marketing, stock market analysis, etc.
6. Read, understand, and use software documentation.

Associate Degree Programs

DIRECTED ELECTIVES

Accounting Focus

ACC*H123	Accounting Software Applications
ACC*H271	Intermediate Accounting I
ACC*H231	Cost Accounting I
Elective	CSA*H145 or appropriate CSC/CST course†
Elective	CSA*H145 or appropriate CSC/CST course†
Elective	Accounting (ACC*H290 recommended)+

Finance Focus

BFN*H20l	Principles of Finance
BFN*H220	Financial Management
BMG*H202	Principles of Management
Elective	Finance, CSA*H145, or appropriate CSC/CST course†
Elective	CSA*H145 or appropriate CSC/CST course†
Elective	Finance (BFN*H296 recommended)†

Management Focus

BMG*H202	Principles of Management
BMG*H105	Supervision and Organizational Behavior
BMG*H220	Human Resources Management
CSA*H145	Database Management
CSA*H207	Computer Applications in Management and Marketing
Elective	Management (BBG*H295 recommended)†

Marketing Focus

BMG*H202	Principles of Management
BMK*H201	Principles of Marketing
BMK*H207	Consumer Behavior
CSA*H145	Database Management
CSA*H207	Computer Applications in Management and Marketing
Elective	Marketing (BBG*H295 recommended)†

†Courses to be chosen in consultation with Business Computer Applications faculty advisors.

BUSINESS FINANCE

This program is designed to provide students with a course of study which will prepare them to assume positions as support personnel in banking, real estate, the insurance industry, and corporate finance departments or non-profit organizations. It is envisioned as a career program. The primary goal of the Finance Program is to prepare students for entry level employment in the field. Also available is the Finance Certificate which is designed for individuals seeking professional advancement. Students are strongly urged to seek the advice of a counselor if they intend to pursue a baccalaureate degree or certificate in finance.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
ACC*H113	Principles of Financial Accounting	3
BFN*H201	Principles of Finance	3
CSA*H105	Introduction to Software Applications	3
Elective	Behavioral Science	3
		15
ENG*H102	Literature and Composition	3
ACC*H117	Principles of Managerial Accounting	3
BBG*H232	Business Law II	3
MAT*H167	Statistics with Technology	3
BFN*H202	Money and Banking	3
		15
BMG*H202	Principles of Management	3
ECN*H101	Principles of Macroeconomics	3
COM*H100	Introduction to Communication	3
Elective	Finance†	3
ECN*H220	Financial Management	3
		15
ECN*H102	Principles of Microeconomics	3
BBG*H210	Business Communication	3
Elective	Science	3
Elective	Arts and Humanities	3
Elective	Finance†	3
		15
	Total Credit Hours	**60**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate knowledge of business finance including financial planning, long and short-term financing, fixed assets management and management of long-term debt.
2. Identify strategies and practices in government and consumer financing.
3. Demonstrate knowledge of monetary, fiscal and debt management policies of government.
4. Demonstrate knowledge of basic analytical techniques, problem-solving and decision-making.
5. Identify the basic concepts of Asset Management and be able to provide an overview of Liability- and Deposit-Management as they relate to the financial services industry.
6. Identify techniques for managing working capital and demonstrate knowledge of the capital budgeting process.
7. Provide an understanding of how the United States economic system is organized, how it functions and how it impacts the global economy.
8. Identify the major goals and functions of financial management.
9. Understand the principle components of financial analysis in all levels of the business organization.
10. Demonstrate an understanding of the interrelationships between Finance and *all* other areas within a business, including working with other departments, to achieve overall strategic goals.

DIRECTED ELECTIVES
Selections should be made with Business Finance faculty.

†Finance
BFN*H125 Principles of Banking
BFN*H126 Principles of Insurance
BRE*H201 Real Estate Principles
BFN*H203 Principles of Investments
BFN*H205 Real Estate Law
BFN*H208 Financial Analysis
BFN*H296 Finance Cooperative Work Experience

The Business Management Program is intended to provide students with a broad background in the field of management. Students completing this program will be qualified to accept entry-level positions in a variety of profit and non-profit organizations.

Students who plan to transfer to a four-year college should choose electives which conform to the curricular patterns of the college in which they plan to enroll after receiving the associate in science degree. (Co-op available)

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below.*
> *Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
Elective	Mathematics†	3-4
ACC*H113	Principles of Financial Accounting	3
BBG*H101	Introduction to Business	3
BBG*H231	Business Law I	3
		15-16
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
ACC*H117	Principles of Managerial Accounting	3
BBG*H232	Business Law II	3
CSC*H101	Introduction to Computers	3
		15
Elective	Behavioral Science	3
Elective	Arts and Humanities	3
ECN*H101	Principles of Macroeconomics	3
BMG*H202	Principles of Management	3
Elective	Science	3-4
		15-16
ECN*H102	Principles of Microeconomics	3
BMG*H105	Supervision and Organizational Behavior	3
BMG*H220	Human Resources Management	3
BBG*H210	Business Communication	3
Elective	Business/Mathematics/ Computer Science††	3
		15
	Total Credit Hours	**60-62**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate basic knowledge of management, human resources, and organizational development in an entry-level management position.
2. Identify the skills needed to organize thoughts and ideas and demonstrate the ability to communicate, verbally and in writing, in a manner that can be easily understood in the business environment.
3. Solve math problems related to various aspects of management including accounting, finance and operations.
4. Understand and practice the various functions of management as well as the nature and responsibilities of a manager.
5. Develop an understanding of the decision-making process and demonstrate effective decision-making.
6. Demonstrate an ability to define management problems, examine alternatives and decide on the best course of action, and submit these in writing to higher management.
7. Develop a personal philosophy of management, enabling him/her to perform as a manager, staff specialist or as a subordinate.
8. Develop an understanding of the nature of change and how to adapt to the accelerating, global environment.
9. Demonstrate a knowledge and use of technological innovations as they apply to management.
10. Develop an ability to interpret management information from various sources such as financial statements, annual reports, and publications.
11. Demonstrate an understanding of the competitive pressures brought by effectiveness, efficiency and innovation issues on organizations.
12. Demonstrate a responsible attitude in relationships with employers, fellow employees, working groups, and the macro environment.

Associate Degree Programs

DIRECTED ELECTIVES

† Mathematics selection from MAT*H167, 172, 232 or higher for transfer students, MAT*H121 for career degree students.

†† **Selection should be made in consultation with Business Division faculty.**
Business or Computer Science electives recommended: BMK*H220 Sales; BMK*H201 Principles of Marketing; BMK*H207 Consumer Behavior; BBG*H295 Management Cooperative Work Experience; BFN*H201 Principles of Finance; BFN*H203 Investment Principles; BFN*H126 Principles of Insurance and CSA*H105 Introduction to Software Applications.

COMPUTER-AIDED ENGINEERING TECHNOLOGY

Computer-Aided Drafting/Design Engineering Technology Option, Engineering Technology

Computer-aided design (CAD) is an advanced, rapidly evolving technology used by designers and engineers to create technical drawings and computer models. It is essential to many industries because drawings and computer models are required before any product can be manufactured. Examples include automobiles, aircraft, marine vessels, machinery, electronics, plastic parts, medical devices, bridges, buildings, and roads, to name a few. Because of its broad application, computer-aided design offers many employment opportunities for people who maintain up-to-date skills.

Computers have made conventional manual drawing and design methods obsolete, thereby fundamentally changing the process of technical documentation. CAD enables a designer to make rapid revisions in a drawing and to evaluate many potential solutions to a design problem, thereby allowing the best one to be selected. In contrast to traditional methods, the designer works with computer models of the complete three-dimensional geometry of an object, rather than the two-dimensional views required when drawing on a sheet of paper. These models allow viewing of the object from any direction and enable a designer to visualize the assembly and fit of complex parts. Although the departmental program emphasizes this new technology, intelligent use of the computer relies upon a thorough knowledge of the principles of engineering graphics and conventional drafting practices. Therefore, topics such as orthographic and isometric projection, section and auxiliary views, descriptive geometry and dimensioning continue to be the starting point for the curriculum. The departmental program combines comprehensive instruction in the use of several current CAD software systems with industrial practice.

Employment opportunities include: CAD Draftsperson/Operator, Mechanical Draftsperson, Designer, Engineering Technician, and Technical Illustrator.

Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.

Course No.	Title	Credits
TCN*H101	Introduction to Technology	3
ENG*H101	Composition	3
MAT*H172	College Algebra	3
PHY*H121	General Physics I	4
COM*H100	Introduction to Communication	3
		16
CAD*H150	CAD 2D	3
CHE*H111	Concepts of Chemistry	4
MAT*H185	Trigonometric Functions	3
MEC*H108	Statics	5
MFG*H106	Computer-Aided Manufacturing I	3
		18
MAT*H232	Applied Calculus	3
MFG*H210	Materials of Engineering	4
MFG*H275	Mechanics of Materials	3
CAD*H200	3D CAD Modeling	4
CAD*H220	Parametric Design	3
		17
Elective	Behavioral or Social Science	3
ENG*H102	Literature and Composition	3
CAD*H294	Senior Project	4
CAD*H275	CAD Animation 3D Studio Max	4
Elective	Directed Elective†	3
		17
	Total Credit Hours	**68**

†DIRECTED ELECTIVES
  CAD*H286 Advanced Modeling Techniques
  EET*H102 Electrical Applications
  MAT*H254 Applied Calculus
  MFG*H104 Manufacturing Processes

Also see: Electronic Engineering Technologyy
  Mechanical Engineering Technology
  (Automated) Manufacturing Engineering Technology

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Have a thorough knowledge and understanding of CADD tools and processes.
2. Demonstrate team-oriented human skills that permit effective participation in multicultural work and social environments.
3. Apply appropriate mathematical and scientific principles to CADD applications, particularly descriptive geometry.
4. Demonstrate a thorough knowledge and understanding of engineering graphics and conventional drafting practices such as orthographic and isometric projection, section, detail, auxiliary views, and geometric dimensioning and tolerancing.
5. Demonstrate the ability to develop an engineering concept through the detail design process and produce professionally finished engineering drawings suitable for use in manufacturing.
6. Be able to work with specialists to resolve technical problems in design, manufacturing engineering, quality assurance, and production.
7. Demonstrate a high level of proficiency in the use of state-of-the-art CADD software and be able to adapt to new CADD systems as they are developed.
8. Demonstrate a thorough understanding of 3-dimensional solid modeling concepts, procedures, and applications.
9. Be aware of new developments in CADD and related areas, and assimilate new technologies as they emerge.
10. Be able to organize activities and perform work in an efficient, accurate manner.
11. Apply knowledge of computer applications including word processing, spreadsheets, and other software related to CADD processes.

Business Division
COMPUTER INFORMATION SYSTEMS TECHNOLOGY

The Computer Information Systems program is built on a foundation of strong technical knowledge in information systems. The program emphasizes the areas of computer programming, database systems, Internet development, computer networking, Internet security, and systems analysis. It also reinforces a broad understanding of other disciplines related to information systems, such as accounting, math, management, and communication. The CIS program allows students to tailor their degree to their interests by offering a wide range of electives. Focus areas are also provided as a guide to assist students in the selection of electives.

The CIS Department is located in Technology Hall, a new 100,000 sq. ft. facility on the eastern side of the NVCC campus. Classes are held in Smart classrooms featuring instructors' workstations that control an advanced classroom audio visual presentation system. Every CIS classroom also includes student workstations with state of the art computers running the Windows Seven 64 bit Operating System. The CIS Department also has three specialized Smart classrooms that are dedicated to the Networking courses and are connected to an adjacent Server Room.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ACC*H113	Principles of Financial Accounting	3
ENG*H101	Composition	3
MAT*H172	College Algebra	3
COM*H100	Introduction to Communication	3
CSC*H101	Introduction to Computers	3
CSC*H205	Visual Basic I	3
		18
ACC*H117	Principles of Managerial Accounting	3
ENG*H202	Technical Writing	3
CST*H120	Introduction to Operating Systems	3
Elective	CSC Elective††	3
Elective	Science	3-4
		15-16
ENG*H102	Literature and Composition	3
MAT*H167	Statistics with Technology	3
CSC*H231	Database Design I	3
Elective	CSC Programming Elective†	3
Elective	CSC Elective††	3
		15
CSC*H250	Systems Analysis and Design	3
Elective	CSC Elective††	3
Elective	CSC Elective††	3
Elective	CSC Elective††	3
Elective	Behavioral Science or Social Science	3
		15
	Total Credit Hours	**63-64**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate desirable attitudes and work habits–creative thinking, the ability to solve problems, cooperation, good judgment, responsibility, and self-reliance.
2. Understand and respect the employer-employee relationship and appreciate the need to produce high quality work.
3. Communicate clearly, both verbally and in writing.
4. Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.
5. Demonstrate a commitment to professional organizations through attending meetings, seminars, and continuing education programs.
6. Apply knowledge of interpersonal and motivational skills and communication techniques learned in English, speech, psychology, and social sciences when working with customers, peers, and subordinates.
7. Develop sound ethical, philosophical, and moral professional characteristics.
8. Demonstrate a responsible attitude in relationships with employers, fellow employees, and toward the working environment.
9. Demonstrate an appreciation of physical fitness and lifelong recreational activities.
10. Acquire a level of math skills appropriate for student's area of concentration.
11. Be able to list and describe emerging technologies.

Associate Degree Programs

DIRECTED ELECTIVES
†Programming Electives
CSC*H206	Visual Basic II
CSC*H211	VB & ASP.NET Web Programming
CSC*H213	Object Oriented Programming Using C++
CSC*H214	Advanced C++ Programming
CSC*H220	Object Oriented Programming Using Java
CSC*H232	Database Design II
CSC*H237	Database Programming with VB .NET
CSC*H201	COBOL I
CSC*H202	COBOL II

††Other Electives
CSC*H183	Information Systems in Organizations
CSC*H236	Introduction to Client Server Systems
CSC*H295	Cooperative Education Work Experience
CST*H130	Network Essentials I
CST*H235	Network Systems
CST*H236	Advanced Network Systems
CST*H239	Servicing & Support of LANS
CSC*H252	Information Systems Project Management
CST*H274	Network Security Technology

Additional electives which may be substituted for CSC Electives. No more than two course substitutions are authorized.

CSA*H135	Spreadsheet Applications
CSA*H205	Advanced Applications
CJS*H224	Computer Crimes
CJS*H234	Computer Security and Data Protection
BMK*H216	Internet Marketing
DAT*H101	Introduction to Digital Arts
DAT*H108	Digital Imaging I
DAT*H205	Multimedia Authoring II
DAT*H215	Multimedia Web Authoring

COMPUTER INFORMATION SYSTEMS TECHNOLOGY

Focus Areas:

Management Information Systems (MIS)
This focus is designed to prepare students to design, manage and implement business computer applications.

CSC*H183	Information Systems in Organizations
CSC*H206	Visual Basic II
CSC*H211	VB & ASP.NET Web Programming
CSC*H236	Introduction to Client Server Systems
CSC*H237	Database Programming with VB.NET
CSC*H252	Information Systems Project Management

Program Outcomes
Upon successful completion of all program requirements, graduates will:
1. Acquire a familiarization with terminology and structure of various programming languages.
2. Demonstrate the ability to use software tools for program development.
3. Use object oriented programming Languages and graphical user interfaces to solve business problems.
4. Troubleshoot common programming problems and test solutions.
5. Demonstrate a basic understanding of relational database concepts.

Client/Server Systems
This focus area recognizes the need to explore relational databases and object-relational databases in a client/server environment. It considers both the distributed and centralized computing environments within an enterprise information system. This focus area concentrates on the introduction to relational databases and object-relational databases in a client/server environment. Programs such as Oracle, PowerBuilder, and Microsoft SQL Server will be used.

CSC*H183	Information Systems in Organizations
CSC*H213	Object Oriented Programming Using C++
CSC*H232	Database Design II
CSC*H236	Introduction to Client Server Systems

Program Outcomes
Upon successful completion of all program requirements, graduates will:
1. Evaluate the benefits of client/server computing vs. traditional data processing.
2. Successfully analyze and design client/server systems.
3. Incorporate client/server into any given organization.
4. Adapt software design approaches to the client/server model.
5. Manage and control client/server application development projects.
6. Employ intranet and Internet technologies in a given client/server application.

Microcomputer Network Administration
This focus area is designed for those individuals who desire an understanding of personal computer networks and their use in the workplace. The course of study will provide the student with a thorough knowledge of local area network design, network management, installation, servicing and support. Students will possess an understanding of PC network technology and programming, set-up, communications, utilities, and system management.

CST*H130	Network Essentials I
CST*H235	Network Systems
CST*H236	Advanced Network Systems
CST*H239	Servicing & Support of LANS
CST*H274	Network Security Technology

Program Outcomes
Upon successful completion of all program requirements, graduates will:
1. Demonstrate an understanding of Local Area Networks and Wide Area Networks.
2. Understand the difference between different Network Operating Systems.
3. Understand the basic network components including modems, hubs, NIC's, switches, repeaters.
4. Understand network protocols, structure, communication architechture, and standards.
5. Understand and be familiar with basic networking terminology, components, and applications.

Object-Oriented Programming
This focus area recognizes the need to educate students in the area of object-oriented programming and systems design. Students will take elective choices in the area of Object-Oriented Systems (OOS). Programming languages include C++, VISUAL BASIC, and JAVA. An introduction to Client/Server Systems and Applications is also included in this focus area.

CSC*H206	Visual Basic II
CSC*H211	VB & ASP.NET Web Programming
CSC*H213	Object Oriented Programming Using C++
CSC*H214	Advanced C++ Programming
CSC*H220	Object Oriented Programming Using Java
CSC*H237	Database Programming with VB.NET

Program Outcomes
Upon successful completion of all program requirements, graduates will:
1. Understand of basic programming and logic.
2. Understand the differences between structured, unstructured, and object-oriented programming.
3. Demonstrate uses of objects in application programs.
4. Be familiar with terminology and structure of various programming languages.
5. Demonstrate the ability to write, compile and execute in various programming languages.
6. Read and write complex data-structure descriptions.
7. Demonstrate the ability to use software tools for program development.

CRIMINAL JUSTICE/PUBLIC SAFETY

The Criminal Justice/Public Safety Program provides training for career opportunities in law enforcement and policing, and also offers a broad liberal arts education for those students who wish to transfer their earned college credits from the program to four-year academic institutions. Five options are offered in the Program: Corrections, Law Enforcement, Security, Computer Crime Deterrence, and Forensics. Each of these options is in a growing field with increasing opportunities for employment. Although all five options are included in the same program, they offer the student a diverse choice of career fields. These options are explained under each of the options on the following pages.

Cooperative Work Experience

One of the special characteristics of the program is the Cooperative Work Experience, whereby the student, under professional supervision, actually engages in practical hands-on training in the Criminal Justice/Public Safety area of his or her choice. The Cooperative Work Experience is an integral and required part of the Criminal Justice/Public Safety curriculum. All students are required to take one semester of Co-op. The Co-op usually takes place during the second semester of the second year, after the student has satisfied all of the prerequisites. The Co-op experience allows students who have successfully met eligibility criteria to integrate and apply classroom theory to the field-based setting. Students participate under the supervision of qualified professionals in Criminal Justice/Public Safety organizations.

The Coordinator of the Criminal Justice/Public Safety Program or the Division Director should approve all Co-op placements. Students in the Criminal Justice/Public Safety Program should consult with the coordinator of the program before registering for courses, especially for the choice of electives and the cooperative work experience.

Course No.	Title	Credits
ENG*H101	Composition	3
CJS*H101	Introduction to Criminal Justice	3
CJS*H103	Introduction to Security	3
CJS*H102	Introduction to Corrections	3
SOC*H101	Principles of Sociology	3
		15
ENG*H102	Literature and Composition	3
CJS*H220	Criminal Investigation	3
PSY*H111	General Psychology	3
Elective	Sociology†	3
Elective	Mathematics†	3
		15
COM*H100	Introduction to Communication	3
CJS*H217	American Legal Systems	3
SOC*H240	Criminology	3
HIS*H201	U.S. History I	
	or	
POL*H112	State and Local Government	3
BIO*H105	Introduction to Biology	
	or	
BIO*H115	Human Biology	
	or	
PHY*H110	Introductory Physics	4
		16
CJS*H211	Criminal Law I	3
CJS*H105	Introduction to Law Enforcement	3
CJS*H293	Criminal Justice Cooperative Work Experience	3
Elective	Philosophy†	3
Elective	Social Science†	3
		15
	Total Credit Hours	**61**

†DIRECTED ELECTIVES

Mathematics: MAT*H135 or higher, excluding MAT*H137
Sociology: SOC*H201, 210, 211, 221, 230, 240 or 241
Philosophy: PHL*H101, 111, 112, 150, 151, or 180

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Given a set of circumstances and occurrences, present a well written investigative report and any accompanying documents.
2. Explain the basic structure and functions of the American Criminal Justice System.
3. Explain the structure of the Federal and State court systems.
4. Identify the functions and services of private security.
5. Explain the computer crime problem.
6. Explain the development of probation, parole and community supervision.
7. Explain the development of the corrections system in the United States.
8. Explain what effects the social conditions in the United States have upon the criminal justice system.
9. Read and explain relevant literature in the field of Criminal Justice.
10. Demonstrate the various methods of taking written statements and confessions.
11. Define the term investigation and the objectives of a criminal investigation.
12. State the psychological theories that may explain criminal behavior.
13. Identify the major sociological theories of criminal behavior.
14. Describe and evaluate the ways in which data are collected on crimes, criminals, and victims.
15. Present oral reports before a group.
16. Explain some of the basic issues and problems in policing, the courts, and corrections in America today.
17. Explain the Bill of Rights and those specific rights guaranteed by the First, Fourth, Fifth, Sixth, Eighth and Fourteenth Amendments.
18. Explain the contributions of both the classical and positivist schools of criminology.
19. Complete fundamental research procedures of criminological research.
20. Show how events in early American history influenced the development of the American Criminal Justice System.
21. Explain what bearing state and local political issues have on the Criminal Justice System.
22. Identify the major biological theories of criminal behavior.
23. Explain how the concepts of Physics can be applied to the criminalistic laboratory.
24. Explain the concept of criminal law, including its purpose as an agent of social control.
25. Define and explain the elements which identify the offenses of: assault, sex crimes, burglary, arson, larceny, robbery and homicide.
26. Explain how state and local law enforcement agencies originated in the United States and how they currently function.
27. Identify the areas that establish a police officer's authority for arrest.
28. Demonstrate work skills relevant to a criminal justice agency.
29. Integrate the theoretical and practical application of the Criminal Justice Program.
30. Explain the impact of the development of modern thought on the Criminal Justice System.
31. Explain the reliance of criminal justice on the social sciences.

CRIMINAL JUSTICE/PUBLIC SAFETY

Computer Crime Deterrence Option

The program provides an excellent preparation for students to obtain entry-level positions in the field of computer crime deterrence. It also provides preparation and assistance to students for successful transfer to other institutions of higher education. Work has already begun to strengthen articulation agreements with four-year colleges.

Specifically, the Computer Crime Deterrence Option is designed to prepare students for the successful transfer to other institutions of higher learning as well as for entry level job opportunities in the field of law enforcement and computer security. It provides the essential skills required to gain and to maintain employment at entry level positions as police officers on the state and local level, Federal law enforcement officers, computer crime investigators and computer security specialists.

Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.

Course No.	Title	Credits
ENG*H101	Composition	3
CJS*H101	Introduction to Criminal Justice	3
CSC*H101	Introduction to Computers	3
CJS*H234	Computer Security and Data Protection	3
SOC*H101	Principles of Sociology	3
		15
ENG*H102	Literature and Composition	3
CST*H120	Introduction to Operating Systems	3
PSY*H111	General Psychology I	3
Elective	Sociology†	3
Elective	Mathematics†	3
		15
COM*H100	Introduction to Communication	3
CJS*H217	American Legal Systems	3
SOC*H240	Criminology	3
HIS*H201	U.S. History I	
	or	
POL*H112	State and Local Government	3
BIO*H105	Introduction to Biology	
	or	
BIO*H115	Human Biology	
	or	
PHY*H110	Introductory Physics	4
		16
CJS*H211	Criminal Law I	3
CJS*H224	Computer Crimes	3
CJS*H293	Criminal Justice Cooperative Work Experience	3
PHL*H111	Ethics	3
CJS*H235	Information Warfare and Security	3
		15
	Total Credit Hours	**61**

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Given a set of circumstances and occurrences, present a well written investigative report and any other accompanying documents.
2. Explain the basic structure and functions of the American Criminal Justice System.
3. Understand the growing dependence and reliance on personal computers in our society.
4. Understand the uses of database management software and its applicability to the business environment.
5. Identify a variety of Network Operating System Software and the features and functionality each provides.
6. Discuss the various problems encountered in the area of information security.
7. Identify current strategies used to protect data.
8. List and describe some of the more common viruses that have infected computer systems.
9. Develop security measures to neutralize various threats and risks.
10. Describe several forms of computer hacking.
11. Explain the purpose and use of the memory management software.
12. Explain various Network Operating Systems (NOS) used in Local Area Networks (LANS).
13. State the psychological theories that may explain criminal behavior.
14. Identify the major sociological theories of criminal behavior.
15. Explain the Bill of Rights and those specific rights guaranteed by the First, Fourth, Fifth, Sixth, Eight and Fourteenth Amendments.
16. Explain the contributions of both the classical and positivist schools of criminology.
17. Explain the concept of criminal law, including its purpose as an agent of social control.
18. Identify methods used to safeguard information.
19. Discuss the legal issues affecting the recovery of evidence during investigations involving the Internet.
20. List and describe the civil liability issues associated with Internet investigations.
21. Explain the threats that may be expected in the areas of physical security, personnel security, communications security, and operations security.
22. Explain the investigative process as it relates to computer crime.
23. Explain the problem of establishing a crime scene for a computer crime.
24. Demonstrate work skills relevant to a criminal justice agency.
25. Discuss the concepts of offensive and defensive information warfare.
26. Identify the specific threats to military, commercial, and personal computers.
27. Describe the various information warfare technologies.
28. Explain how information warfare helped to win the Gulf War.
29. Explain how information can be pirated and what can be done about it.

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†DIRECTED ELECTIVES
  Mathematics: MAT*H135 or higher, excluding MAT*H137
  Sociology: SOC*H201, 210, 211, 221, 230, 240 or 241
  Philosophy: PHL*H101, 111, 112, 150, 151, or 180

CRIMINAL JUSTICE/PUBLIC SAFETY

Corrections Option

The modern Corrections System needs people with ability, sensitivity and professional training. The Corrections Option provides training for career opportunities in Corrections and also offers a broad liberal arts education for those students who wish to transfer their earned college credits from the program to four-year academic institutions. To be admitted formally to the program, a student must complete all prerequisite courses (if applicable) and must pass CJS*H101 Introduction to Criminal Justice with a minimum grade of "C". Employment opportunities after successful training in the Corrections Option include, but are not limited to, Corrections Officer, Corrections Administration, Probation Officer, Parole Officer and Correctional Counselor.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
CJS*H101	Introduction to Criminal Justice	3
CJS*H102	Introduction to Corrections	3
CJS*H261	Victim and Offender Mediation	3
SOC*H101	Principles of Sociology	3
		15
ENG*H102	Literature and Composition	3
CJS*H246	Juvenile Corrections	3
PSY*H111	General Psychology I	3
Elective	Sociology†	3
Elective	Mathematics†	3
		15
COM*H100	Introduction to Communication	3
CJS*H217	American Legal Systems	3
SOC*H240	Criminology	3
HIS*H201	U.S. History I	
	or	
POL*H112	State and Local Government	3
BIO*H105	Introduction to Biology	
	or	
BIO*H115	Human Biology	
	or	
PHY*H110	Introductory Physics	4
		16
CJS*H211	Criminal Law I	3
CJS*H241	Correctional Counseling I	3
CJS*H293	Criminal Justice Cooperative Work Experience	3
Elective	Philosophy†	3
CJS*H244	Community Based Corrections	3
		15
	Total Credit Hours	**61**

†DIRECTED ELECTIVES

Mathematics: MAT*H135 or higher, excluding MAT*H137
Sociology: SOC*H201, 210, 211, 221, 230, 240 or 241
Philosophy: PHL*H101, 111, 112, 150, 151, or 180

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Present a well written investigative report and any other accompanying documents when given a set of circumstances and occurrences.
2. Explain the basic structure and functions of the American Criminal Justice System.
3. Explain the structure of the federal and state court systems.
4. Explain the development of probation, parole and community supervision.
5. Explain the development of the correctional system in the United States.
6. Explain the role of the victim in rehabilitating the offender.
7. Identify methods used to manage conflict.
8. Explain what effects the social conditions in the United States have upon the criminal justice system.
9. Read and explain relevant literature in the field of criminal justice.
10. Explain the development of the juvenile corrections system.
11. Explain the specific problems of juveniles in the criminal justice system.
12. State the psychological theories that may explain criminal behavior.
13. Identify the major sociological theories of criminal behavior.
14. Describe and evaluate the ways in which data are collected on crimes, criminals and victims.
15. Present oral reports before a group.
16. Explain the Bill of Rights and those specific rights guaranteed by the First, Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments.
17. Explain some of the basic issues and problems in policing, the courts, and corrections in America today.
18. Explain the contributions of both the classical and positivist schools of criminology.
19. Complete fundamental research procedures of criminology research.
20. Show how events from early American history influenced the development of the American Criminal Justice System.
21. Explain what bearing national political issues have on the criminal justice system.
22. Identify the major biological theories of criminal behavior.
23. Explain how the concepts of physics can be applied to the criminalistic's laboratory.
24. Explain the concept of criminal law, including its purpose as an agent of social control.
25. Define and explain the element of: assault, sex crimes, burglary, arson, larceny, robbery and homicide.
26. List the various forms of intervention techniques available in corrections.
27. Explain how correctional counseling works.
28. Demonstrate work skills relevant to a criminal justice agency.
29. Integrate the theoretical and practical applications of the Criminal Justice Program.
30. Explain the impact of the development of modern thought on the Criminal Justice System.
31. List the alternatives to incarceration that are currently in use.
32. Explain the concept of community corrections.

Associate Degree Programs

CRIMINAL JUSTICE/PUBLIC SAFETY

Forensics Option

The Forensics Option is a two-pronged approach to employment in the Criminal Justice filed. On the one hand, the Option will prepare students for entry-level employment in the field of law enforcement on the local, state , and federal level. On the other hand, the Option will prepare students for successful transfer to other institutions of higher learning where they will obtain the baccalaureate degree necessary for employment criminal laboratories.

The program will provide an academic and learning experience that promotes common sense, ethics, civic responsibility, cultural appreciation, and respect for diversity. These characteristics are inherent issues and will be discussed in every required course in the program.

The program has a strong connection with the community. Representatives of some area agencies such as the State Police Crime Lab have served as advisors in the development of the program to ensure that it contributes to the production of an educated and trained work force that responds to the needs of the region.

Specifically, the Forensics Option is designed to prepare students for the successful transfer to other institutions of higher learning as well as for entry level job opportunities in the field of law enforcement. It provides the essential skills required to gain and to maintain employment at entry level positions as police officers on the state and local level as well as Federal law enforcement officers.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
CJS*H101	Introduction to Criminal Justice	3
SOC*H101	Principles of Sociology	3
Elective	Criminal Justice	3
CJS*H229	Crime Scene Investigation	3
		15
ENG*H102	Literature	3
PSY*H111	General Psychology I	**3**
PSY*H217	Psychology of Criminal Behavior	3
CJS*H225	Forensic Science	3
Elective	Mathematics †	3
		15
COM*H100	Introduction to Communication	3
BIO*H115	Human Biology and Lab	4
HIS*H201	U.S. History I	3
	or	
POLS*H111	American Government	
CJS*H217	American Legal Systems	3
SOC*H240	Criminology	3
		16
CJS*H105	Introduction to Law Enforcement	3
CJS*H211	Criminal Law I	3
CJS*H255	Ethical Issues in Criminal Justice	3
CJS*H293	CJ Coop Work Experience	3
Elective	Philosophy†	3
		15
	Total Credit Hours	**60-61**

†ELECTIVES
  Mathematics: MAT*H135 or higher, excluding MAT*H137
  Philosophy: PHL*H101, 111, 112, 150, 151, 180

Program Outcomes

The Criminal Justice/Public Safety graduate should be able to:

1. Given a set of circumstances and occurrences, present a well written investigative report and any other accompanying documents.
2. Explain the basic structure and functions of the American Criminal Justice System.
3. Explain the structure of the Federal and State court systems.
4. Manage a crime scene.
5. Recognize evidence at a crime scene.
6. Collect, preserve and package evidence.
7. Mark and record evidence.
8. Discuss the capabilities of the crime lab.
9. Expalin the concept of transfer of evidence.
10. Conduct basic laboratory analysis.
11. Conduct field tests.
12. Identify and describe a crime scene.
13. Discuss the capabilities of various pieces of equipment used at a crime scene.
14. Conduct a crime scene search.
15. Name the types of evidence
16. Describe the "linkage triangle" for physical evidence.
17. Explain what effects the social conditions in the United States have upon the criminal justice system.
18. Read and explain relevant literature in the field of Criminal Justice.
19. List the major categories of physical evidence.
20. Explain the difference between class and individual characteristics of physical evidence.
21. Explain the legal requirements effecting the crime scene.
22. Explain the concept of chain of custody.
23. Explain the scientific requirements effecting the crime scene.
24. Explain the responsibilities of the first responder at the crime scene.
25. State the psychological theories that may explain criminal behavior.
26. Identify the major sociological theories of criminal behavior.
27. Describe and evaluate the ways in which data are collected on crimes, criminals and victims.
28. Present oral reports before a group.
29. Explain the Bill of Rights and those specific rights guaranteed by the First, Fourth, Fifth, Sixth, Eight and Fourteenth Amendments.
30. Explain some of the basic issues and problems in policing, the courts, and corrections in America today.
31. Explain the contributions of both problems in policing, the courts, and corrections in America today. the classical and positivist schools of criminology.
32. Complete fundamental research procedures of criminology research.
33. Show how events from early American history influenced the Development of the American Criminal Justice System.
34. Explain what bearing state and local political issues have on the criminal justice system.
37. Explain the concept of criminal law, including its purpose as an agent of social control.
38. Define and explain the elements of:assault, sex crimes, burglary, arson, larceny, robbery and homicide.
39. Demonstrate work skills relevant to a criminal justice agency.
40. Integrate the theoretical and practical application of the Criminal Justice Program.
41. Explain the impact of the development of ethical thought on the Criminal Justice System.

CRIMINAL JUSTICE/PUBLIC SAFETY

Law Enforcement Option

The field of law enforcement needs people with ability, sensitivity and professional training. The Law Enforcement Option provides training for career opportunities in law enforcement and policing and also offers a broad liberal arts education for those students who wish to transfer their earned college credits from the program to four-year academic institutions. To be admitted formally to the program, a student must complete all prerequisite courses (if applicable) and must pass CJS*H101 Introduction to Criminal Justice with a minimum grade of "C". Employment opportunities after successful training in the Law Enforcement Option include, but are not limited to, municipal and state police officers, federal law enforcement officers, environmental protection enforcement officers, fish and game wardens, and court investigators. The general objective of the option is to prepare students for jobs in the law enforcement field or to transfer to a baccalaureate degree program.

Connecticut Police Academy Graduate

Successful graduates of the Connecticut Police Academy are granted a maximum of nine (9) credits toward their degree in the Criminal Justice/Public Safety Program. Graduates from the Academy are granted credits for CJS*H220 Criminal Investigation, CJS*H105 Introduction to Law Enforcement, and CJS*H293 Criminal Justice Cooperative Work Experience, with an additional eighty (80) hours of field work and appropriate scholarly paper.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
CJS*H101	Introduction to Criminal Justice	3
CJS*H105	Introduction to Law Enforcement	3
CJS*H280	Victimology	3
SOC*H101	Principles of Sociology	3
		15
ENG*H102	Literature and Composition	3
CJS*H220	Criminal Investigation	3
PSY*H111	General Psychology I	3
Elective	Sociology†	3
Elective	Mathematics†	3
		15
COM*H100	Introduction to Communication	3
CJS*H217	American Legal Systems	3
SOC*H240	Criminology	3
HIS*H201	U.S. History I	
	or	
POL*H112	State and Local Government	3
BIO*H105	Introduction to Biology	
	or	
BIO*H115	Human Biology	
	or	
PHY*H110	Introductory Physics	4
		16
CJS*H211	Criminal Law I	3
CJS*H210	Constitutional Law	3
CJS*H293	Criminal Justice Cooperative Work Experience	3
Elective	Philosophy†	3
CJS*H255	Ethical Issues in Criminal Justice	3
		15
	Total Credit Hours	**61**

†DIRECTED ELECTIVES
  Mathematics: MAT*H135 or higher, excluding MAT*H137
  Sociology: SOC*H201, 210, 211, 221, 230, 240 or 241
  Philosophy: PHL*H101, 111, 112, 150, 151, or 180

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Present a well written investigative report and any other accompanying documents when given a set of circumstances and occurrences.
2. Explain the basic criminal justice structure and functions of the American Criminal Justice System.
3. Explain the structure of the federal and state court systems.
4. Explain how state and local law enforcement agencies originated in the United States and how they currently function.
5. Identify the areas that establish a police officer's authority to arrest.
6. Explain the concept of victim's rights.
7. Explain how a criminal selects a victim.
8. Explain what effects the social conditions in the United States have upon the criminal justice system.
9. Read and explain relevant literature in the field of criminal justice.
10. Demonstrate the various investigation methods of taking written statements and confessions.
11. Define the term investigation and the objectives of a criminal investigation.
12. State the psychological theories that may explain criminal behavior.
13. Identify the major sociological theories of criminal behavior.
14. Describe and evaluate the ways in which data are collected on crimes, criminals and victims.
15. Present oral reports before a group.
16. Explain the Bill of Rights and those specific rights guaranteed by the First, Fourth, Fifth, Sixth, Eighth and Fourteenth Amendments.
17. Explain some of the basic issues and problems in policing, the courts, and corrections in America today.
18. Explain the contributions of both the classical and positivist schools of criminology.
19. Complete fundamental research procedures of criminology research.
20. Show how events from early American history influenced the development of the American Criminal Justice System.
21. Explain what bearing national political issues have on the criminal justice system.
22. Identify the major biological theories of criminal behavior.
23. Explain how the concepts of physics can be applied to the criminalistic's laboratory.
24. Explain the concept of criminal law, including its purpose as an agent of social control.
25. Define and explain the elements of: assault, sex crimes, burglary, arson, larceny, robbery and homicide.
26. List and explain the constitutional law relevant to Supreme Court cases regarding search and seizure.
27. List and explain the Miranda Warnings.
28. Demonstrate work skills relevant to a criminal justice agency.
29. Integrate the theoretical and practical application of the Criminal Justice Program.
30. Explain the impact of the development of modern thought on the criminal justice system.
31. Explain the corruption hazards faced by law enforcement officers.
32. Recite and explain the Law Enforcement Officers' Code of Ethics.

Associate Degree Programs

CRIMINAL JUSTICE/PUBLIC SAFETY

Security Option

The security industry needs people with ability, sensitivity and professional training. The Security Option provides training for career opportunities in the security industry and also offers a broad liberal arts education for those students who wish to transfer their earned college credits from the program to four-year academic institutions. To be admitted formally to the program, a student must complete all prerequisite courses (if applicable) and must pass CJS*H101 Introduction to Criminal Justice with a minimum grade of "C". Employment opportunities after successful training in the Security Option include, but are not limited to, retail security, physical security, corporate security, private investigations, executive protection, loss prevention, surveillance and undercover operations. The general objective of the option is to prepare students for jobs in the security field or to transfer to a baccalaureate degree program.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
CJS*H101	Introduction to Criminal Justice	3
CJS*H103	Introduction to Security	3
CJS*H233	Institutional Security	3
SOC*H101	Principles of Sociology	3
		15
ENG*H102	Literature and Composition	3
CJS*H232	Industrial and Retail Security	3
PSY*H111	General Psychology I	3
Elective	Sociology†	3
Elective	Mathematics†	3
		15
COM*H100	Introduction to Communication	3
CJS*H217	American Legal Systems	3
SOC*H240	Criminology	3
HIS*H201	U.S. History I	
	or	
POL*H112	State and Local Government	3
BIO*H105	Introduction to Biology	
	or	
BIO*H115	Human Biology	
	or	
PHY*H110	Introductory Physics	4
		16
CJS*H211	Criminal Law I	3
CJS*H218	Legal Aspects of Security	3
CJS*H293	Criminal Justice Cooperative Work Experience	3
Elective	Philosophy†	3
CJS*H230	Security Mangement	3
		15
	Total Credit Hours	**61**

†DIRECTED ELECTIVES
   Mathematics: MAT*H135 or higher, excluding MAT*H137
   Sociology: SOC*H201, 210, 211, 221, 230, 240 or 241
   Philosophy: PHL*H101, 111, 112, 150, 151, or 180

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Present a well written investigative report and any other accompanying documents when given a set of circumstances and occurrences.
2. Explain the basic structure and functions of the American Criminal Justice System.
3. Explain the structure of the federal and state court systems.
4. Identify the functions and services of private security.
5. Explain the computer crime problem.
6. Explain how institutional security may differ from other types of security.
7. Explain the various security systems in use in institutional establishments.
8. Explain what effects the social conditions in the United States have upon the criminal justice system.
9. Read and explain relevant literature in the field of criminal justice.
10. Explain the problems of theft from industrial and retail establishments.
11. Explain the various security systems in use in industrial and retail establishments.
12. State the psychological theories that may explain criminal behavior.
13. Identify the major sociological theories of criminal behavior.
14. Describe and evaluate the ways in which data are collected on crimes, criminals and victims.
15. Present oral reports before a group.
16. Explain the Bill of Rights and those specific rights guaranteed by the First, Fourth, Fifth, Sixth, Eighth and Fourteenth Amendments.
17. Explain some of the basic issues and problems in policing, the courts, and corrections in America today.
18. Explain the contributions of both the classical and positivist schools of criminology.
19. Complete fundamental research procedures of criminology research.
20. Show how events from early American history influenced the development of the American Criminal Justice System.
21. Explain what bearing national political issues have on the criminal justice system.
22. Identify the major biological theories of criminal behavior.
23. Explain how the concepts of physics can be applied to the criminalistic's laboratory.
24. Explain the concept of criminal law, including its purpose as an agent of social control.
25. Define and explain the elements of: assault, sex crimes, burglary, arson, larceny, robbery and homicide.
26. List and explain some of the legal problems that may be encountered in the field of security.
27. Explain the problem of liability as it applies to the field of security.
28. Demonstrate work skills relevant to a criminal justice agency.
29. Integrate the theoretical and practical application of the Criminal Justice Program.
30. Explain the impact of the development of modern thought on the criminal justice system.
31. Explain the legal problems encountered in security management and supervision.
32. Explain the supervision practices used in the security field.

DIGITAL ARTS TECHNOLOGY

The Digital Arts Degree is a comprehensive and tightly knit sequence of courses designed to provide the student with an in-depth understanding of interactive software development and digital media design. The program mission and focus synthesizes interactive design principles, human-computer interaction theory, software engineering structures and instructional design methods with visual and audio design principles to produce interactive software/media designers eligible for career paths in fine arts, advertising, audio production, broadcasting, education, electronic publishing, graphic art production, instructional design, marketing, and Web development. Digital artists have become an integral part of the communication media, creative arts, business, and education and positions in interactive software development and media design exist, and continue to grow, in virtually every profession.

The Digital Arts Degree provides students with a basic general education component that is transferable to four-year institutions. In addition, through a series of options, it leads students to three areas of interest. Listed below are the options, including related professional opportunities.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Digital Arts Technology Core Curriculum	*Audio/ Video Option*	*Graphics/ Animation Option*	*Multimedia/ Web Authoring Option*	
GENERAL EDUCATION				
(must be 1/3 program total)				*Credits*
Composition	ENG*H101	ENG*H101	ENG*H101	3
Literature and Composition	ENG*H102	ENG*H102	ENG*H102	3
Introduction to Communication	COM*H100	COM*H100	COM*H100	3
Two-Dimensional Design	ART*H121	ART*H121	ART*H121	
	or	**or**	**or**	
Photography I	ART*H141	ART*H141	ART*H141	
	or	**or**	**or**	
Introduction to Graphic Design	GRA*H150	GRA*H150	GRA*H150	3
Math Elective (MAT*H135 or higher, excluding MAT*H137)	MAT*H146 or 167	MAT*H146 or 167	MAT*H146 or 167	3
Science Elective	Science Elective	Science Elective	Science Elective	3-4
Social Science Elective	Social Science Elective	Social Science Elective	Social Science Elective	3
Behavioral Science Elective (PSY*H111, SOC*H101, or ANT*H101)	Behavioral Science Elective	Behavioral Science Elective	Behavioral Science Elective	3
				24/25
SPECIALIZED COURSES				
Introduction to Software Applications	CSA*H105	CSA*H105	CSA*H105	3
Introduction to Multimedia	DAT*H101	DAT*H101	DAT*H101	
Multimedia Authoring I	DAT*H104	DAT*H104	DAT*H104	3
Digital Imaging	DAT*H108	DAT*H108	DAT*H108	3
Digital Video Production	DAT*H110	DAT*H110	DAT*H110	3
Multimedia Authoring II	DAT*H205	DAT*H205	DAT*H205	3
				18
OPTION *(15 credits maximum)*	MUS*H218 – Electronic Music Composition/ Audio Technology I	DAT*H106 – Digital Design	CSC*H220 – Object-Oriented Prog. JAVA or CSC*H205 – Visual Basic I or CSC*H213 – Object Orient Programming Using C++	3
	DAT*H220 – Acoustics and Sound Design	DAT*H212 – 3D Graphics & Animation I		
	DAT*H224 – Digital Video Production II	DAT*H230 – Digital Imaging II	DAT*H116 – Interactive Media Design	3
	DAT*H226 – Motion Graphics for Film & Video	DAT*H234 – 3D Graphics & Animation II	DAT*H215 – Multimedia Web Authoring	3
	DAT*H290 – Digital Arts Project	DAT*H290 – Digital Arts Project	DAT*H240 – Multimedia Authoring III	3
			DAT*H290 – Digital Arts Project	3
				15
DIRECTED ELECTIVES				
Digital Arts or Arts Elective	Digital Arts or Arts Elective	Digital Arts or Arts Elective	Digital Arts or Arts Elective	3
Digital Arts or Arts Elective	Digital Arts or Arts Elective	Digital Arts or Arts Elective	Digital Arts or Arts Elective	3
				6
			Total Credit Hours	**63-64**

Associate Degree Programs

DIGITAL ARTS TECHNOLOGY

Audio/Video Option

The **Audio/Video Option** will focus on the detailed study of acoustics, audio production, recording engineering, sound design, motion graphics, visual composition, and non-linear video editing and production. Students will be qualified to seek positions in the fields of audio production, video production, post-production, advertising, interactive design, and electronic publishing.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below.*
> *Refer to page 51 for a listing of courses that will satisfy elective requirements.*

GENERAL EDUCATION
Credits
(must be 1/3 program total)

ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
ART*H121	Two-Dimensional Design	
	or	
ART*H141	Photography I	
	or	
GRA*H150	Introduction to Graphic Design	3
Elective	Mathematics†	3
Elective	Science	3-4
Elective	Social Science	3
Elective	Behavioral Science††	3
	Total	**24-25**

SPECIALIZED COURSES

CSA*H105	Introduction to Software Applications	3
DAT*H101	Introduction to Digital Arts	3
DAT*H104	Multimedia Authoring I	3
DAT*H108	Digital Imaging I	3
DAT*H110	Digital Video Production I	3
DAT*H205	Multimedia Authoring II	3
	Total	**18**

OPTION *(15 credits maximum)*

MUS*H218	Electronic Music Composition/ Audio Technology I	3
DAT*H220	Acoustics and Sound Design	3
DAT*H224	Digital Video Production II	3
DAT*H226	Motion Graphics for Film & Video	3
DAT*H290	Digital Arts Project	3
	Total	**15**

DIRECTED ELECTIVES

Digital Arts or Arts Elective	3
Digital Arts or Arts Elective	3
Total	**6**
Total Credit Hours	**63-64**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Analyze and evaluate the properties of sound, human hearing, psychoacoustics, electro-acoustic and digital sound reproduction systems.
2. Design and edit digital and analog audio files.
3. Synthesize and apply the processes involved in transforming a concept to a video production.
4. Design, produce, edit, and complete original video projects.
5. Utilize state-of-the-art special effect techniques currently used in the film and video industry.
6. Complete significant projects terminating in deliverable software/media products with technical documentation.

†MAT*H135 or higher, excluding MAT*H137
††PSY*H111, SOC*H101, or ANT*H101

DIGITAL ARTS TECHNOLOGY

Graphics/Animation Option

The **Graphics/Animation Option** will focus on the detailed study of two-dimensional digital graphics design, three-dimensional object modeling, and digital animation. Students will be qualified to seek positions in the fields of broadcasting, character animation, electronic publishing, graphic art production, and Web design.

> Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.

GENERAL EDUCATION   **Credits**
(must be 1/3 program total)

ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
ART*H121	Two-Dimensional Design	
	or	
ART*H141	Photography I	
	or	
GRA*H150	Introduction to Graphic Design	3
Elective	Mathematics†	3
Elective	Science	3-4
Elective	Social Science	3
Elective	Behavioral Science††	3
	Total	**24-25**

SPECIALIZED COURSES

CSA*H105	Introduction to Software Applications	3
DAT*H101	Introduction to Digital Arts	3
DAT*H104	Multimedia Authoring I	3
DAT*H108	Digital Imaging I	3
DAT*H110	Digital Video Production I	3
DAT*H205	Multimedia Authoring II	3
	Total	**18**

OPTION *(15 credits maximum)*

DAT*H106	Digital Design	3
DAT*H212	3D Graphics & Animation I	3
DAT*H230	Digital Imaging II	3
DAT*H234	3D Graphics & Animation II	3
DAT*H290	Digital Arts Project	3
	Total	**15**

DIRECTED ELECTIVES

Digital Arts or Arts Elective	3
Digital Arts or Arts Elective	3
Total	**6**
Total Credit Hours	**63-64**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Design, edit and manipulate digital graphic and image files.
2. Utilize advanced techniques for character modeling and the design of virtual space.
3. Design, model, and animate complete 3-dimensional virtual worlds.
4. Utilize state-of-the-art 3D special effect techniques currently used in the film and video industry.
5. Utilize current digital imaging equipment and techniques to create/acquire content
6. Complete significant projects terminating in deliverable software/media products with technical documentation.

Associate Degree Programs

†MAT*H135 or higher, excluding MAT*H137
††PSY*H111, SOC*H101, or ANT*H101

DIGITAL ARTS TECHNOLOGY

Multimedia/Web Authoring Option

The **Multimedia/Web Authoring Option** will focus on the detailed study of the development of interactive multimedia systems, multimedia authoring, programming/scripting languages, and project development and management. Students will be qualified to seek positions in the fields of advertising, electronic publishing, interactive design, multimedia software authoring, and Web design and development.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

GENERAL EDUCATION		Credits
(must be 1/3 program total)		
ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
ART*H121	Two-Dimensional Design	
	or	
ART*H141	Photography I	
	or	
GRA*H150	Introduction to Graphic Design	3
Elective	Mathematics†	3
Elective	Science	3-4
Elective	Social Science	3
Elective	Behavioral Science††	3
	Total	**24-25**

SPECIALIZED COURSES		
CSA*H105	Introduction to Software Applications	3
DAT*H101	Introduction to Digital Arts	3
DAT*H104	Multimedia Authoring I	3
DAT*H108	Digital Imaging I	3
DAT*H110	Digital Video Production I	3
DAT*H205	Multimedia Authoring II	3
	Total	**18**

OPTION *(15 credits maximum)*

CSC*H220	Object Orient Programming Using JAVA	3
	or	
CSC*H205	VISUAL BASIC I	
	or	
CSC*H213	Object Orient Programming Using C++	3
DAT*H116	Interactive Media Design	3
DAT*H215	Multimedia Web Authoring	3
DAT*H240	Multimedia Authoring III	3
DAT*H290	Digital Arts Project	3
	Total	**15**

DIRECTED ELECTIVES	
Digital Arts or Arts Elective	3
Digital Arts or Arts Elective	3
Total	**6**
Total Credit Hours	**63-64**

†MAT*H135 or higher, excluding MAT*H137
††PSY*H111, SOC*H101, or ANT*H101

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Utilize current design and delivery techniques to design advanced multimedia systems.
2. Utilize the phases of the project development life-cycle to assist in the design and completion of software development projects.
3. Storyboard, design, and implement multimedia systems.
4. Design and implement accessibility-compliant user interfaces.
5. Design World Wide Web Interactive technologies.
6. Complete significant projects terminating in deliverable software/media products with technical documentation.

DRUG and ALCOHOL RECOVERY COUNSELOR (DARC)

The Drug and Alcohol Recovery Counselor (DARC) program provides education and training for persons seeking employment, job advancement, or transfer to baccalaureate and/or graduate degree programs in the field of addictions counseling. Students who complete the DARC courses meet the Connecticut Certification Board (CCB) 360 hours of education/training requirements in preparation towards becoming credentialed as a Certified Addiction Counselor. Additional hours of paid direct work experience are needed to meet the requirements for Provisional or Standard certification as an Addiction Counselor by the State of Connecticut.

Employment
Students who graduate with a DARC Associates degree are highly sought after for entry level opportunities as substance abuse counselors in public and private agencies such as outpatient care centers, residential mental health facilities, local hospitals, prevention organizations, youth service agencies, and the criminal justice system.

Curriculum
The DARC Program consists of two years of academic study which includes general education courses, DARC specialty courses and a full year (fall/spring) internship. Students should take DARC H101 and H111 before enrolling in any other DARC courses as they provide the foundation for the remaining course work. DARC H111 is a prerequisite for DAR H220 and DAR H213. DAR H251 and H252 require formal admission and approval by the DARC Coordinator. All of the DARC courses (DAR 101, 111, 158, 112, 220, 213) are open to any students at the college, provided they have met the prerequisite of ENG H063.

Program Admissions and Internship
Acceptance into the full year internship (DAR H251 and DAR H252) is selective. Interested applicants must have completed DAR H101, H111, H112 and H158 with a C or better, complete a formal DARC Application and participate in the screening and interview process which occurs during the spring semester. Students must be formally accepted into the DARC internship to register for DAR H251 Counseling Internship I and DAR H252 Counseling Internship II.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG *H101	Composition	3
COM *H100	Communications	3
PSY *H111	General Psychology I	3
DAR *H101	Public Health Issues in Abuse and Addiction	3
DAR *H111	Addiction Counseling I	3
		15
ENG *H102	Literature and Composition	3
SOC *H101	Principles of Sociology	3
PSY *H245	Abnormal Psychology	3
DAR *H112	Group Counseling Theory and Techniques	3
DAR *H158	Biology of Addiction	3
		15
BIO *H110	Principles of the Human Body or	
BIO *H115	Human Biology & lab	3-4
MAT *H135	Topics in Contemporary Mathematics or	
MAT *H167	Principles of Statistics	3
CSA *H105	Introduction to Computer Applications	3
DAR *H251	Counseling Internship I	6
DAR *H220	Co-Occurring Counseling	3
		18-19
Fine Arts	Fine Arts Elective	3
Social Science	History recommended	3
DAR *H252	Counseling Internship II	6
DAR *H213	Addiction Counseling II	3
		15
	Total Credit Hours	**63-64**

Program Outcomes
Upon successful completion of the DARC Program the graduate should be able to:

1. Describe the physical, emotional and psychological basis of addiction.
2. Define the causes and characteristics of substance dependence and addiction relevant to various populations and cultures.
3. Define and apply counseling theories to addiction counseling which include Adlerian, Existential, Person-Centered, Gestalt, Reality, Behavior, Motivational Interviewing, Brief Therapy, and Cognitive Behavioral perspectives.
4. Define and demonstrate ethical behavior within the counseling profession.
5. Demonstrate knowledge and skills related to relapse prevention education.
6. Describe the categories of drugs and effects on physiological functioning.
7. Describe the characteristics of individuals with co-occurring disorders.
8. Demonstrate the ability to develop/implement treatment plans for individuals with co-occurring disorders.
9. Co-facilitate group counseling sessions under supervision.
10. Demonstrate ability to develop/write a treatment/discharge plans.
11. Demonstrate understanding of the screening, intake and evaluation process in addiction treatment.
12. Demonstrate ability to keep accurate records of group/individual process, treatment and discharge planning.
13. Describe the steps involved in crisis intervention.
14. Describe different self-help groups available for individuals with co-occurring disorders and addiction issues.
15. Describe the effects of substance abuse on the family and stages of recovery for families.
16. Describe the stages of change model and its application to treatment of addiction.
17. Describe the use of multicultural counseling skills related to the assessment, treatment and aftercare issues for persons of different gender, ethnicity, disability, adolescents, the elderly and homeless.
18. Accurately describe the overall role of the counselor as a member of the care-giving team.
19. Describe and demonstrate the transdisciplinary foundations and competencies required of addiction counselors (TAP 21).

Associate Degree Programs

EARLY CHILDHOOD EDUCATION

This two-year program in Early Childhood Education will lead to the associate in science degree. The curriculum prepares students for transfer to baccalaureate programs as well as for immediate employment in early childhood programs such as child care centers. Head Start, preschool, and other similar programs. To be admitted formally to the program, the student must receive a grade of "C –" or better in each of the Early Childhood Education courses as well as meet admission requirements which may include an entrance interview during the first semester.

Practical experience is received by observing and assisting in a variety of Early Childhood facilities. Students are required to student teach at the College's Child Development Center. Such experience provides opportunities to implement knowledge received in the college classroom. Students in the Early Childhood program are required to consult with their academic advisor before registering for courses and scheduling the required practicum hours to be fulfilled. Student teaching hours must be done in licensed, accredited Pre-Kindergarten programs in order for those hours to apply toward a State of Connecticut Head Teacher certificate.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
PSY*H111	General Psychology	3
ECE*H101	Introduction to Early Childhood Education	3
ECE*H109	Science & Math For Children	3
BIO*H105	Introduction to Biology	
	or	
BIO*H115	Human Biology & Lab	4
		16
ENG*H102	Literature and Composition	3
ECE*H231	Early Language and Literacy Development	3
ECE*H106	Music and Movement Education	3
ECE*H103	Creative Experiences for Children	3
ECE*H141	Infant/Toddler Growth and Development†	
	or	
ECE*H206	Administration and Supervision of Early Childhood Programs†	3
PSY*H204	Child and Adolescent Development	3
		18
ECE*H210	Observation and Participation	3
SOC*H101	Principles of Sociology	3
Elective	MAT*H135 or higher††	3
ECE*H176	Health, Safety and Nutrition	3
ECE*H290	Student Teaching I	3
		15
COM*H100	Introduction to Communication	3
Elective	Arts and Humanities†††	3
ECE*H215	The Exceptional Learner	3
ECE*H222	Methods and Techniques in Early Childhood Education	3
ECE*H291	Student Teaching II	3
ECE*H118	Dance Pedagogy	1
		16
	Total Credits Hours	**65**

†Students who are planning to transfer to a baccalaureate degree program may substitute a social science elective recommended by the college to which they are applying.

Social Sciences
ECN*H101, 102, GEO*H102, 111
HIS*H101, 102, 104, 105, 121, 122, 123, 124, 201, 202 215, 218, 224, 251, POL*H105, 111, 112

††With the exception of MAT*H137

†††**Arts and Humanities**
ART*H101, 102, 141, 161; DAN*H101; ENG*H215;
MUS*H101, 103, 137, 115, 218; THR*H101

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Be knowledgeable about various theories as they apply to young children.
2. Demonstrate a basic knowledge of Early Childhood Education and the skills required to make objective observations of young children in the classroom setting.
3. Understand how a child's sensorimotor development influences a child's ability to learn.
4. Use effective classroom management techniques.
5. Introduce children to a wide variety of music, visual and performing arts.
6. Understand the various aspects of speech, language and communication.
7. Become acquainted with various communication impairments or delays and set realistic goals for young children in the area of language development.
8. Recognize that the process of creating is as important as the end product.
9. Use their own creative abilities in working with young children.
10. Demonstrate an understanding of the concept of creativity through planning environments and activities.
11. Understand the interconnectedness of the developmental areas and the specific needs of infants and toddlers.
12. Learn how theories can be applied to understanding children's behavior.
13. Develop communication skills in relation to families, colleagues and children.
14. Describe and evaluate the ways in which data are collected and applied.
15. Provide general curricula adaptations and guidelines to help children meet their special needs.
16. Gain the experience to create a supportive and interesting learning environment.
17. Develop a curricula using a multisensory approach to teaching.
18. Become more aware of children's special needs.
19. Be aware of the interrelationships between child development and the areas of health, safety and nutrition.
20. Be knowledgeable about the control and prevention of communicable disease.
21. Develop a deeper understanding of the importance of family-school relationships.
22. Become familiar with CT State Licensing Regulations; C.D.A. Competency Standards, N.A.E.Y.C. Accreditation Procedures and CT State Pre-school Performance Standards.
23. Plan, organize, execute and evaluate classroom experiences on a weekly basis.
24. Write a learning explanation based upon a child's strengths and needs.
25. Provide services that are developmentally and individually appropriate.

ELECTRONIC ENGINEERING TECHNOLOGY

Today's electronics engineering technician must always be ready to serve our dynamic society. The expanding domain of electronics technology has reached into and overlapped many other disciplines. Electronic technicians of today are different from those of only a few years ago. The Electronic Engineering Technology Program at Naugatuck Valley Community College offers a curriculum that is designed to prepare students for these new career opportunities.

The program emphasizes the fundamentals of electric and electronic circuit theory and analysis, but also stresses the role of computers, computer software, CAD systems, microprocessors, robotics, digital systems, programmable logic controllers (PLC's), various laboratory instruments, data acquisition and control systems. Students gain practical "hands-on" experience by using electronic instruments, microprocessors and computers. Also, a thorough knowledge of digital/electronic circuits is acquired, along with experience in electronic fabrication techniques and the design of printed circuit boards. As a result of the training and preparation provided by our program, the Electronics Engineering Technology graduate is an important and much sought after contributor to the engineering team in Connecticut's ever-changing high technology industries.

Typical job entry titles include: Engineering Technician, Research Technician, Customer Engineer, Field Service Technician, Test/Service Manager, Repair Technician, Assistant Engineer and Electronics Technician. This program is accredited by the Technology Accreditation Commission of ABET (TAC of ABET) located at 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, Telephone: 410-347-7700.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course no.	Title	Credits
ENG*H101	Composition	3
MAT*H172	College Algebra	3
PHY*H121	General Physics I	4
EET*H110	Electric Circuits I	4
EET*H104	Electrical CAD and Fabrication	1
EET*H126	Labview	2
		17
COM*H100	Introduction to Communication	3
MAT*H185	Trigonometric Functions	3
PHY*H122	General Physics II	4
EET*H114	Electric Circuits II	4
EET*H136	Electronics I	4
		18
ENG*H102	Literature and Composition	3
EET*H232	Electronics II	4
EET*H252	Digital Electronics	4
EET*H251	Electronic Instrumentation	3
EET*H208	Applied Circuit Analysis	3
	or	
MAT*H254	Calculus I	4
		17-18
EET*H256	Microprocessors	4
EET*H294	Projects	2
Elective	Behavioral or Social Science	3
Elective	Technical†	3
Elective	Technical†	3
		15
	Total Credit Hours	**67-68**

ELECTIVES

†Technical

EET*H208 Applied Circuit Analysis
EET*H253 Advanced Digital Electronics
EET*H268 Control Systems
EET*H242 Fiber Optics

Also see: Computer-Aided Drafting/Design Technology
       Mechanical Engineering Technology
       (Automated) Manufacturing Engineering Technology

Program Objectives

Upon successful completion of all program requirements, graduates will be able to:

1. Apply mathematical principles and scientific laws and theorems to electrical circuit applications.
2. Use general test equipment to test and measure circuit characteristics.
3. Be proficient in the use state-of-the-art software as applicable tools in the development process of new circuit or system designs.
4. Effectively communicate findings of research or laboratory experiments using written, oral and computer skills.
5. Work as a member of a team to accomplish assigned tasks on time in a laboratory setting.
6. Be expected to act consistent with accepted standards of ethical and professional conduct of an electronic engineering technician.
7. Possess the educational background and technical skills needed to:
   a. obtain employment as an electronic technician, and
   b. continue studies toward a B.S. degree in electrical engineering as well as other engineering programs.

Program Outcomes

Upon successful completion of the program requirements, the graduates will be able to:

1. Use mathematical formulas based on scientific laws and theorems as they relate to electricity, to analyze circuit problems, formulate solutions, and predict circuit behavior of both analog and digital circuits.
2. Possess the knowledge and skills to create a digital logic circuit design as a solution to a given problem statement. Build, troubleshoot, and verify designed circuit operation. Provide full documentation on design.
3. Build analog or digital circuits from a schematic drawing. Verify operation using test equipment such as ohmmeters, digital and analog voltmeters, ammeters, oscilloscopes, power supplies, function generators, and logic probes.
4. Use PSPICE modeling circuit simulation software as a design tool to draw, simulate and test behavior of both analog and digital circuits.
5. Create an electronic project using an Electronic Design Automation software to design printed circuit board(s), build the project, and ensure its proper operation.
6. Use a high level programming language to program a microcontroller or solve a technical problem.
7. Design a LabVIEW program to serve as a system including virtual instruments to display / store / evaluate or plot data.
8. Communicate findings of laboratory experiments in the form of laboratory reports in a professional manner using appropriate word processor, spreadsheet, and schematic drawing software.
9. Present results of experiments or research orally to a group.
10. Actively participate on multicultural teams in a laboratory setting to achieve final solutions to a given task within the time allotted.
11. Realize the responsibility of the individual technician to work in an ethical manner as it relates to recommendations based on experimental data and understand the code of ethics as it applies to the electronic technician profession.
12. Gain employments as an electronic technician or in a related technology field.
13. Continue studies toward a B.S. degree in engineering or engineering technology.

Associate Degree Programs

ENGINEERING TECHNOLOGY

The Engineering Technology Program leads to an associate in science degree. It was developed to meet the need for educational opportunities that will lead to employment in jobs using electro-mechanical skills, computer knowledge and application skills. The need for Engineering Technology graduates who have a strong math/science background and who are well grounded in the application of technology to workplace problems, has been the focus of much attention by the state's employers.

Connecticut's business and industry needs technical people who have knowledge in several areas of engineering technology. The increasing application of two or more technologies to achieve desired results in such areas as robotics and numerical control has focused our attention on the value of an engineering technology generalist.

The engineering technician is versed in several disciplines including electrical, automated manufacturing, mechanical, and chemical, and also has a good working knowledge of computer systems. The Engineering Technology Program prepares students to be engineering technicians who are able to respond to the changing demands of "high tech" industries, who are able to communicate with both the production worker and the engineer, and who can "wear many hats."

The Engineering Technology Program is attractive to those with specific career and educational goals that require diversity and to those who are unsure of their interests and/or abilities. Students may tailor a special program to meet specific educational and/or career goals which may include a unique career, job objectives, or a technology-oriented transfer program. While providing a quality education that prepares graduates for immediate employment, the program also enables graduates to transfer to baccalaureate programs at senior institutions. It is also attractive to those presently employed seeking skills enhancement and/or upward mobility.

Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.

Course No.	Title	Credits
ENG*H101	Composition	3
MAT*H172	College Algebra	3
PHY*H121	General Physics I	4
EET*H102	Electrical Applications	3
COM*H100	Introduction to Communication	3
		16
MAT*H185	Trigonometric Functions	3
CHE*H111	Concepts of Chemistry	4
CAD*H150	CAD 2D	3
MFG*H106	Computer-Aided Mfg I	3
MEC*H108	Statics	5
		18
ENG*H102	Literature and Composition	3
MFG*H275	Mechanics of Materials	3
Elective	Technical & Lab†	4
Elective	Technical & Lab†	4
Elective	General	3
		17
Elective	Behavioral or Social Science	3
Elective	Technical & Lab†	4
Elective	Technical & Lab†	4
Elective	General	3
		14
Total Credit Hours		**65**

Program Objectives

Upon successful completion of all program requirements, graduates will be able to:

1. Apply appropriate mathematical and scientific principles to Engineering Technologies.
2. Use state-of-the-art software and hardware.
3. Design and prepare CAD drawings.
4. Perform individually or as a member of a team to complete projects in an industrial environment.
5. Conduct experiments, analyze data, and interpret results from controlled laboratory experimentation in industrial applications.
6. Effectively and efficiently plan, organize, implement, and control projects.
7. Act consistently with the ethical standards and conduct of a professional in Engineering Technology.
8. Communicate effectively with individuals and groups using written, oral, and computer skills.
9. Possess the educational background needed to:
   a. obtain employment as a technician, and
   b. continue studies toward a B.S. degree in Engineering Technology.

DIRECTED ELECTIVES
  †Technical & Lab
   Courses to be determined in consultation
   with Department Chairperson. A minimum
   of 16 Technical electives must be taken.
Directed Electives
MFG*H230 Statistical Processs Control
MEC*H239 Geometric Dimensioning & Tolerancing

Also see: Computer-Aided Drafting/Design Technology
         Electronic Engineering Technology
         (Automated) Manufacturing Engineering Technology
         Mechanical Engineering Technology

ENVIRONMENTAL SCIENCE

Biology Option

The environmental field is a broad based area of study. It is truly interdisciplinary in nature. The subjects of biology, chemistry and geology are interwoven to provide a full picture of our environment and man's impact upon this system.

The Environmental Science degree provides students with a foundation in the basic sciences, and provides the opportunity to tailor the program to the students' interests with a choice of options. The goal of the Environmental Science Biology Option Program is to prepare students to transfer into a biological environmental science program at a four-year institution, or directly enter the workforce.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
MAT*H172	College Algebra	3
ENV*H110	Environmental Regulations	3
BIO*H155	General Botany	
	or	
BIO*H121	Cellular Biology	4
CHE*H121	General Chemistry I	4
		17
MAT*H167	Statistics with Technology	3
BIO*H145	General Zoology	
	or	
BIO*H122	Organismal Biology	4
CSA*H105	Introduction to Software Applications	3
CHE*H122	General Chemistry II	4
BIO*H181	Environmental Science	4
		18
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
ENV*H120	Introduction to Hazardous Materials	3
GLG*H121	Introduction to Physical Geology	4
BIO*H171	Field Biology	4
		17
BIO*H235	Microbiology	4
GEO*H102	Introduction to Human Geography	3
Elective	Behavioral Science	3
Elective	Arts and Humanities	3
Elective	Directed†	3
		16
	Total Credit Hours	**68**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Appreciate the liberal arts, sciences, and fine arts.
2. Critically analyze extra-perceptual media within the context of the scientific method and statistics, and recognize the distinction between scientific fact and media sensationalism.
3. Understand the interrelatedness of all species in the natural world with that of the physical world.
4. Investigate environmental problems utilizing research skills and science process skills.
5. Comprehend how ecosystems function both on a macro and micro biological level.
6. Perform basic chemical calculations and preparation of inorganic solutions.
7. Understand the basic physiology of plants, animals and microorganisms.
8. Construct, analyze, and interpret scientific data in the form of a graph.
9. Read and understand basic environmental regulations as related to safe handling of hazardous materials.
10. Scientifically analyze and critically evaluate local/regional/global environmental problems in terms of ecological principles and development of sustainable solutions.
11. Collaboratively work with peers to independently explore environmental problems and issues, as well as establish personal positions on such issues and problems.
12. Transfer to a four-year environmental science program.

†DIRECTED ELECTIVES

HRT*H215	Pest Control in Ornamentals & Turf
ENV*H160	Environmental Measurements
ENV*H205	Foundations of Environmental Chemistry
ENV*H230	Environmental Control Processes
ENV*H235	Waste Minimization & Treatment
ENV*H240	Principles of Soil & Water Resources

ENVIRONMENTAL SCIENCE

Environmental Systems Option

The environmental field is a broad based area of study. It is truly interdisciplinary in nature. The subjects of biology, chemistry and geology are interwoven to provide a full picture of our environment and man's impact upon this system.

The Environmental Science degree provides students with a foundation in the basic sciences, and provides the opportunity to tailor the program to the students' interests with a choice of options. The goal of the Environmental Systems Option is to prepare students for a position in industry dealing with the compliance of environmental regulations, or for transfer into an environmental technology program at a four-year institution.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
MAT*H172	College Algebra	3
ENV*H110	Environmental Regulations	3
ENV*H120	Introduction to Hazardous Materials	3
CHE*H121	General Chemistry I	4
		16
MAT*H167	Statistics with Technology	3
ENV*H160	Environmental Measurements	3
CSA*H105	Introduction to Software Applications	3
CHE*H122	General Chemistry ll	4
BlO*H181	Environmental Science	4
	or	
BIO*H180	Principles of Environmental Science	3
		16-17
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
ENV*H230	Environmental Control Processes	3
ENV*H240	Principles of Soil & Water Resources	3
Elective	Arts and Humanities	3
Elective	Social Science	3
		18
ENV*H205	Foundations of Environmental Chemistry	3
ENV*H235	Waste Minimization & Treatment	3
ENV*H270	Environmental Project	2
	or	
ENV*H290	CWE-Environmental Science Co-op	3
Elective	Behavioral Science	3
Elective	Directed†	3
Elective	Directed†	3
		17-18
	Total Credit Hours	**67-68**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Appreciate the liberal arts, sciences, and fine arts.
2. Devise a plan to sample for contamination in the air, water, or soil.
3. Operate common environmental sampling and analysis equipment.
4. Understand how sampling procedures can affect the data obtained.
5. Select treatment methods to control air and water emissions.
6. Use chemical principles to explain how environmental control processes work.
7. Compare control process capability with government regulations.
8. Describe mineral classes, uses and structures.
9. Explain soil physical characteristics, chemical characteristics and methods of formation.
10. Explain surface and groundwater transport mechanisms.
11. Suggest pollution prevention strategies in an industrial situation.
12. Show the economic advantages of the source reduction of pollutants.
13. Evaluate the economics of recycling.
14. Evaluate waste disposal options such as incineration, land-filling, and biological degradation.
15. Use an understanding of separation techniques to select processes that recover useful materials from wastes.
16. Know the regulatory requirements governing the movement and use of hazardous materials.
17. Have the ability to implement a risk assessment program.
18. Be familiar with the routes of entry of chemicals into the body.
19. Be capable of selecting, using, and maintaining personal protective equipment.
20. Interpret a CFR citation.
21. Implement management systems approach to compliance.

†DIRECTED ELECTIVES

BlO*H105	Introduction to Biology
BIO*H121	Cellular Biology
BIO*H122	Organismal Biology
BlO*H171	Field Biology
BlO*H235	Microbiology
GLG*H121	Introduction to Physical Geology
MAT*H185	Trigonometric Functions
MAT*H254	Calculus I
MFG*H104	Manufacturing Processes
PHY*H121	General Physics I

FIRE TECHNOLOGY AND ADMINISTRATION

The program in Fire Technology and Administration is designed to provide advanced training and education on the college level that develops competent technicians who are, or will become, leaders in fire protection, prevention, and administration. It also provides training and education for personnel of insurance companies and of industries involved in fire prevention and protection practices.

Working in career and volunteer fire departments, local, state and federal government agencies, industry, architectural and construction firms, insurance organizations, and related groups, the fire technologist knows the need for fire prevention activities, the necessity to educate both children and adults in fire safety, and the importance of enforcing fire prevention codes. Because of the broad spectrum of problems encountered and the need for extensive familiarity with many subjects, the work of the fire technologist is seldom routine or boring. There is always something new to learn. However, the greatest satisfaction may come from knowing that the effective fire technologist continually improves the world in which we live by making it a safer place and by reducing the misery which uncontrolled fire can cause.

The program of study which leads to the associate in science degree in Fire Technology and Administration is planned to help students meet the professional standards established by the National Fire Protection Association, the Connecticut Commission on Fire Prevention and Control, and the Connecticut Fire Marshal's Training Council.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
MAT*H172	College Algebra	3
PHY*H121	General Physics I	
	or	
PHY*110	Introduction to Physics	4
FTA*H272	Terrorism - First Responders	3
FTA*H112	Introduction to Fire Technology	3
		16
COM*H100	Introduction to Communication	3
MAT*H167	Principles of Statistics	
	or	
MAT*H185	Trigonometric Functions	3
FTA*H116	Building Construction	3
Elective	Biology or Physics Elective††	4
Elective	Technical†	3
		16
ENG*H202	Technical Writing	3
CHE*H111	Concepts of Chemistry	4
FTA*H118	Fire Prevention & Inspection	3
FTA*H210	Water Supply & Hydraulics	3
FTA*H213	Codes & Standards	3
		16
Elective	Behavioral or Social Science	3
FTA*H216	Municipal Fire Administration	3
FTA*H218	Sprinkler & Fixed Extinguishing Systems	3
FTA*H219	Fire Investigation	3
Elective	Technical†	3
Elective	General Elective	3
		18
	Total Credit Hours	**66**

DIRECTED ELECTIVES
†Technical
Credits may be granted by completing fire technology courses or for Connecticut certification as an Emergency Medical Technician, Fire Service Instructor I, Fire Service Instructor II, Fire Officer I, Fire Officer II, or Fire Marshal/Fire Inspector, and for some National Fire Academy courses such as Chemistry of Hazardous Material.

NOTE:
††Biology Elective: BIO*H105, BIO*H110, BIO*H115.

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Demonstrate the ability to communicate verbally and in writing, to prepare reports, presentations and investigations that support the administration and management of a fire or emergency service agency in either an emergency or a non-emergency situation.
2. Apply social and behavioral sciences, mathematical and scientific principles, and technical knowledge to develop and create solutions to address community problems and issues in the emergency management field they have not encountered previously.
3. Demonstrate knowledge of the organizational structure, both operational and administrative, of various types of emergency service providers, both public and private, career and volunteer, which impact the life safety of a community.
4. Understand human resource policies and procedures in order to assist members of an emergency service agency who are in need of assistance and intervention.
5. Apply basic principles of supervision and human resource management to set priorities and plan so as to respond to community needs as determined in a community hazard assessment.
6. Evaluate available information, from a fire or emergency incident, and using proper techniques, such as conducting interviews, making observations, collecting and securing evidence, determine a preliminary cause and origin.
7. Develop a pre-incident plan of a specific facility, applying pre-planning policies, procedures and forms, so that all required elements are identified and catalogued.
8. Develop an initial action plan for an emergency operation to make maximum use of resources to control and mitigate the incident.
9. Demonstrate knowledge of safety policies, regulations and procedures as they apply to emergency and non-emergency operations of a community's emergency response agencies.
10. Demonstrate the basic knowledge necessary to conduct an inspection to identify hazards and address code violations in an Assembly, Educational, Health Care, Detention and Correctional, Residential, Mercantile, Business, Industrial, Storage, Unusual Structures, and Mixed Occupancy, so that all hazards, including hazardous materials are identified, appropriate forms are completed and appropriate action is initiated.
11. Demonstrate an in depth knowledge of who issues various protocols, standards and guides on a local, state, and national level that provide guidance to and regulation of life safety organizations.
12. Describe the methods of heat transfer and chemical processes that govern the development and spread of fire and how to apply that to various types of structures and situations in order to control and extinguish the fire by altering and improving the structure.
13. Demonstrate the ability to review a set of plans for a structure and assess the structure against the requirements for that type of structure as laid out in the fire and life safety codes.
14. Calculate the water flow and determine if a design for a water supply or sprinkler system would protect a specific structure or portion of a community.

Associate Degree Programs

GENERAL STUDIES

The General Studies Program encourages students to explore, examine, and analyze a wide range of human knowledge. The program sets the foundation for lifelong learning.

The following are the requirements of the General Studies Program. The student must:
   A. COMPLETE coursework totaling not less than sixty (60) credit hours.
   B. COMPLETE the following twenty-four to twenty-six (24-26) credits from the College's Common Core listing. The student is urged to take these courses before those in section "C" because they are a foundation upon which to build the program.

COURSE		CREDIT HOURS
ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
Elective	Arts and Humanities	3
Elective	Behavioral Science	3
Elective	Mathematics	3-4
Elective	Science	3-4
Elective	Social Science	3
		24 - 26

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required.   Refer to page 51 for a listing of courses that will satisfy elective requirements.*

   C. CHOOSE thirty-six (36) additional credit hours from at least three (3) of the following academic areas: Arts and Humanities, Business, Engineering Technologies, Mathematics/Science, and Behavioral and Social Sciences. The courses chosen must be available within the present capabilities and resources of the faculty and the College. Courses restricted to students in particular programs or credit courses which do not apply to a degree may not be chosen. A degree program may not total more than sixty-eight (68) credits. Students in other programs of the College may transfer into the General Studies Program, but they must be able to apply previous coursework or new courses in at least three (3) areas.
   D. DESIGN a coherent program from the courses chosen in close consultation with a counselor.
   E. SEEK formal written approval of the total General Studies Program by a counselor prior to the completion of thirty (30) total credit hours.

General Education Outcomes

The outcomes of general education courses are listed in each course syllabus which are distributed to students each semester. The specific outcomes of the General Education categories are listed as follows:

Group I - Communication Skills
   English - After successful completion of ENG*H101, students will be able to write clear, coherent, focused, well-developed, error-free essays, and a documented research paper.
   Communications - After successful completion of COM*H100, students will be able to express themselves orally in interpersonal, small groups and large-group situations, and demonstrate an awareness of communication barriers and breakdowns.

Group II - Mathematics and Science
   Mathematics - After successful completion of mathematics courses, students will be able to solve problems and make reasoned decisions in their personal and professional lives.
   Science - After successful completion of science courses, students will be able to appreciate and apply the scientific method in describing, creating, and understanding natural phenomena.

Group III - Behavioral and Social Sciences
   Behavioral Sciences - After successful completion of a behavioral science elective, students will be able to: demonstrate knowledge of the major theories in the behavioral sciences, understand and apply the scientific methodology used for behavioral science research; demonstrate an understanding of basic psychological processes, such as memory and learning; critically analyze the effects of social forces on the perceptions, roles and behaviors of individuals and groups; and, evaluate the causes and consequences of perceived inequality among groups of people. Also, demonstrate an understanding of the range of psychological and social functioning among different people, across the lifespan and across situations; demonstrate an understanding and appreciation for the development and range of social structures such as marriage and the family, the arts, political organization, and religion across cultures; and, develop a conceptual framework for the origin of man and the development of culture.

Social Sciences - After successful completion of a social science elective, students will be able to conduct an inquiry in the social sciences using a variety of resources to gather and evaluate information; evaluate the interdependence of local, national, and global communities; appreciate the relevance of the social sciences to social, political, and economic institutions and behaviors; critically analyze the reciprocal influence of Western and non-Western institutions and ideas in the developing global community; demonstrate competence in accessing, ordering, interpreting, and evaluating new information; demonstrate knowledge of both the strengths and weaknesses of the types of research employed in the social sciences; and, develop an appropriate conceptual framework for analyzing current world issues.

Group IV - Arts & Humanities
   English - Literature - After successful completion of ENG*H102, students will be able to demonstrate awareness of relationships between literature and society, as well as understand social and multicultural perspectives in literature. Students will also be able to form and express logical opinions about literature both in discussion and writing.
   Arts - After successful completion of an arts elective, students will have developed an aesthetic knowledge of the arts through classroom activities, practical application, and related cultural experiences.
   Humanities - After successful completion of a humanities elective, students will have critically examined the development of values, the roles of creativity, spontaneity and discipline in human life, and the essential spirit of communication.

Special Note on Computer Literacy-
Word processing skills are expected of all incoming students. Computer technology is integrated into most courses at the College. Students are urged to master basic computer skills prior to enrolling at the College, or to take computer courses during the first semester of the College experience.

HORTICULTURE

The Horticulture Program is designed as a career program leading to the associate in science degree. The goal of the Horticulture Program is to prepare students for employment in landscaping, garden centers, greenhouses, or related businesses and for further education.The program includes the completion of two full years of study and an appropriate supervised cooperative work experience with cooperative nurseries, landscape businesses and greenhouses.

The transfer program articulated with UConn guarantees admission with complete transfer of NVCC courses. See the program brochure for details. This is a Professional Landcare Network (Planet) accredited program. NVCC is a member of the CT Nursing LandscapeAssociation, CT Greenhouse Growers Association and CT Florist Association.

> Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing
> of courses. Additional courses may be required. The suggested sequence for full-time students is shown below.
> Refer to page 51 for a listing of courses that will satisfy elective requirements.

Course No.	Title	Credits
ENG*H101	Composition	3
BIO*H155	General Botany	4
HRT*H101	Landscape Mechanic	4
HRT*H102	Woody Plants	3
HRT*H103	Herbaceous Plants	3
		17
MAT*H121	Applications for Business and Careers	3
	or	
MAT*H135	Topics in Contemporary Mathematics	3
COM*H100	Introduction to Communication	3
PSY*H111	General Psychology I	3
HRT*H222	Greenhouse Management I	4
ENV*H240	Principles of Soil and Water Resources	3
		16
ENG*H102	Literature and Composition	3
HRT*H215	Pest Control in Ornamentals and Turf	3
HRT*H202	Landscape Design I†	3
	or	
HRT*H124	Floral Design I	3
HRT*H115	Turf Management	3
	or	
HRT*H223	Greenhouse Management II††	4
	or	
HRT*H204	Landscape Design III††††	3
HRT*H207	Landscape Maintenance	3
	or	
HRT*H105	Fruit and Vegetable Production	3
		15-16
BBG*H101	Introduction to Business	3
	or	
BES*H118	Small Business Management	3
HRT*H125	Floral Design II	3
	or	
HRT*H203	Landscape Design II†††	
	or	
HRT*H240	Nursery Management†††††	3
HRT*H206	Landscaping Small Properties	3
	or	
HRT*H219	Arboriculture	3
	or	
HRT*H224	Plant Propagation and Hybridization	4
HRT*H290	CWE/Horticulture Co-op	3
Elective	Arts and Humanities	3
Elective	Behavioral or Social Science	3
		18-19
	Total Credit Hours	**66-68**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Relate basic knowledge of botany, chemistry, and soils to plant growth and culture.
2. Identify the skills needed to organize thoughts and ideas, and demonstrate the ability to communicate, verbally and in writing, in a manner that can be easily understood.
3. Solve mathematics problems related to the use of soil amendments, fertilizers, and plant growth control chemicals, and apply effective cost estimating, pricing, and record keeping techniques.
4. Identify common trees and shrubs, ground covers, various annuals, biennials, and perennials by botanical and common names, and describe the outstanding characteristics of each; summarize landscape, garden center, and greenhouse uses and cultural requirements of these plants.
5. Identify foliage plants commonly used indoors by botanical and common names, state distinguishing characteristics of each, and describe their use and culture in various indoor landscape areas.
6. Select the proper procedures, define the physiological basis, and describe practical applications of the reproduction of plants by asexual and sexual methods.
7. Describe proper design and operation of greenhouse environmental systems, and evaluate their advantages and disadvantages in commercial production.
8. Summarize and assess plant growth requirements for commercial production of greenhouse crops, and economically produce a crop from seed or cutting to harvest and sales.
9. Demonstrate a responsible attitude in relationships with employers, fellow employees, and toward the world of work.
10. Select appropriate techniques for the establishment and management of lawns and utility turf areas.
11. Manage the procedures used in landscape constructions and in the maintenance of small engines.
12. Design flower beds, mixed borders, price trees and shrubs for a variety of gardens, for both residential and commercial properties.
13. Create, manage and gain profit from running a small landscaping business.
14. Access available resources to incorporate technological innovations.
15. Evaluate and design landscapes that compliment the community, highlight the home, and meet the needs of the client.
16. Demonstrate skills in planning and successfully producing fruit and vegetables commercially and residentially.

Associate Degree Programs

NOTE:

†Prerequisite HRT*H102 Woody Plants or permission of instructor.

††Prerequisite HRT*H222 Greenhouse Management I or permission of instructor.

†††Prerequisite HRT*H202 Landscape Design I or permission of instructor.

††††Prerequisite HRT*H203 Landscape Design II or permission of instructor.

†††††Prerequisite HRT*H102 Woody Plants and HRT*H103 Herbaceous Plants.

HOSPITALITY MANAGEMENT

Foodservice Management

Foodservice is the second largest retail industry in the nation, employing more people in more businesses than any other retail industry. The demand for qualified personnel is much greater than the supply. Career opportunities abound in restaurants, hotels, resorts, clubs, conference centers, air and cruise lines, schools and colleges, and health care. For two years in a row, the Foodservice Management Program was honored with the ***National Restaurant Association's Award of Excellence*** as the top program in Connecticut and third runner-up in the nation. The program also received the ***V.I.P. Award from Connecticut's Department of Education and the Governor's Connecticut Tourism Award.*** The program's wine and viticulture component continues to gain national notoriety.

Non-degree students or those desiring a course for professional development or certification purposes must have written approval from the Program Coordinator prior to registration.

The general objective of the Foodservice Management program is to prepare students for employment or self-employment in entry to mid-level supervisory and management careers in any of several types of foodservice operations and related positions in production, planning, sales and marketing. In addition, successful completion of the program provides graduates with the opportunity to transfer to bachelor of science degree programs in Hospitality Management/Administration in top universities.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
HSP*H100	Introduction to the Hospitality Industry	3
HSP*H101	Principles of Food Preparation	3
HSP*H108	Sanitation and Safety	3
ENG*H101	Composition	3
Elective	Mathematics†	3
		15
HSP*H135	Service Management	3
HSP*H102	Food Production & Purchasing	3
CSA*H105	Introduction to Software Applications	3
ENG*H102	Literature and Composition	3
ACC*H113	Principles of Financial Accounting	3
		15
HSP*H211	Food & Beverage Cost Control	3
HSP*H202	Catering and Event Management	3
BMG*H202	Principles of Management	3
COM*H100	Introduction to Communication	3
ECN*H101	Principles of Macroeconomics	3
		15
HSP*H231	Hospitality Law	3
HSP*H237	Hospitality Marketing	3
BIO*H111	Introduction to Nutrition	3
Elective	Hospitality Management or Business	3
Elective	Behavioral Science	3
		15
	Total Credit Hours	**60**

DIRECTED ELECTIVES
†MAT*H121 recommended or MAT*H135.
 MAT*H167 has prerequisite of MAT*H137, and is
 recommended for students intending to transfer.

NOTES:
 • Course substitutions may be granted with written approval
  of HSP Program Coordinator or Business Division Director.
 • See course description (HSP) for Wine and Viticulture courses.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify, organize, plan and allocate resources in foodservice operations such as time, materials and facilities, money, and human resources.

2. Demonstrate a working knowledge of food preparation theories and techniques, and utilize food production knowledge (quantity and quality standards) to meet production requirements of a foodservice operation within a projected budget.

3. Effectively work with others as a member of a team, serving clients and customers, and teaching others new skills. Exercise leadership behaviors, negotiate, and work with others from diverse backgrounds.

4. Obtain nationally recognized professional certification in such areas as food sanitation (as required by State Statute) and food, beverage, and labor cost controls. Demonstrate appropriate personal hygiene.

5. Organize and evaluate information from a variety of sources including food preparation and service techniques and costs, food and related purchasing specifications, catered events planning, research data, and computer applications and Internet output. Communicate the results to others using oral, written, graphic or multimedia methods.

6. Apply concepts of procurement and inventory to purchase, receive, store, issue, and distribute food and related items in a foodservice operation.

7. Identify current trends in the foodservice industry such as delivery systems and functions, and operate effectively within them. Make suggestions to modify existing systems, to improve products or services, and develop new or alternate systems.

8. Judge which set of foodservice procedures, tools or machines, including computer applications, will produce the desired results, and apply such technology to task.

9. Demonstrate behavior and self-management reflective of personal and professional ethical conduct.

10. Perform basic mathematical computations accurately and appropriately, especially with regard to food and beverage production, purchasing and cost controls.

11. Identify and apply basic concepts of human nutrition and health in the preparation and service of food.

12. Describe and apply basic marketing, sales and merchandising methods in hospitality operations.

13. Demonstrate work readiness through resume preparation, appropriate business dress and behavior, and assertive communication skills.

HOSPITALITY MANAGEMENT

Hotel Management

The nation's dynamic lodging industry generates over $100 billion in yearly sales, employs over 2 million people and creates 100,000 new jobs each year. Demand for managerial personnel is projected to increase by up to 20-27 percent by the year 2008. A wide variety of career opportunities exist in convention, resort, luxury and motor hotels as well as in new lodging concepts such as all-suite hotels, bed-and-breakfast inns and geriatric care facilities. Graduates pursue management careers in rooms division, front office, food and beverage, conference services, banquets, marketing and sales, financial control, recreation, security, housekeeping and concierge among others. **The program was recently honored with the Governor's Connecticut Tourism Award in Hospitality Education Training.**

The general objective of the Hotel Management program is to prepare students for employment or self-employment in entry to midlevel supervisory and management careers, in any of several types of lodging operations and related positions in operations, planning, tourism, sales and marketing. In addition, successful completion of the program provides graduates with the opportunity to transfer to bachelor of science degree programs in Hospitality Management/Administration in top universities.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
HSP*H100	Introduction to the Hospitality Industry	3
HSP*H101	Principles of Food Preparation	3
CSA*H105	Introduction to Software Applications	3
ENG*H101	Composition	3
Elective	Mathematics†	3
		15
HSP*H135	Service Management	3
HSP*H242	Hotel Management	3
HSP*H108	Sanitation and Safety	3
ENG*H102	Literature and Composition	3
ACC*H113	Principles of Financial Accounting	3
		15
HSP*H241	Principles of Tourism and Travel	3
HSP*H211	Food & Beverage Cost Control	3
BMG*H202	Principles of Management	3
COM*H100	Introduction to Communication	3
ECN*H101	Principles of Macroeconomics	3
		15
HSP*H231	Hospitality Law	3
HSP*H237	Hospitality Marketing	3
Elective	Hospitality Management or Business	3
Elective	Behavioral Science	3
Elective	Science††	3-4
		15-16
	Total Credit Hours	**60-61**

DIRECTED ELECTIVES
 †MAT*H121 or MAT*H135 recommended.
   MAT*H167 has prerequisite of MAT*H137.

††Science Electives: BIO*H111 Introduction to Nutrition (3cr.)
   is acceptable. Transfer students may want to consider
   a four-credit science course with lab.

NOTES:
• Course substitutions may be granted with written approval
  of HSP Program Coordinator or Business Division Director.
• See course description (HSP) for Wine and Viticulture courses.
• See course description (HSP) for Baking classes.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify, organize, plan and allocate resources in hotel operations such as time, materials and facilities, money, and human resources.
2. Process reservations, register the guest, process guest departure, and assist in resolving guest problems.
3. Describe functional relationships among hotel divisions and departments.
4. Perform night audit procedures.
5. Summarize development and operational components of the following industries: airline, surface travel, cruise and steamship, and hotel/motel/resort.
6. Identify and implement systems and processes for room status/changes, front office posting, telephone/pbx, bank maintenance, cash transactions, and security and guest keys.
7. Demonstrate a working knowledge of food preparation theories and techniques, and utilize food production knowledge (quantity and quality standards) to meet production requirements of a foodservice operation.
8. List and describe the steps in planning destination development, and discuss the social, cultural and economic impact of this development upon the local environment.
9. Identify major geographical areas in terms of tourism generators.
10. Distinguish between various systems of travel/tourism distribution and intermediary functions.
11. Effectively work with others as a member of a team, serving clients and customers, and teaching others new skills. Exercise leadership behaviors, negotiate, and work with others from diverse backgrounds.
12. Obtain nationally recognized professional certification in such areas as front desk procedures and food, beverage, and labor cost controls, as well as foodservice sanitation, as required by State Statute.
13. Apply concepts of procurement and inventory to purchase, receive, store, issue, and distribute food, and related items in a foodservice operation.
14. Identify current trends in the lodging industry such as delivery systems and functions, and operate effectively within them. Make suggestions to modify existing systems, to improve products or services, and develop new or alternate systems.
15. Judge which set of hotel procedures, tools or machines, including computer applications, will produce the desired results, and apply such technology to task.
16. Demonstrate behavior and self-management reflective of personal and professional ethical conduct.
17. Perform basic mathematical computations accurately and appropriately, especially with regard to hotel and guest accounting, night audit, and cost controls.
18. Describe and apply basic marketing, sales and merchandising methods in hospitality operations.
19. Demonstrate work readiness through resume preparation, appropriate business dress and behavior, and assertive communication skills.

Associate Degree Programs

HUMAN SERVICES

The field of Human Services is a dynamic and growing profession. Human Services provide assistance for people in all walks of life and in all stages of human development. Services focus on the individual as a whole, and stress care in relation to the individual's circumstances and social environment.

The Human Services Program at NVCC offers an Associate Degree that allows students the opportunity, through directed electives, to focus on the areas of child and family services, disability & mental health or gerontology. In addition, Certificate Programs are offered in these three areas of focus. The degree program curriculum prepares students for entry level, generalist Human Services practice. Examples of employment opportunities for graduates include: case aide, case worker, youth worker, home visitor, shelter worker, parent advocate, residential counselor, community educator and substance abuse counselor. The program is also designed to provide ease of transfer for students continuing their education at a four-year institution in human services and social work.**

ADMISSION TO THE PROGRAM AND SPECIAL INFORMATION
A student may enter the Human Services major by either declaring it upon admission to the College or as an internal transfer from another program within the College. As a professional preparation program, successful progress in the major necessitates that the student achieve a minimum grade of "C" in each of the core Human Services courses before proceeding to the next one. Among the special characteristics of the Human Services Program is the coordination of supervised field work experience with academic studies. In the field work experience, students, under professional supervision, engage in hands-on training in the area of their interest at community agencies.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
SOC*H101	Principles of Sociology	3
PSY*H111	General Psychology I	3
HSE*H101	Introduction to Human Services	3
BIO*H105	Introduction to Biology	
	or	
BIO*H115	Human Biology	4
		16
ENG*H102	Literature and Composition	3
PSY*H258	Behavior Modification	3
HSE*H202	Introduction to Counseling & Interviewing	3
MAT*H135	Topics in Contemporary Math	
	or	
MAT*H167	Statistics with Technology†	3
Elective	Behavioral & Social Sciences	3
		15
COM*H100	Introduction to Communication	3
Elective	Psychology	3
SOC*H201	Contemporary Social Issues	3
	or	
SOC*H221	Social Inequality	
Elective	Human Services	3
Elective	Fine Arts	3
		15
SOC*H210	Sociology of the Family	3
POL*H111	American Government	3
ECN*H101	Principles of Macroeconomics	3
HSE*H281	Human Services Field Work I	3
Elective	Liberal Arts	3
		15
Total Credit Hours		**61**

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Describe how the events of the political, social, and economic climate have shaped the American response to human needs.
2. Compare and contrast the ecological, functional, and conflict perspectives to understand and analyze social issues such as inequality, alienation, poverty, crime and health.
3. State the major theories, processes, and research methods important in psychology.
4. Describe the relationship between politics, research and the establishment of social policy.
5. Identify the history of treatment, issues and needs of the primary populations that require human services intervention.
6. Utilize the critical thinking skills necessary to read and analyze current and future trends as presented in literature related to the field of Human Services.
7. Demonstrate an understanding of how to use the skills of engagement, assessment, case planning, intervention and termination with a diverse population.
8. Present a well-organized, comprehensive oral report before a group.
9. Demonstrate behaviors that comply with the ethical standards of the National Organization of Human Services.
10. Demonstrate an increased awareness of available community resources and the relationships among community systems.
11. Demonstrate the ability to document information, and present a well-written report that demonstrates critical thinking skills.

DIRECTED ELECTIVES
  †MAT*H167, Statistics is strongly recommended for students planning to transfer to a four-year institution.
  ††Child and Family focus, PSY*H203, 204 or 207.
    Disability and Mental Health focus, PSY*H201, 245 or 260.
    Gerontology focus, PSY*H201 or 208.
  †††Child and Family focus, HSE*H115.
    Disability and Mental Health focus, HSE*H133.
    Gerontology focus, HSE*H170.

**Students are encouraged to meet with a Human Services academic advisor to select the appropriate electives based on their career and transfer goals.

LEGAL ASSISTANT/PARALEGAL

The Legal Assistant/Paralegal Program is a member of the American Association for Paralegal Education whose focus is to train paralegals for private and public placement. It is not a pre-law program intended for those students who plan to enroll in law school after they have completed a baccalaureate program. Students who are planning to eventually enter law school should obtain a four-year degree as soon as possible.

The Legal Assistant/Paralegal curriculum prepares qualified people to handle, in a professional manner, many of the complex tasks involved in rendering skilled assistance to lawyers. Legal Assistants are prepared to do specialized work for banks, insurance companies, real estate firms, corporate offices, and public and semi-public agencies. The Legal Assistant/Paralegal Program offers a new career opportunity in a rapidly expanding field for people who have had no previous experience with legal work. For people already employed in legal work, the program will upgrade their skills. The topic of ethics and the paralegal's role in the legal profession are emphasized throughout the courses in the program.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
LGL*H101	Introduction to Paralegalism	3
POL*H111	American Government	
	or	
HIS*H201	U.S. History	3
COM*H100	Introduction to Communication	3
Elective	Science or Lab Science	3-4
		15-16
Elective	Mathematics	3
CSA*H105	Introduction to Software Applications	3
ENG*H102	Literature and Composition	3
LGL*H104	Real Estate Practice	3
LGL*H102	Legal Research & Writing	3
		15
BBG*H231	Business Law I	3
LGL*H202	Advanced Legal Research and Writing	3
LGL*H208	Litigation	3
PSY*H111	General Psychology I	3
Elective	Social Science	3
		15
BBG*H232	Business Law II	3
Elective	Arts and Humanities	3
Elective	Legal Assistant Program†	3
LGL*H209	Probate Practice and Estate Administration	3
LGL*H270	Cooperative Education Work Experience	3
	or	
Elective	Business elective approved by coordinator	
		15
	Total Credit Hours	**60-61**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Interview client(s) and condense fact patterns into a concise legal analysis.
2. Explain the structure of the State and Federal Court system, including Trial Court function(s) and Appellate Court functions.
3. Identify historical, sociological and political trends that have changed, and continue to change, the American legal system.
4. Explain the role of forensic science in evidentiary matters pertaining to civil and criminal litigation.
5. Research a particular fact pattern to identify all legal issues, and describe the competing arguments that can be advanced by parties to a controversy.
6. Explain the role of the judiciary in providing a balance to the legislative and executive functions of government.
7. Differentiate between liability issues and damage issues in legal controversies.
8. Identify inherent restrictions in the civil and criminal legal process that inhibit the ability of the legal system to function as a tool of social justice.
9. Identify and present a logical plan for a client, taking into account the strengths and weaknesses of adopting various legal positions.
10. Maintain organized financial data concerning a client's case file.
11. Foster good relations between the law firm, department, or public entity, and the clients served.
12. Demonstrate organization in handling multiple client case files, and maintain strict docket control for timely case file review.
13. Understand conflict resolution as viewed from the theoretical perspective and the pragmatic perspective.
14. Apply common law principles and statutory principles where appropriate.
15. Recognize fundamental tort and contract principles that are found in different areas of the law.

Associate Degree Programs

†DIRECTED ELECTIVES
 LGL*H210 Family Law
 LGL*H204 Criminal Procedure
 LGL*H230 Advanced Legal Issues Seminar
 LGL*H206 Bankruptcy Law

LIBERAL ARTS and SCIENCES

Liberal education is intended to sharpen intelligence and to foster growth of personal values. The suggested liberal arts and sciences sequences outlined below provide the broad foundation for those students who plan to transfer for a bachelor's degree. The program may also be used as a basis in professional studies such as education, medicine and health, dentistry, pharmacy, law, or business administration. For graduation, students must complete coursework totaling not less than sixty-one (61) credit hours.

Because students need to be aware of specific requirements of those colleges to which they hope to transfer, the Liberal Arts and Sciences Program requires that students seek the advice of a college counselor and faculty advisor, and they must obtain a current catalog from the four-year institution of their choice.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
ENG*H200	Advanced Composition	
	or	
ENG*H102	Literature and Composition	3
ENG*H2xx	Literature (200 level)	3
COM*H100	Introduction to Communication	3
Elective	Fine Arts†	3
Elective	Humanities†	3
Elective	Modern Language††	3
Elective	Modern Language††	3
Elective	Mathematics†††	3
Elective	Science (Lab)†	4
Elective	Math/Science†††	3-4
Elective	HIS* 101, 102, 105, 121, 122, 201, 218	3
Elective	Behavioral Science†	3
Elective	Social Science†	3
Elective	Liberal Arts†	3
Elective	Liberal Arts†	3
Elective	General	3
Elective	General	3
Elective	General	3
Elective	General	3
	Total Credit Hours	**61-62**

DIRECTED ELECTIVES

†Refer to Common Core of Education (p 53-54) for definitions of electives.

††Student completing 3 years of modern language in high school may substitute 6 credits of general elective. See advisor.

†††Only Math electives numbered higher than MAT*H137; BIO*H111 is excluded from sciences elective for this major.

Liberal Arts graduates may successfully continue their studies at colleges and universities with majors such as:

Anthropology
Biology
Chemistry
Communications
Economics
Education
English
Fine Arts
Geography
History
Languages
Mathematics
Philosophy
Political Science
Psychology
Physics
Sociology

With good planning, students may transfer into many other majors as well. Students will work primarily on Core Requirements of transfer colleges, and may also begin to fulfill course requirements in a major, by choosing liberal arts and general electives in their chosen discipline. As a first step, students should refer to the Liberal Arts and Sciences definitions, "Common Core of General Education", and then to the appropriate course descriptions.

It is very important to work closely with an advisor when selecting these courses. The concentration may serve your immediate interest or needs, but the college to which you are transferring makes the final determination as to which courses it will accept.

MANUFACTURING

(Automated) Manufacturing Engineering Technology Option, Engineering Technology

In the Manufacturing Engineering Program students learn to develop the most competitive manufacturing processes to produce the new 'high tech' products needed for the future. Students learn basic engineering fundamentals and how to apply scientific principles to solve technical problems. Advanced computer design and simulations are used throughout the two-year curriculum to find alternative solutions for advanced industrial enterprises. The program covers a full range of industrial processes that include advanced automated programming skills for equipment controls and computer numerical controlled (CNC) machines using computer-aided manufacturing (CAM) software. Students also learn how to use the newest quality assurance procedures such as Statistical Process Control in order to improve product quality. Students will gain valuable experience in the engineering design courses, as well as a sound business sense for budgets and cost comparisons.

The manufacturing engineering graduate is a flexible, adaptable team member within the evolving technological industrial environment. Graduates of the program are prepared for careers in 'high tech' fields of industry or for transfer to Bachelor of Science programs in manufacturing or mechanical engineering disciplines. When graduates enter the career field directly after graduation, they are capable of using state-of-the-art skills and knowledge needed to be valued employees in advanced technology industries.

Graduates are employed in various industrial fields of manufacturing engineering, product development, CNC/CAM programming, and project or production supervision. This program is accredited by the Technology Accreditation Commission of ABET (TAC of ABET) located at 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, Telephone: 410-347-7700.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Prior to taking the courses listed below, the following prerequisites are required: TCN*H101 Introduction to Engineering Technology, and MFG*H104 Manufacturing Processes.

Course No.	Title	Credits
EET*H102	Electrical Applications	3
ENG*H101	Composition	3
MAT*H172	College Algebra	3
PHY*H121	General Physics I	4
COM*H100	Introduction to Communication	3
		16
CAD*H150	CAD 2D	3
CHE*H111	Concepts of Chemistry	4
MAT*H185	Trigonometric Functions	3
MEC*H108	Statics	5
MFG*H106	Computer-Aided Mfg I	3
		18
ENG*H102	Literature and Composition	3
MAT*254	Calculus I	4
	or	
CAD*H200	3D CAD	3
MFG*H201	Computer-Aided Mfg II	3
MFG*H210	Materials of Engineering	4
MFG*H275	Mechanics of Materials	3
		16 or 17
Elective	Behavioral or Social Science	3
MFG*H171	Introduction to Lean Manufacturing	3
MFG*H200	Manufacturing Management	3
MFG*H230	Directed Elective	3
MFG*H248	Computer Integrated Manufacturing	3
		15
	Total Credit Hours	**65-66**

DIRECTED ELECTIVES
  MFG*H230 Statistical Process Control
  MEC*H239 Geometric Dimensioning & Tolerancing

Also see: Computer-Aided Drafting/Design Technology
            Electronic Engineering Technology
            Mechanical Engineering Technology

Program Objectives
Upon successful completion of the program requirements, the graduates will be able to:
1. Apply appropriate mathematical and scientific principles to manufacturing practices and materials.
2. Use state-of-the-art software and hardware for manufacturing processes.
3. Design and prepare CAD drawings of tooling and fixtures for manufacturing assemblies and processes.
4. Perform individually or as a member of a team to complete manufacturing projects in an industrial environment.
5. Conduct experiments, analyze data, and interpret results from controlled laboratory experimentation in manufacturing and materials applications.
6. Effectively and efficiently plan, organize, implement, measure, and control manufacturing systems.
7. Act consistently with the ethical standards and conduct of a professional in Manufacturing Engineering Technology.
8. Communicate effectively with individuals and groups using written, oral, and computer skills.
9. Possess the educational background needed to: a. obtain employment as a manufacturing technician, and b. continue studies toward a B.S. degree in manufacturing or mechanical engineering technology as well as other engineering programs.

Program Outcomes
Upon successful completion of the program requirements, the graduates will demonstrate the ability to:
1. **a)** Use college algebra, trigonometry, and differential calculus for computational analyses of problems and experiments in mechanics, manufacturing and materials. **b)** Use the principles of physics I, statics, and strength of materials to understand product manufacture and design of tooling. **c)** Use the concepts of chemistry to understand the properties and selection of engineering materials.
2. **a)** Program with Manual Data Input software to prepare the program steps for CNC parts manufacture. **b)** Apply Computer-Aided Design and MasterCAM® software for direct programming of CNC machining steps on a lathe and milling machine.
3. Design tooling and fixtures by employing appropriate materials and mathematical analysis for force to determine axial, bending, and torsion stresses and strains.
4. Complete tooling and fixture drawings using Computer-Aided Design software.
5. Demonstrate effective participation as a member of a multicultural team that investigates a mathematical solution to a technical problem or evaluates the properties of a material in a laboratory.
6. Prepare experimental procedures, collect data, and analyze results for manufacturing processes and materials analysis in the laboratory or industrial machine shop.
7. **a)** Complete manufacturing process plans for turning and milling machining operations, as well as forming operations for metallic and nonmetallic materials. **b)** Prepare quality assurance methods using statistical process control procedures using control limits and ranges for dimensions and attributes.
8. Apply professional ethics for engineers and technicians to make appropriate decisions based on real-world case studies.
9. Prepare technical and laboratory reports, acceptable to industry requirements, using word processing software.
10. Make oral presentations to a group, acceptable to industry requirements, using Power Point software.
11. Utilize available information and data sources in support of manufacturing operations and select appropriate manufacturing processes.
12. Gain employment as an engineering technician or other technical career.
13. Continue academic progress toward a B.S. degree in engineering or engineering technology.

MARKETING

The Marketing Program is designed to provide the most appropriate education and skills for those who are currently working or who plan to work, after receipt of their degree. At the same time, it provides flexibility to fit into a bachelor's degree in Marketing for students who plan to immediately transfer to a four-year college. (Co-op available)

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
ACC*H113	Principles of Financial Accounting	3
Elective	Mathematics†	3
CSA*H105	Introduction to Software Applications	3
BMK*H201	Principles of Marketing	3
		15
ENG*H102	Literature and Composition	3
ACC*H117	Principles of Managerial Accounting	3
BBG*H232	Business Law II	3
BMK*H207	Consumer Behavior	3
CSA*H207	Computer Applications in Management and Marketing	3
		15
COM*H100	Introduction to Communication	3
ECN*H101	Principles of Macroeconomics	3
Elective	Business††	3
Elective	Behavioral Science	3
Elective	Marketing†††	3
		15
ECN*H102	Principles of Microeconomics	3
Elective	Arts and Humanities	3
Elective	Science	3-4
BBG*H210	Business Communication	3
BBG*H295	Marketing Co-op Work Experience††††	3
		15-16
	Total Credit Hours	**60-61**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify and develop solutions to marketing issues required to meet customers' needs.
2. Develop a marketing plan containing effective marketing vehicles.
3. Apply the concepts of "Total Quality Management."
4. Apply the concept of "Total Customer Service" and function as a customer service representative.
5. Apply market research methodologies to the business marketing issues.
6. Apply the Sales and Customer Service Process to the business' needs.
7. Prepare marketing material to include: sales literature, customer proposals, point-of-sale literature, and promotion plans for the consumer, trade and salesforce.
8. Possess the following computer skills: database management, wordprocessing, internet marketing, desktop publishing, and sales and customer service information systems configuration.
9. Communicate clearly both verbally and in writing.

DIRECTED ELECTIVES

†Mathematics selection from MAT*H167, 172, 232 or higher.

††Selection in consultation with Business Division faculty advisor to meet students educational/career goals from: BMG*H202, BMK*H216; ACC*H231, 241, 271, 272; BFN*H201, 220.

†††Selection in consultation with Business Division faculty advisor to meet students educational/career goals from: BMK*H216; CSA*H135, 145, or 205.

††††Can be waived by the Marketing Coordinator or the Business Division Director for valid educational reasons. A business elective will be substituted from †† or ††† above. To be done in consultation with Business Division faculty advisor.

*Note: We design a focused curriculum for those students who are planning to transfer to a college that has a liberal arts oriented curriculum in the first two years. The following substitutions are made: a second Arts and Humanities elective and a second Behavioral Science elective are substituted for CSA*H207 and BBG*H295.*

The Mathematics/Science Program provides the fundamentals in mathematics and the sciences, enabling students to continue their education in mathematics, the physical sciences, the biological sciences and computer science. Students may enter the areas of science and technology, or should use the program for pre-engineering, pre-medicine, or transfer to a four-year institution, etc. Students should consult with the Mathematics/Sciences Division early to determine specific electives.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
COM*H100	Introduction to Communication	3
Elective	Science & Lab	4
Elective	Science & Lab	4
Elective	Mathematics	3
		17
ENG*H102	Literature and Composition	3
Elective	Computer Science	3
Elective	Science & Lab	4
Elective	Liberal Arts	3
Elective	Mathematics	3-4
		16-17
Elective	Behavioral or Social Science	3
Elective	Arts and Humanities	3
Elective	General	3
Elective	Mathematics/Science	3-4
Elective	Mathematics/Science	3-4
		15-17
Elective	General	3
Elective	Liberal Arts	3
Elective	Behavioral or Social Science	3
Elective	Mathematics/Science	3-4
Elective	Mathematics/Science	3-4
		15-17
	Total Credit Hours	**63-68**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:
1. Communicate effectively.
2. Be proficient in mathematics through calculus.
3. Have strong, varied science background.
4. Transfer to four-year institutions.

Note: All prospective science majors planning to transfer should endeavor to complete PHY*H121, 122; CHE*H121, 122; MAT*H254, 256, as part of their curriculum. Biology majors should take at least three biology laboratory courses, including a two-semester sequence. BIO*H121 and BIO*H122 are considered optimal choices.

MATHEMATICS/SCIENCE

Chemistry Option

The Chemistry Option provides a good preparation for employment in the chemical or pharmaceutical industries. This option can also be used as a transfer program for students who plan to continue their baccalaureate education in the fields of chemistry, biochemistry, environmental science, or materials science.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
ENG*H101	Composition	3
MAT*H172	College Algebra	3
CSA*H105	Introduction to Software Applications	3
CHE*H121	General Chemistry I	4
Elective	Behavioral or Social Science	3
		16
ENG*H102	Literature and Composition	3
MAT*H185	Trigonometric Functions	3
CHE*H122	General Chemistry II	4
Elective	Arts and Humanities	3
COM*H100	Introduction to Communication	3
		16
PHY*H121	General Physics I	4
MAT*H254	Calculus I	4
CHE*H211	Organic Chemistry I	4
Elective	Liberal Arts	3
Elective	General	3
		18
PHY*H122	General Physics II	4
MAT*H256	Calculus II	4
CHE*H212	Organic Chemistry II	4
Elective	Behavioral or Social Science	3
Elective	General	3
		18
	Total Credit Hours	**68**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Understand atomic theory, chemical bonding, solution chemistry, acid-base theory, titration curves, reduction, oxidation, kinetics, thermodynamics, and nuclear chemistry.
2. Demonstrate good laboratory practice in the areas of handling gases, liquids, and solids, using vacuum pumps, heating reagents and the measurement of temperature, filtration, and distillation.
3. Be able to utilize mathematics, including calculus to solve problems in chemistry.
4. Understand organic chemistry nomenclature.
5. Understand inorganic chemistry nomenclature.
6. Perform basic organic synthesis reactions.
7. Utilize a computer to present data in a proper technical report.
8. Utilize a computer to generate graphs from data, and then interpret the graph.
9. Calibrate and operate analytical equipment.
10. Utilize material safety data sheets and safely handle hazardous materials.
11. Safely work with compressed gases.
12. Understand the scientific principles associated with electricity, the laws of motion, mechanics, light, and sound.
13. Communicate orally and in written form.

Mechanical Engineering Technology Option, Engineering Technology

Mechanical engineering deals with POWER, and with the machinery used to convert power to useful work. The mechanical engineering technician is a practically-oriented member of the engineering team which applies existing technology to the solution of engineering problems. The mechanical engineering technician designs machines and processes used to generate and apply power to useful purposes. For example, a mechanical engineering technician may assist in the design of a power plant, testing of a space shuttle, manufacturing of a nuclear submarine, or building of an aircraft carrier.

Naugatuck Valley Community College's Mechanical Engineering Technology Program combines theory with laboratory experience. Subjects such as mathematics, physics, engineering mechanics, fluid mechanics, materials of engineering, thermodynamics, and mechanical design are included within the curriculum. After the theory is taught, it is applied to practical situations in the laboratories, which are supervised by professional engineers. Students learn how to set up and conduct an experiment, to extract and analyze engineering data, and to solve problems which require the application of engineering principles.

As a result of the training and preparation provided by our program, the Mechanical Engineering Technology student is ready to be employed by industry upon graduation. The blend of 'hands-on' experience with theoretical background, the applications to current technology, and the individual initiative that the student develops, make our graduates very marketable in the workforce. Graduates of the Mechanical Engineering Technology Program are successfully employed in many different industries in such positions as: laboratory technicians, field service technicians, design engineering technicians, application engineering technicians, and plant engineering technicians.

This program is accredited by the Technology Accreditation Commission of ABET (TAC of ABET) located at 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, Telephone: 410-347-7700.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
EET*H102	Electrical Applications	3
ENG*H101	Composition	3
MAT*H172	College Algebra	3
PHY*H121	General Physics I	4
CHE*H111	Concepts of Chemistry	4
		17
CAD*H150	CAD 2D	3
MEC*H240	Fundamentals of Thermodynamics	4
MAT*H185	Trigonometric Functions	3
MEC*H108	Statics	5
COM*H100	Introduction to Communications	3
		18
Elective	Behavioral or Social Science	3
MAT*H232	Applied Calculus	3
MEC*H251	Materials Strength	4
MFG*H210	Materials of Engineering	4
MEC*H271	Fluid Mechanics	4
		18
Elective†	Directed Elective	5
ENG*H102	Literature and Composition	3
MEC*H238	Dynamics	4
MFG*H280	Capstone/Design	3
		15
	Total Credit Hours	**68**

†DIRECTED ELECTIVES
 MFG*H217 Machine Design
 MEC*H284 Tool Design

Also see: Computer-Aided Drafting/Design Technology
 Electronic Engineering Technology
 (Automated) Manufacturing Engineering Technology

Program Objectives

Upon successful completion of all program requirements, graduates will:

1. Be able to communicate effectively with individuals and groups using written, oral and computer skills.
2. Possess the educational background needed for (a) obtaining employment as a Mechanical Engineering Technician and (b) continue studies toward a B.S. Degree in Mechanical Engineering or Mechanical Engineering Technology.
3. Design and prepare drawings of machines, components, and assemblies using appropriate CAD (computer-aided-drafting) software.
4. Effectively perform individually or as a member of a team working on Mechanical projects in an industrial environment.
5. Be expected to act consistent with the high moral/ethical standards and professional conduct of a Mechanical Engineering Technician.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Prepare technical and laboratory reports using the Internet and Word Processing software; present such reports to a group of individuals using PowerPoint software and oral communications skills.
2. Design machine components by employing mathematical force and stress analysis.
3. Identify the basic properties of common fluids (liquids and gases) and calculate the amount of heat transferred between hot and cold objects by Conduction, Convection, and Radiation processes.
4. Understand and perform the common manufacturing processes used in industry.
5. Create drawings of machine parts using AutoCAD software.
6. Work effectively as a member of a team that investigates a mathematical solution to a technical problem or evaluates the properties of a material in a laboratory.
7. Apply and practice the Code of Ethics for the Mechanical Engineering Technology profession.

Associate Degree Programs

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NURSING R.N.

CONNECTICUT COMMUNITY COLLEGE NURSING PROGRAM
Capital Community College, Gateway Community College, Naugatuck Valley Community College
Northwestern Connecticut Community College, Norwalk Community College, Three Rivers Community College

The Connecticut Community College Nursing Program (CT-CCNP) is an innovative associate degree nursing program offered at six Connecticut Community Colleges (www.commnet.edu/nursing). The nursing program is a four semester program designed to prepare registered nurses to function in the professional role utilizing current standards of nursing practice. The curriculum is built upon courses from the social and biological sciences, liberal arts, and nursing. These courses provide the foundation for the practice of nursing. Six core values—critical thinking, safe and competent practice, caring, professionalism, communication, and holistic care—provide the framework for organizing the nursing curriculum.

A graduate of the nursing program is awarded an Associate in Science degree and is eligible to take the National Council Licensing Examination for Registered Nurses (NCLEX-RN). Graduates can apply for licensure through the Connecticut Department of Public Health. The graduate is prepared to function as an entry-level practitioner in health care settings such as: general or specialty hospitals, extended care facilities, doctors' offices, and clinics. Each of the six campuses are individually approved by the Connecticut State Board of Examiners for Nursing with the consent of the Commissioner of the Connecticut Department of Public Health and accredited by the National League for Nursing Accrediting Commission, Inc., 3343 Peachtree Road, NE, Suite 50, Atlanta, Ga 30326. Tel. (404) 975-5000

Nursing Campuses

CAPITAL COMMUNITY COLLEGE
Enrollment Services Office
950 Main Street
Hartford, Connecticut 06103
Phone: 860-906-5126
www.ccc.commnet.edu

GATEWAY COMMUNITY COLLEGE
Admissions Office - Long Wharf Campus
Attention: Nursing
60 Sargent Drive
New Haven, Connecticut 06511
Phone: 203-285-2010
www. gwcc.comment.edu

NAUGATUCK VALLEY COMMUNITY COLLEGE
Admissions Office
750 Chase Parkway
Waterbury, Connecticut 06708
Phone: 203-575-8294
www.nvcc.commnet.edu

NORTHWESTERN CONNECTICUT COMMUNITY COLLEGE
Admissions Office
Park Place East
Winsted, Connecticut 06098
Phone: 860-738-6300
www.nwcc.commnet.edu

NORWALK COMMUNITY COLLEGE
Admissions Office
188 Richards Avenue
Norwalk, Connecticut 06854-1655
Phone: 203-857-7060
www.ncc.commnet.edu

THREE RIVERS COMMUNITY COLLEGE
Nursing Admissions
7 Mahan Drive
Norwich, Connecticut 06360-2497
Phone: 860-892-5702
www.trcc.commnet.edu

ADMISSION PROCESS
Applicants seeking admission into the Connecticut Community College Nursing Program (CT-CCNP) must file a CT-CCNP Nursing Application through the Admissions Office at **the College of first choice*** by February 1 deadline date**.** Advisors/Counselors are available at each campus to guide applicants through the admission process.

Submit the following by the **February 1 deadline date**:
- College application (separate from the nursing program application) with application fee of $20.00 for first-time applicant to any of the twelve Connecticut Community Colleges.
- Connecticut Community College Nursing Program (CT-CCNP) common application.
- Proof of high school completion.
   If the student is using their high school chemistry to satisfy the admission requirement, official high school transcripts are required.
- Official SAT I score reports, if applicable (see Admission Requirements for clarification).
- Official College/University transcripts from ALL colleges ever attended.
- Official TEAS results, if not taken at a CT Community College (see Admission Requirements).
- Proof of immunization.

Complete the required Accuplacer computerized placement test. The placement test may be waived for applicants who have prior college English and/or mathematics credits.

***Where to Apply* –** Applicants must submit all application materials to the Admissions Office at the **College of first choice** by **February 1.**
***When to Apply* –** The application period for the nursing program for the class beginning each fall is November 1, through February 1.
When the admission requirements, except for Anatomy and Physiology II, have been met, the Admissions Office determines the application complete.
***Notification of Admission Status* –** The applicant will be notified by letter of the admission decision prior to May 1.

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ADMISSION REQUIREMENTS
- High school graduate or equivalent
- One year of high school chemistry with a lab with a grade of C or higher; or Connecticut Community College CHE 111 or equivalent with a grade of C or higher successfully completed within five years prior** to application deadline of February 1.
- SAT 1 Math score of 550 or higher: OR a score of 40 or higher on the College Level Math portion of the Accuplacer; OR Connecticut Community College MAT*136 or 137, or equivalent or higher, with a grade of C or higher, completed prior to application deadline of February 1.
- GPA 2.7 - Based on all college credits taken within the past five years; and any college courses taken prior to five years that meet the nursing admission and/or curriculum requirements.
- Computer literacy – A passing score on the computer proficiency test or completion of Connecticut Community College CSA*105 or CSC*101 or equivalent, with a grade of C or higher, completed prior to application deadline of February 1.
- Test of Essential Academic Skills – Please consult the 2012-2013 Student Information Packet for TEAS eligibility requirements.
- Connecticut Community College BIO 211: Anatomy and Physiology I, or equivalent, with a grade of C+ or higher, successfully completed within five years prior** to application deadline of February 1.
- Connecticut Community College ENG 101: English Composition, or equivalent, with a grade of C or higher, successfully completed prior to application deadline of February 1.
- Connecticut Community College BIO 212: Anatomy and Physiology II, or equivalent, with a grade of C+ or higher, successfully completed within five years prior** to application deadline of **February 1** or successfully completed during, but no later than, the spring semester of the year of application.

    * "**College of First Choice**" is the college that you would most like to attend.
    ** "Five years prior" is defined as having completed the course between December 2006 and February 1, 2012, to begin the program in fall 2012.

Transcripts
All high school and college/university official transcripts must be received by the Admissions Office at the **College of first choice** post-marked no later than the application deadline of February 1. It is the applicant's responsibility to submit all official material to the Advisor/Admissions Officer.

ATI-TEAS
All applicants to the Connecticut Community College Nursing Program (CT-CCNP) must take the Test of Essential Academic Skills (TEAS). Please consult the 2012-2013 Student Information Packet for TEAS eligibility requirements. The score on the TEAS will also be used to rank eligible students. The test is a multiple choice test that evaluates essential academic skills, math, science, reading and English. The test will take 3.5 hours to complete. The applicant may retake the TEAS as many times as desired, however, there must be a 45 day period between each testing. Test results are valid for three (3) years from the most recent date. There is a non-refundable fee for the TEAS.

The ATI-TEAS Study Manual can be ordered at http://www.atitesting.com/global/students/teas-study-manual.aspx at a cost of approximately $35.00. The study manual is also on reserve in the NVCC library. It is recommended that applicants review biology and chemistry content in preparation for taking the TEAS. The applicant can also subscribe to practice tests offered on-line at www.ati.com.

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Transfer Credit
- **Non-Nursing Courses -** Applicants must have official transcripts from other colleges or universities sent to the Admissions Office of the **College of first choice** by the application deadline date of February 1. In accordance with transfer of credit guidelines set forth by the Board of Trustees, courses which meet nursing program requirements will be accepted by the CT-CCNP. Once an applicant earns credit at the **College of first choice,** transfer credit for the same course from another college will not be granted.
- **Credits Earned Outside the United States –** Transcripts need to be evaluated by the "Course By Course" option through the World Education Services Inc, PO Box 745, Old Chelsea Station, New York, New York 10113 or another approved site and submitted to the **College of first choice**. Contact the College of First Choice for additional information.

ADVANCED PLACEMENT
- **Licensed Practical Nurse**
  The Connecticut Community Colleges Nursing Program participates in the Connecticut Articulation Model for LPNs. Applicants must meet the CT-CCNP admission requirements. Applicants are encouraged to seek advisement prior to the application process.

- **Transfer Nursing Students From Programs Outside CT-CCNP**
  Transfer students who wish to transfer nursing courses from another college or university will be considered for transfer after a written request for evaluation of nursing course work has been received by the Nursing Director at **College of first choice**. Applicants must meet all nursing program admission requirements. Applicants can obtain complete transfer requirements from the **College of first choice**. Transfer students are admitted based upon a GPA of 3.00; ability to place applicant in the appropriate clinical section; and availability of openings, clinical resources, and faculty.

ADMITTED STUDENTS
Health Requirements
> **Immunization Requirements -** Students will receive a packet of information at the time of acceptance into the CT-CCNP.
> **Physical Examination** – A complete physical examination must be on file. The physical examination must be current (within one year of the student entering the clinical area).

Basic Life Support
> Students must provide proof of current certification as a Healthcare Provider through the American Heart Association or the American Red Cross by July 1st of the admission year. Certification must remain current throughout the nursing program.

Technical Standards
> The RN student must be able to apply the knowledge and skills necessary to function in a broad variety of clinical situations. Technical standards reflect reasonable performance expectations of the RN student for the performance of common functions of the registered nurse. A copy of the Technical Standards can be obtained from the Nursing Director (E602).

Criminal Background Checks
> Some clinical learning sites require students to undergo a background check for felony and/or misdemeanor convictions. Students who do not pass the background check may be excluded from the clinical site and may not be able to meet the competencies required for the program.

Clinical Sites
> Clinical learning experiences are planned as an integral part of the nursing courses and are held at a variety of healthcare settings, such as: hospitals, extended care facilities, and selected community health centers. Students are responsible for arranging their own transportation to and from assigned clinical sites. Clinical experiences may be assigned during daytime, evening, or weekend hours. Assignment of clinical sites is at the discretion of the nursing faculty.

Waiver of Licensure Guarantee
> Upon successful completion of the Associate of Science degree with a major in Nursing, the graduate is eligible to take the National Council of State Boards of Nursing's Licensure Examination for Registered Nurses (NCLEX-RN). Graduation from the CT-CCNP does not guarantee licensure to practice nursing. Licensure requirements and procedures are the responsibility of the Connecticut Department of Public Health, State Board of Examiners for Nursing. Permission to take the NCLEX-RN examination is established by law and granted by the Connecticut State Board of Examiners for Nursing.

Felony Conviction
> At the time of application for RN licensure an applicant will be asked the following question by the Connecticut Department of Public Health: "*Have you ever been found guilty or convicted as a result of an act which constitutes a felony under the laws of this state, federal law or the laws of another jurisdiction and which, if committed within this state, would have constituted a felony under the laws of this state? If your answer is "yes", give full details, dates, etc. on a separate notarized statement and furnish a Certified Court Copy (with court seal affixed) of the original complaint, the answer, the judgment, the settlement, and/ or the disposition.*"

NURSING R.N.

CONNECTICUT COMMUNITY COLLEGE NURSING PROGRAM
Capital Community College, Gateway Community College, Naugatuck Valley Community College
Northwestern Connecticut Community College, Norwalk Community College, Three Rivers Community College

Program of Study

ADMISSION REQUIREMENTS		Credits
BIO*H211	Anatomy & Physiology I †	4
ENG*H101	English Composition	3
		7

PRE-REQUISITE REQUIREMENTS:

BIO*H212	Anatomy & Physiology II †	4

FIRST SEMESTER

NUR*H101	Introduction to Nursing Practice	8
BIO*H 235	Microbiology †	4
PSY*H111	General Psychology	3
		15

SECOND SEMESTER

NUR*H102	Family Health Nursing	8
NUR*H103	Pharmacology for Families Across the Life Span	1
PSY*H201	Life Span Development†	3
SOC*H101	Principles of Sociology	3
		15

THIRD SEMESTER

NUR*H201	Nursing Care of Individuals and Families I	9
NUR*H202	Pharmacology for Individuals and Families with Intermediate Health Care Needs	1
ENG*H102	English Composition & Literature†	3
		13

FOURTH SEMESTER

NUR*H203	Nursing Care of Individuals and Families II	8
NUR*H204	Pharmacology for Individuals, Families and Groups with Complex Health Care Needs	1
NUR*H205	Nursing Management & Trends	2
Elective	Humanities†† or Arts or COM*H100	3
		14

Total Credit Hours	**68**
General Education Credits	**30**
Nursing Credits	**38**

Program Objectives

The graduate will:

1. Integrate the principles of the natural, physical, social, biological, and behavioral sciences, and nursing theory to provide holistic care to individuals, families, and groups across the wellness-illness continuum.
2. Integrate the nursing process as a critical thinking skill for decision making in nursing practice.
3. Provide safe and competent care to individuals, families, and groups grounded in evidenced-based practice, quantitative competencies, and technological proficiency.
4. Integrate effective communication skills through professional interactions with individuals, families, groups and the health care team.
5. Create an environment where therapeutic interventions reflect a respect for human dignity.
6. Collaborate as a member of a multidisciplinary health team.
7. Integrate accountability and responsibility for practice within the legal and ethical standards of the nursing profession.
8. Function in the professional role utilizing current standards of nursing practice.

Associate Degree Programs

†There may be a prerequisite course that must be successfully completed prior to taking the course.
††Norwalk Community College requires one interdisciplinary course to fulfill core curriculum requirements.

Non-Nursing courses must be taken in the semester indicated above or they may be taken earlier (with a minimum of C grade). Nursing courses must be taken in the stated sequence.

Nursing Credits:
  Classroom - one contact hour = 1 credit
  Clinical - three contact hours = 1 credit

PHYSICAL THERAPIST ASSISTANT

The Physical Therapist Assistant (PTA) program is accredited by Connecticut's Board of Governors for Higher Education, and by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, 1111 North Fairfax St., Alexandria, VA, 22314, (703) 684-2782.

The PTA is an assistant to the physical therapist and a valued member of the health team. Career opportunities are in hospitals, school systems, private offices, home health agencies, industry, rehabilitation hospitals and nursing homes.

This two year, full-time curriculum for an Associate in Science degree is offered through a collaborative arrangement among Capital, Housatonic, Manchester, Naugatuck Valley, Northwestern Connecticut, and Tunxis Community Colleges. The program is based at Naugatuck Valley Community College. The physical therapy courses are held at that college in Waterbury, and more than 90 physical therapy clinics from around the state collaborate with this program to provide internships. The course of study begins in January and includes a minimum of 67 credits.

In reading this section candidates must note the special requirements of this program.

Selective Admission Requirements
1. Submit a PTA program application, in addition to the college application for admission, and an official final high school transcript indicating graduation or a General Education Development (GED) Diploma.

2. Complete the following courses with a minimum grade of "C", and submit a high school and/or college transcript documenting that these were completed no earlier than five years prior to the application date:
   a. Intermediate Algebra
   b. Chemistry or Physics, with a laboratory component

   Applicants enrolled in high school can complete these requirements through courses at the college preparatory or advanced level. High school modified grade level courses will not meet these admissions criteria nor will high school courses designated as "allied health".

   Applicants not enrolled in high school may complete these requirements through courses completed at a college. Adult education courses do not meet these criteria. Satisfactory scores on the CLEP in intermediate algebra and chemistry or physics are acceptable in meeting these requirements.

   Courses which must be completed by the application deadline to meet these requirements are:

   ALGEBRA: The minimum high school level course to meet this requirement is Algebra II. The minimum college algebra course to meet this requirement is MAT*H137.

   CHEMISTRY or PHYSICS: This high school course must be "general with laboratory". College courses with laboratory must be "introductory" or "general" level courses. The minimum course to meet this requirement is CHE*H111 (Concepts of Chemistry) or PHY*H110 (Introductory Physics).

3. Complete no earlier than five (5) years prior to entering the PTA program the course Anatomy and Physiology I (4 cr.), which must be completed with a minimum grade of "C". Students enrolled in Anatomy and Physiology I during the Fall Semester, and who have met all other admissions criteria, may be offered conditional acceptance to the program based on achieving a minimum grade of "C" at the end of the semester. Official transcripts or final grade(s) must be submitted as soon as they are available. The minimum course to meet this requirement is BIO*H211 or equivalent.

4. Complete the required College Placement Tests. Remedial courses required as indicated by testing must be completed before October 1 of the year prior to the year in which the student wishes to enter the PTA program.

5. Earn a GPA of 2.5 for all previous college work.

6. Submit all application materials, including official high school and college transcripts, and program application, by **October 15,** for admission consideration for the upcoming spring semester.

7. Students must be able to perform common physical therapy functions as defined in the program's Essential Requirements. Contact the program to receive a copy of this document.

8. In addition to tuition and fees, students in the PTA program must pay for books, appropriate attire for internships, and transportation. Students must complete and verify all required immunizations and provide certification by the American Heart Association in Basic Life Support (BLS) for the Health Care Provider before the start of clinical activities.

9. Students may be required by a health care facility to undergo a background check for felony convictions. Students who do not pass the background check may be excluded from the clinical site and may not be able to meet the competencies required for the program.

PHYSICAL THERAPIST ASSISTANT

Learning is planned as a progression of increasing complexity. The general education courses are supportive of the PTA courses. Therefore, all courses must be taken in sequence. A minimum grade of "C" is required in all areas of physical therapy and biology, and an evaluation of "Satisfactory" must be attained in clinical internship courses in order to progress. The faculty reserves the right to withdraw a student whose clinical performance is unsatisfactory. Attendance for class, lab, and clinical experience is required. Sixty-seven (67) semester hours are required for graduation from the PTA Program.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
BIO*H211	Anatomy and Physiology I	4
PTA*H120	Introduction to Physical Therapy	3
PTA*H125	Physical Therapy for Function	4
BIO*H212	Anatomy and Physiology II	4
ENG*H101	Composition	3
PSY*H111	General Psychology I	3
PTA*H220	Introduction to the Physical Therapy Clinic	1
PTA*H230	Physical Agents in Physical Therapy	4
PTA*H235	Kinesiology for Rehabilitation	4
COM*H100	Introduction to Communication	3
ENG*H102	Literature and Composition	3
Elective	Mathematics†	3
PTA*H250	Therapeutic Exercise	5
PTA*H253	Pathophysiology for Rehabilitation	3
PTA*H258	PTA in the Healthcare Arena	2
Elective	Arts/Humanities†	3
Elective	Social Science†	3
PTA*H260	Physical Therapy Seminar	2
PTA*H262	PTA Internship II	5
PTA*H265	PTA Internship III	5
	Total Credit Hours	**67**

†The general education requirements follow Naugatuck Valley Community College's core requirements, and may vary from the core requirements at each consortium college.

Program Objectives

The objective of the PTA program is to prepare graduates to succeed in careers as PTAs. Upon successful completion of all program requirements, graduates will be able to:

1. Sit for examination for state licensure/registration as a physical therapist assistant.
2. Perform physical therapy interventions under the supervision of a physical therapist.
3. Accurately obtain patient information through data collection.
4. Demonstrate accurate problem-solving abilities when working as a physical therapist assistant.
5. Competently communicate with physical therapists, patients, families and other health care providers.
6. Effectively provide education to patients, families and other caregivers.
7. Produce documentation supporting physical therapy services.
8. Demonstrate behaviors that comply with appropriate statutes and with the ethical standards established by the American Physical Therapy Association.
9. Competently function within an interdisciplinary health care team.

Associate Degree Programs

RADIOLOGIC TECHNOLOGY

The radiologic technologist is the technical assistant to the radiologist, (a physician who specializes in the use of x-rays and radioactive isotopes). Since x-rays are an important tool for the diagnosis of disease, radiologic technologists are valued members of the health team. The Radiologic Technology Program leads to employment as radiologic technologists in hospitals, medical offices, clinics and public health institutions.

Admission Requirements
The applicant must meet the following requirements in addition to the general admission policies:

1. High school diploma or equivalency.

2. Completion, within the last 5 years, of the following high school or college courses with a minimum grade of "C"
    *   HS algebra II with a grade of C or better and a placement score above intermediate algebra; or College MAT*H137, or equivalent, with a grade of "C" or better.
    *   Two sciences, one must be biology with a lab. The biology requirement may be achieved by HS biology with a lab with a grade of "C" or better; or one semester of college biology with a grade of "C" or better (NVCC A & P I requires BIO*H105 or BIO*H115. The BIO*H105 requirement may be achieved by successful completion of CLEP or examination administered by the Math/Science Division).

3. Qualified achievement on College Placement Tests. Remedial courses must be completed before acceptance into the program.

4. Application deadline is January 15 of each year. All application and program deadlines are strictly enforced. Failure to adhere to deadlines will disqualify a candidate for consideration for admission.

5. Consideration for admission requires all minimally qualified applicants to attend a mandatory program information session. Applicants will be notified by mail to schedule attendance at a session. The deadline to register for an information session is strictly enforced.

6. Medical examination report by a physician (within three months) which describes the physical and emotional health of the applicant. Completion and verification of all required immunizations before beginning classes.

7. Be able to perform the skills needed as a radiographer, as outlined in the program's Technical Standards.

8. Submission of all application materials including high school transcripts, college records and radiology program records when applicable.

9. Admitted students must provide proof of a Health Care Provider course in Basic Life Support (BLS) from the American Heart Association prior to beginning class. The Division of Continuing Education offers BLS courses throughout the summer.

10. Selection of candidates for admission is based upon academic history of the applicant. Overall high school and/or college GPA, Math GPA, Science GPA, and successfully completed general education courses in the radiology curriculum are used to rank candidates.

11. The American Registry of Radiologic Technologists (ARRT) requirements concerning individuals with a previous criminal conviction may eliminate a student from sitting for the certification examination. A previous criminal record includes but may not be restricted to misdemeanor drug possession charges, DUI, felony convictions, military court martial, and proceedings where a plea of nolo contendere was entered. Individuals may contact the ARRT at (615) 687-0048 privately for clarification of their eligibility status. ARRT certification is required to obtain a radiographer's license in Connecticut and many other states.

    Additionally, students may be required by a clinical affiliate to undergo a criminal background check prior to attending assignments in their facility. Students that do not pass a criminal background check may be excluded from the clinical site and may not not able to meet the competencies required for the program. If you feel that this may apply to you, please consider your acceptance into the NVCC Radiologic Technology Program carefully. If you have any questions, please call the Director of Allied Health, Nursing and Physical Education at 203-575-8057.

An evening clinical track is available to four incoming students in the first year fall and spring semesters. Students attend radiology classes during the day. Prior to beginning the evening clinical, all students attend a four week program orientation session during the day. During the six week summer session, evening students attend clinical on Tuesday evening and on Friday, 8:00 a.m. to 4:30 p.m. The evening students are matriculated into the day clinical track for the entire second year of the program. Students interested in the evening clinical track should contact the Program Director for further information. The evening clinical track is offered based upon instructor availability and funding.

Due to the extensive time requirements for classes, clinical, and studying, program faculty strongly recommend that radiology students work no more than 20 hours a week. Faculty strongly advise applicants to consider the time requirements for studying, attending class, attending clinical, as well as their personal obligations before accepting admission.

In order to meet the educational objectives of the program as well as ensure the safety of the patient and student, attendance policies are strictly enforced.

Readmission and Transfer
Candidates seeking readmission to the program must apply to the Program Director. Readmission into the program for the fall semester must be submitted in writing to the Director before March 1, and for the spring semester before November 1. Readmission is based on a total faculty review even when students meet the eligibility criteria. A cumulative grade point average of 2.5 is required for readmission or transfer within the Radiologic Technology Program. Consideration for readmission or transfer into the program can only be granted if there are available openings. Transfer students are required to submit official transcripts. Transfer admission is based on GPA, seat availability and completed course work.

RADIOLOGIC TECHNOLOGY

Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.

The Curriculum

The Radiologic Technology Program is approved by the Board of Governors for Higher Education and the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago, Il. 60606. (312) 704-5300. www.jrcert.org

The curriculum is designed as a progression of increasing complexity. Therefore, all prescribed courses must be taken in sequence. Electives and core courses can be taken prior to the semester scheduled with the exception of the radiology courses.

Clinical practicum is conducted in hospitals, offices, and imaging centers. It is necessary for the student to have adequate transportation.

A minimum grade of "C" is required in all courses related to radiology and science courses. The faculty in the Radiologic Technology Program reserves the right to require withdrawal of a student from the Radiologic Technology Program whose clinical performance is unsatisfactory. Upon successful completion of all program requirements, students are eligible to take the American Registry of Radiologic Technologist Registry Examination. A minimum of sixty-eight (68) semester hours is required for graduation.

Course No.	Title	Credits
ENG*H101	Composition	3
BIO*H211	Anatomy & Physiology I	4
RAD*H112	Orientation to Radiology	3
RAD*H197	Clinical Practice I	2
		12
RAD*H113	Rad. Physics/ Radiographic Quality I	3
PSY*H111	General Psychology I	3
BIO*H212	Anatomy & Physiology II	4
PHY*H110	Introduction to Physics	4
RAD*H198	Clinical Practice II	2
		16
RAD*H114	Contrast Media Procedures and Radiographic Quality II	3
RAD*H199	Clinical Practice III	2
		5
RAD*H200	Radiologic Physics and Diagnostic Imaging Modalities	3
RAD*H222	Radiobiology and Protection	3
COM*H100	Introduction to Communication	3
PSY*H201	Lifespan Development	3
RAD*H297	Clinical Practice IV	3
		15
RAD*H215	Radiographic Pathology	3
CSA*H105	Introduction to Software Applications	3
Elective	History or Social Science	3
ENG*H102	Literature and Composition	3
RAD*H298	Clinical Practice V	3
		15
RAD*H217	Seminar in Radiology (A Case Study Approach)	3
RAD*H299	Clinical Practice VI	2
		5
	Total Credit Hours	**68**

Mission Statement

The Radiologic Technology Program prepares students to enter the imaging sciences as an educated and skilled radiographer. The program, founded on close alliances with the professional community and the use of educational technology, creates a learning environment that prepares radiographers who:
- Combine efficiency and compassion when imaging patients.
- Practice in accordance with theoretical knowledge and essential skills.
- Maintain high ethical standards.
- Strive for continued development as a professional.
- Commit to clinical excellence.

Program Outcomes

The mission statement of the radiologic technology program is further defined by the following goals and objectives:

1. Students will learn from a curriculum that offers a balance of general education and professional courses enabling the graduate to become ARRT certified, beginning their careers with satisfactory entry level skills.

2. Graduates will have completed an educational program that fosters critical thinking, effective communication, professional ethics, and a commitment to lifelong learning.

3. Students will be assigned clinical experiences that integrate the acquisition of the knowledge and the skills necessary to promote clinical competence, safety, and efficiency when performing imaging procedures.

Clinical Affiliates:
   Charlotte Hungerford Hospital
   Diagnostic Imaging of Southbury
   Greater Waterbury Imaging Center
   Naugatuck Valley Radiological Associates, Chase Parkway
   Naugatuck Valley Radiological Associates, West Main
   Orthopaedics of New England
   St. Mary's Hospital
   Waterbury Hospital Health Center

Associate Degree Programs

RESPIRATORY CARE

The Respiratory Care Program at Naugatuck Valley Community College is approved by the Board of Governors for Higher Education and is recognized by the Commission on Accreditation of Respiratory Care as an Advanced Practitioner Respiratory Care Program. Graduates of the program are eligible to take the entry level and advanced practitioner examinations provided by the National Board of Respiratory Care with successful completion of the program.

Characteristics of the field:
Respiratory therapists provide a wide variety of services within the healthcare system. Respiratory therapists work under the direction of a qualified physician and are responsible for taking care of patients with heart and lung problems.

Respiratory Therapists are responsible for:
- Administration of medical gases
- Administration of medications to the cardiopulmonary system.
- Assessment of a patients cardiopulmonary system.
- Assisting patients with secretion management.

Respiratory Therapists perform diagnostic procedures, which may include:
- Arterial blood gas analysis
- Cardiac and pulmonary stress tests
- Pulmonary function studies
- Sleep studies

Respiratory therapists work in Intensive Care Units (ICU) and are members of the cardiac arrest teams and trauma teams found within a hospital system. The respiratory therapist's responsibilities include:
- Airway management
- Initiation, monitoring, and discontinuation of mechanical ventilation for life support.
- Physiologic monitoring of the critical care patients lung and heart function.
- Administration of oxygen therapy and non-invasive ventilation.

A career as a respiratory therapist can provide you with:
- A service and people centered profession
- A highly technical but rewarding career in a health care profession
- The opportunity to work as a valuable member of the health care team.

Admissions Requirements:
The Respiratory Care Program has selective admissions into the program. The applicant must meet the following requirements in addition to the general admission policies:
1. High school diploma or equivalency
2. Completion, within the last 5 years, of the following high school or college courses with a minimum grade of "C":
 - MAT*H137 Intermediate Algebra or a placement test score above Intermediate Algebra
 - BIO*H105 or BIO*H115 or equivalents; the BIO*H105 requirement may be achieved by successful completion of CLEP or examination administered by the Math/Science Division)
3. Qualified achievement on College Placement Tests. Remedial and ESL courses must be completed before acceptance into the program.
4. Complete a program application by the January 15 deadline.
5. Attend a mandatory information session. Applicants will be notified via US mail to schedule attendance at a session. The deadline to register for an information session is strictly enforced.
6. Chemistry, anatomy and physiology I and II taken prior to admission into the program must have been taken within the following timeframe and the student must have achieved a grade of "C" or better for each of the courses:
 - Anatomy and Physiology I and II within the last 5 years
 - Chemistry within the last 8 years
7. Algebra, Chemistry, and Biology (including Anatomy and Physiology I and II) taken at other colleges must be equivalent to NVCC courses in order to fulfill the program science and math prerequisites and program science requirements.
8. A minimum G.P.A. of 2.5.
9. Submit all application materials including high school transcripts, college records and respiratory care program records when applicable.
10. Students may be required by a clinical affiliate to undergo a criminal background check prior to attending assignments in their facility.

Students that do not pass a criminal background check may be excluded from the clinical site and may not meet the competencies required for the program.

Due to the extensive time requirements for classes, clinical, and studying, the program faculty strongly recommends that respiratory care students work no more than 20 hours a week. Faculty strongly advises applicants to consider this before applying and/or before accepting an offer of admission.

Special Admission Requirements for Certified Respiratory Therapist (CRTs)
Graduates of a one year certificate program who seek admission to the program and have successfully completed the Certification Exam for Respiratory Therapists by the National Board for Respiratory Care (NBRC) will be admitted into the program as a second year student. All CRTs seeking admission into the program must provide proof of certification in order to receive credit for the following technician level courses:

RSP*H112	Fundamentals of Respiratory Care
RSP*H131	Applied Pharmacology
RSP*H121	Cardiopulmonary Anatomy and Physiology
RSP*H141	Principles of Respiratory Care
RSP*H151	Cardiopulmonary Pathophysiology
RSP*H180	Clinical Practicum
RSP*H181	Clinical Practicum II
RSP*H281	Advanced Clinical Practicum (transfer credit requires approval from the Director of Clinical Education).

Students entering the program as a CRT must complete all of the general education courses prior to graduation. All applicants will be required to take a self-assessment exam by the NBRC prior to admission to the program. This test is not used for placement into the program, but for internal purposes only.

Readmission into the Respiratory Care Program
Students seeking readmission into the respiratory care program must apply directly to the program director within 18 months of severance from the program. Readmission is based on faculty review, clinical evaluations, current GPA of 2.5 and evidence of interim efforts on the candidate's part to strengthen areas of weakness. Readmission is on a space available basis. Please see the Respiratory Care Student Handbook for additional information regarding readmission.

Transfer Requirements:
1. Students seeking transfer into the program must apply to the Program Director by the program application deadline (January 15).
2. Official transcripts must be provided with the application.
3. Consideration for transfer into the Respiratory Care Program depends on whether there are available openings at the time of the request.
4. Transfer admission is based on GPA and previous completed course work.
5. The Program Director and the Director of Clinical Education will evaluate previous respiratory care course work for equivalency with NVCC respiratory care courses.

Student responsibilities:
Once a student has been accepted into the program, the student must assume the following responsibilities:
- Perform the skills necessary to function as a respiratory therapist as outlined in the program's technical standards.
- Provide proof of a Health Care Provider course in Basic Life Support (BLS).
- Submit a current physical examination which describes the student's health and proof of immunizations.
- Purchase required books, manuals and clinical supplies.
- Purchase required uniforms for clinical practice which conform to the program dress code.
- Transportation to and from clinical facilities.
- Follow established college policies and procedures.
- Follow established program policies and procedures as outlined in the Respiratory Care Student Handbook.

Please contact the program director for details or questions.

RESPIRATORY CARE

Learning is planned as a progression of increasing complexity. Therefore, in order for a student to progress to the next semester, a minimum grade of "C" is required in all respiratory courses. BIO*H211 and BIO*H212 must be completed with a grade of "C" or better before a student can progress to the second year of the program. Respiratory courses must be taken in the designated sequence. Electives and other core courses may be taken prior to the designated semester. Students must achieve a "C" or better in all required courses including respiratory, science and general education courses. Graduates of the program will be eligible to take the Entry Level Examination and the Advanced Practitioner Level Examination for Respiratory Therapy Practitioners given by the National Board of Respiratory Care after graduation.

The Respiratory Care Program at Naugatuck Valley Community College is accredited by the Commission on Accreditation for Respiratory Care, **www.coarc.com**. Commission on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, Texas 76021-4244. (817) 283-2835.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

Course No.	Title	Credits
BIO*H211	Anatomy & Physiology I	4
ENG*H101	Composition	3
Elective	Social Science	3
RSP*H112	Fundamentals of Respiratory Care	4
RSP*H121	Cardiopulmonary Anatomy and Physiology	3
		17
BIO*H212	Anatomy & Physiology II	4
COM*H100	Introduction to Communication	3
RSP*H131	Applied Pharmacology	3
RSP*H141	Principles of Respiratory Care	4
RSP*H180	Clinical Practicum	1
		15
RSP*H151	Cardiopulmonary Pathophysiology	3
RSP*H181	Clinical Practicum II	2
ENG*H102	Literature and Composition	3
		8
CHE*H111	Concepts of Chemistry	4
PSY*H111	General Psychology I	3
RSP*H270	Hemodynamic and Critical Care Monitoring	3
RSP*H262	Advanced Principles of Respiratory Care	4
RSP*H281	Advanced Clinical Practicum	2
		16
RSP*H271	Pulmonary and Cardiovascular Diagnostics	2
RSP*H291	Perinatal and Pediatric Respiratory Care	2
RSP*H201	Future Trends	2
RSP*H282	Advanced Clinical Practicum II	2
Elective	Arts/Humanities	3
		11
	Total Credit Hours	**67**

Program Outcomes

Upon graduation from the program, the graduate must be competent in the following areas: Psychomotor skills, Affective skills and Cognitive skills. Each area will be evaluated while enrolled in the program on a semester by semester basis. Learning is planned as progression of increasing complexity. The goal of the Respiratory Care program is to prepare the student to function as a competent respiratory care practitioner. Upon successful completion of the program the graduate will:

1. demonstrate the ability to understand, utilize, access and assess information relating to his/her function as a respiratory therapist.
2. demonstrate the skills necessary to function as a respiratory therapist.
3. demonstrate the behaviors consistent with professional and employer expectations of a respiratory therapist.
4. demonstrate proficiency as a respiratory therapist, as described by the National Board for Respiratory Care and the Commission on Accreditation for Respiratory Care.
5. assist physicians in diagnosis, management, and treatment of patients affected by cardiopulmonary disorders.

Clinical experiences are provided at the following facilities:
- Bridgeport Hospital
- Connecticut Children's Medical Center
- Gaylord Health and Rehabilitation Center
- Hospital for Special Care
- Hospital of St. Raphael's
- Pulmonary Associates of Waterbury
- St. Mary's Hospital
- Waterbury Hospital
- Yale New Haven Hospital

Associate Degree Programs

VISUAL and PERFORMING ARTS

Naugatuck Valley's distinctive programs in Art, Dance, Digital Design Technology, Music and Theater Arts offer challenging courses of study for both the inexperienced and experienced, the student and the artist, by providing training, skills, and opportunities in the world of the arts. We help students reach their creative and intellectual potential through our quality instruction, interdisciplinary focus, and fine works and productions.

The Visual and Performing Arts degree provides students with a basic general education component which is transferable to four-year institutions. In addition, through a series of options, it leads them to five areas of interest and a diverse choice of career fields. Below is the core curriculum. The options are explained on the following pages, including some related job opportunities. Each option comprises a general education component (24-25 credits), a specialized core (18 credits), specialized options (15 credits), and 3 directed electives (9 credits), for a total of 66-67 credits.

General Education Core		*Credits*
ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
HIS*H101 or 102	West. Civ. I or II	
	or	
HIS*H121 or 122	World Civ. I or II	3
Elective	Arts & Humanities	3
Elective	Behavioral Science	3
Elective	Mathematics†	3
Elective	Science	3-4
		24-25

Specialized Core

CSA*H105	Introduction to Software Applications	3
ART*H101	Art History I	3
	or	
ART*H102	Art History II	
DAN*H101	History and Appreciation of World Dance	3
DAT*H101	Introduction to Digital Arts	3
MUS*H101	Music History & Appreciation I	3
THR*H101	Introduction to Theater	3
		18

Specialized Options   *(see details on following pages)*

15
††Directed Electives

Arts	3
Arts	3
Arts	3
	9
Total Credit Hours	**66-67**

†MAT*H135 or higher, excluding MAT*H137.
  Students intending to transfer to a public state university should select from MAT*146, 167, or 172.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Read and interpret relevant literature and historical events from a variety of Arts areas.
2. Communicate clearly and effectively, using specific Arts' Vocabulary.
3. Identify specific Arts' luminaries and their contributions to a particular field of expertise.
4. Given specific assignments, produce quality documentation/products/performance related to Arts' specialty areas.
5. Design, develop, and complete advanced projects.
6. Develop an appreciation of world culture through the beauty and discipline of the Arts.
7. Demonstrate desirable attitudes and work habits – creative thinking, problem-solving ability, good artistic judgment, industriousness, cooperation, responsibility, and self-reliance.

††*Arts Directed Electives*

ART*H101	Art History I
ART*H102	Art History II
ART*H160	Crafts
ART*H122	Three-Dimensional Design
ART*H131	Sculpture I
ART*H132	Sculpture II
ART*H141	Photography I
ART*H142	Photography II
ART*H161	Ceramics I
ART*H162	Ceramics II
ART*H167	Printmaking I
COM*H175	Voice and Diction
DAN*H102	Ballet I: Renaissance to Romantic
DAN*H111	Jazz Dance I: Afro-Caribbean/American
DAN*H112	Jazz Dance II: Broadway & Film
DAN*H113	Modern Dance I: Pioneers of America
DAT*H106	Digital Design
DAT*H116	Interactive Media Design
DAT*H212	3D Graphics and Animation I
DAT*H290	Digital Arts Project
GRA*H150	Introduction to Graphic Design
MUS*H111	Fundamentals of Music I
MUS*H158	Chamber Music/Jazz Ensemble I
MUS*H163	Ear Training I
MUS*H164	Ear Training II
MUS*H176	Gospel Choir
MUS*H179	Opera Performance Ensemble
MUS*H184	Applied Private Music Lessons & MUS*H183
MUS*H206	Intro to Music Education
MUS*H208	Intro to Music Therapy
MUS*H213	Music Theory III
MUS*H214	Music Theory IV
MUS*H254	Concert Band
MUS*H218	Electronic Music Composition/Audio Technology I
THR*H110	Acting I
THR*H120	Stagecraft
THR*H190	Theater Practicum I

VISUAL and PERFORMING ARTS

Visual Arts Option

The *Visual Arts Option* provides training in art history, traditional two-dimensional methodologies (painting, drawing, design), three-dimensional formats (sculpture and pottery), and computerized graphic design. Students will be qualified to seek positions in galleries, museums, and theater productions.

> Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.

General Education Core		Credits
ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
HIS*H101 or 102	West. Civ. I or II	
	or	
HIS*H121 or 122	World Civ. I or II	3
Elective	Arts & Humanities	3
Elective	Behavioral Science	3
Elective	Mathematics†	3
Elective	Science	3-4
		24-25

Specialized Core

CSA*H105	Introduction to Software Applications	3
ART*H101	Art History I	3
	or	
ART*H102	Art History II	
DAN*H101	History and Appreciation of World Dance	3
DAT*H101	Introduction to Digital Arts	3
MUS*H101	Music History and Appreciation I	3
THR*H101	Introduction to Theater	3
		18

Specialized Options
Art Option

ART*H121	Two-Dimensional Design	3
ART*H151	Painting I	3
ART*H152	Painting II	3
ART*H111	Drawing I	3
ART*H112	Drawing II	3

15
††Directed Electives

Arts		3
Arts		3
Arts		3
		9
	Total Credit Hours	**66-67**

†MAT*H135 or higher, excluding MAT*H137.
  Students intending to transfer to a public state university should select from MAT*146, 167, or 172.

PROGRAM OUTCOMES

Upon successful completion of all program requirements, graduates will be able to:

1. Execute skills and techniques necessary for studio art, and demonstrate manipulative skills including dexterity with tools and equipment specific to various media.
2. Compile a portfolio of work reflecting the breadth of his/her study.
3. Demonstrate desirable attitudes and work habits — creative thinking, the ability to solve problems, good artistic judgment, industriousness, cooperation, responsibility, and self-reliance.
4. Describe a knowledge of the relationship among various components of art including design, drawing and painting, and understand the contributions that each makes to the final product.
5. Demonstrate an understanding of the process of mounting an exhibition of work and presenting it to the public.
6. Communicate clearly using specific art vocabulary.

††Arts Directed Electives

ART*H101	Art History I
ART*H102	Art History II
ART*H160	Crafts
ART*H122	Three-Dimensional Design
ART*H131	Sculpture I
ART*H132	Sculpture II
ART*H141	Photography I
ART*H142	Photography II
ART*H161	Ceramics I
ART*H162	Ceramics II
ART*H167	Printmaking I
COM*H107	Voice and Diction
DAN*H102	Ballet I: Renaissance to Romantic
DAN*H111	Jazz Dance I: Afro-Caribbean/American
DAN*H112	Jazz Dance II: Broadway & Film
DAN*H113	Modern Dance I: Pioneers of America
DAT*H106	Digital Design
DAT*H116	Interactive Media Design
DAT*H212	3D Graphics and Animation I
DAT*H290	Digital Arts Project
GRA*H150	Introduction to Graphic Design
MUS*H111	Fundamentals of Music I
MUS*H158	Chamber Music/Jazz Ensemble I
MUS*H163	Ear Training I
MUS*H164	Ear Training II
MUS*H176	Gospel Choir
MUS*H179	Opera Performance Ensemble
MUS*H184	Applied Private Music Lessons & MUS*H183
MUS*H206	Intro to Music Education
MUS*H208	Intro to Music Therapy
MUS*H213	Music Theory III
MUS*H214	Music Theory IV
MUS*H254	Concert Band
MUS*H218	Electronic Music Composition/ Audio Technology I
THR*H110	Acting I
THR*H120	Stagecraft
THR*H190	Theater Practicum I

Associate Degree Programs

VISUAL and PERFORMING ARTS

Dance Option

The ***Dance Option*** provides students with a broad base of cultural and historical knowledge as well as technique, pedagogy and repertoire in the various dance genres. The creative process is fostered by inclusion of production skills, the art of choreography, and performance opportunities. This foundation will prepare students to further their study, teach, choreograph, and/or perform. Graduates may seek employment in dance education, dance studios, community service organizations, and as production assistants, choreographers, teacher assistants, dance therapy assistants, and as dancers in the arts and entertainment industry. Students must be physically able to participate in studio courses. As of 2006, Connecticut now requires K-12 dance instructors to be certified. The Dance Option provides the required dance courses for this education certification. The Transfer Program articulated with Central Connecticut State University guarantees acceptance of major dance credits.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

General Education Core		*Credits*
ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
HIS*H101 or 102	West. Civ. I or II	
	or	
HIS*H121 or 122	World Civ. I or II	3
Elective	Arts & Humanities	3
Elective	Behavioral Science	3
Elective	Mathematics†	3
Elective	Science	3-4
		24-25

Specialized Core		
CSA*H105	Introduction to Software Applications	3
ART*H101	Art History I	
	or	
ART*H102	Art History II	3
DAN*H101	History and Appreciation of World Dance	3
	*DAN*H101, 120, 232, &/or DAN*H233: any combo = 3 cr.*	
DAN*H119	Dance Pedagogy for Elementary 1	1
DAN*H120	Dance Pedagogy for Secondary 1	1
DAN*H232	Ballet III	2
DAN*H233	Modern III	2
MUS*H120	Music History and Appreciation I	3
THR*H101	Introduction to Theater	3
		18

Dance Option		
DAN*H102	Ballet I: Renaissance to Romantic	3
DAN*H111	Jazz Dance I: Afro-Caribbean/American	3
DAN*H113	Modern Dance I: Pioneers of America	3
DAN*H221	Repertory/Ensemble I	3
DAN*H222	Choreographic Principles/ Ensemble I	3
		15

††*Directed Electives*		
Arts		3
Arts		3
Arts		3
		9
	Total Credit Hours	**66-67**

†MAT*H135 or higher, excluding MAT*H137.
  Students intending to transfer to a public state university should select from MAT*146, 167, or 172.

††*Arts Directed Electives*	
ART*H101	Art History I
ART*H102	Art History II
ART*H160	Crafts
ART*H122	Three-Dimensional Design
ART*H131	Sculpture I
ART*H132	Sculpture II
ART*H141	Photography I
ART*H142	Photography II
ART*H161	Ceramics I
ART*H162	Ceramics II
ART*H167	Printmaking I
COM*H175	Voice and Diction
DAN*H109	Ballroom Dancing
DAN*H110	Rhythm Tap
DAN*H112	Jazz Dance II: Broadway & Film
DAN*H118	Dance Pedagogy for Early Childhood
DAN*H119	Dance Pedagogy for Elementary Education
DAN*H120	Dance Pedagogy for Secondary Education
DAN*H140	Pilates/Wellness
DAN*H175	Kinesiology for Dancers
DAN*H202	Ballet II: Classical to Contemporary
DAN*H213	Modern Dance II: Second Generation America
DAN*H223	Repertory/Ensemble II
DAN*H224	Choreographic Principles/Ensemble II
DAT*H106	Digital Design
DAT*H116	Interactive Media Design
DAT*H212	3D Graphics and Animation I
DAT*H290	Digital Arts Project
GRA*H150	Introduction to Graphic Design
MUS*H111	Fundamentals of Music I
MUS*H158	Chamber Music/Jazz Ensemble I
MUS*H163	Ear Training I
MUS*H164	Ear Training II
MUS*H176	Gospel Choir
MUS*H179	Opera Performance Ensemble
MUS*H184	Applied Private Music Lessons & MUS*H183
MUS*H206	Intro to Music Education
MUS*H208	Intro to Music Therapy
MUS*H213	Music Theory III
MUS*H214	Music Theory IV
MUS*H254	Concert Band
MUS*H218	Electronic Music Composition/Audio Technology I
THR*H110	Acting I
THR*H120	Stagecraft
THR*H190	Theater Practicum I

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate and execute warm-up exercises specific to all dance forms (ballet, modern, ethnic, jazz).
2. Execute desirable physical activity, preparation, and training for the dancer, actor, or musician so that she/he may intelligently choose a further course of action in the arts.
3. Execute a variety of choreographic styles to enhance and broaden movement and choreographic vocabulary utilizing time, space and energy.
4. Demonstrate kinesthetic awareness, mental and physical coordination, rhythmic sensitivity, and musicality.
5. Identify dancers and choreographers and their particular contributions to the field of dance and their processes in creating dance.
6. Choreograph and perform movement and demonstrate performance skills of concentration, projection, characterization, expression and ensemble work.
7. Demonstrate wherewithal for scheduling and conducting rehearsals and producing a performance that includes staging, lighting, costuming, decor, and publicity.

VISUAL and PERFORMING ARTS

Digital Design Option

The *Digital Design Option* provides students with an in-depth understanding of two-dimensional digital design, three-dimensional object modeling and animation, and sound design. Required courses focus on the detailed study of 3D modeling and animation, digital photography and video production, digital audio and sound design, and Web design and development. Topics are explored from both a theoretical and applications perspective. The program mission is to prepare digital designers for jobs in marketing, video production, music and sound production, graphic art production, and electronic publishing.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

General Education Core — *Credits*

ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
HIS*H101 or 102	West. Civ. I or II	
or		
HIS*H121 or 122	World Civ. I or II	3
Elective	Arts & Humanities	3
Elective	Behavioral Science	3
Elective	Mathematics†	3
Elective	Science	3-4
		24-25

Specialized Core

CSA*H105	Introduction to Software Applications	3
ART*H101	Art History I	3
or		
ART*H102	Art History II	
DAN*H101	History and Appreciation of World Dance	3
DAT*H101	Introduction to Digital Arts	3
MUS*H101	Music History & Appreciation I	3
THR*H101	Introduction to Theater	3
		18

Digital Design Option

DAT*H106	Digital Publishing	3
DAT*H108	Digital Imaging I	3
DAT*H110	Digital Video Production I	3
DAT*H212	3D Graphics & Animation	3
DAT*H220	Acoustics & Sound Design	3
		15

††*Directed Electives*

Arts	3
Arts	3
Arts	3
	9

Total Credit Hours — **66-67**

†MAT*H135 or higher, excluding MAT*H137. Students intending to transfer to a public state university should select from MAT*146, 167, or 172.

Program Outcomes

Upon successful completion of all program requirements graduates will be able to:

1. Design and edit digital graphic and image files.
2. Utilize techniques for 3D character modeling and the design of 3D virtual space.
3. Analyze and evaluate the properties of sound, human hearing, psychoacoustics, electro-acoustic and digital sound reproduction systems.
4. Design state-of-the-art special effect techniques for film and video.
5. Design and edit digital audio for multimedia, video, games, and the WWW.
6. Plan, produce, script, edit, and complete original video projects.

††*Arts Directed Electives*

ART*H101	Art History I
ART*H102	Art History II
ART*H160	Crafts
ART*H122	Three-Dimensional Design
ART*H131	Sculpture I
ART*H132	Sculpture II
ART*H141	Photography I
ART*H142	Photography II
ART*H161	Ceramics I
ART*H162	Ceramics II
ART*H167	Printmaking I
COM*H175	Voice and Diction
DAN*H102	Ballet I: Renaissance to Romantic
DAN*H111	Jazz Dance I: Afro-Caribbean/American
DAN*H112	Jazz Dance II: Broadway & Film
DAN*H113	Modern Dance I: Pioneers of America
DAT*H106	Digital Design
DAT*H116	Interactive Media Design
DAT*H212	3D Graphics and Animation I
DAT*H290	Digital Arts Project
GRA*H150	Introduction to Graphic Design
MUS*H103	History of American Music
MUS*H104	World Music
MUS*H111	Fundamentals of Music I
MUS*H158	Chamber Music/Jazz Ensemble I
MUS*H163	Ear Training I
MUS*H164	Ear Training II
MUS*H176	Gospel Choir
MUS*H179	Opera Performance Ensemble
MUS*H184	Applied Private Music Lessons & MUS*H183
MUS*H206	Intro to Music Education
MUS*H208	Intro to Music Therapy
MUS*H213	Music Theory III
MUS*H214	Music Theory IV
MUS*H254	Concert Band
MUS*H218	Electronic Music Composition/Audio Technology I
THR*H110	Acting I
THR*H120	Stagecraft
THR*H190	Theater Practicum I

Associate Degree Programs

VISUAL and PERFORMING ARTS

Music Option

The *Music Option,* through a rigorous program of academic and performance courses, provides a comprehensive foundation in which students receive individual attention within their private lessons and interact with other performers in classroom and large ensemble settings. The music program emphasizes ensemble and solo performance with additional study of music theory and history.

Musicians of all capabilities and experience can prepare for their particular musical goals including seasoned musicians as well as the talented beginner exploring music for the first time. Music majors pursue careers in performance, education, composition, audio recording, concert sound reinforcement, commercial production, church music, musical instrument service and sales, or arts management.

The Transfer Program is designed for students wishing to complete their degree at a 4-year college or university; requirements vary and students should seek assistance from the Music Advisor. The Transfer Program articulated with Western CT State University guarantees admission with complete transfer of NVCC courses. See the Music Advisor for details.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

General Education Core		*Credits*
ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
HIS*H101 or 102	West. Civ. I or II	
	or	
HIS*H121 or 122	World Civ. I or II	3
Elective	Arts & Humanities	3
Elective	Behavioral Science	3
Elective	Mathematics†	3
Elective	Science	3-4
		24-25

Specialized Core		
CSA*H105	Introduction to Software Applications	3
ART*H101	Art History I	3
	or	
ART*H102	Art History II	
DAN*H101	History and Appreciation of World Dance	3
DAT*H101	Introduction to Digital Arts	3
MUS*H101	Music History and Appreciation I	3
THR*H101	Introduction to Theater	3
		18

Music Option		
MUS*H115	Music Theory I	3
MUS*H116	Music Theory II	3
MUS*H218	Electronic Music Composition/ Audio Technology I	3
MUS*H183	Applied Private Music Lessons I	2
Music Performance Courses	Chorus, Jazz Band or Jazz Singers	4
		15

††*Directed Electives*		
Arts		3
Arts		3
Arts		3
		9
	Total Credit Hours	**66-67**

†MAT*H135 or higher, excluding MAT*H137.
Students intending to transfer to a public state university should select from MAT*146, 167, or 172.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:
1. Relate basic musical forms and theoretical principles to performance.
2. Demonstrate technical skills in singing and/or in playing an instrument or instruments.
3. Demonstrate historical knowledge of musical events, styles, forms and concepts.
4. Demonstrate a knowledge of musical literature in the area of the student's major.
5. Demonstrate performance skills through ensemble experience.
6. Develop an appreciation of world culture through the beauty and discipline of the art of music.

††*Arts Directed Electives*	
ART*H101	Art History I
ART*H102	Art History II
ART*H160	Crafts
ART*H122	Three-Dimensional Design
ART*H131	Sculpture I
ART*H132	Sculpture II
ART*H141	Photography I
ART*H142	Photography II
ART*H161	Ceramics I
ART*H162	Ceramics II
ART*H167	Printmaking I
COM*H175	Voice and Diction
DAN*H102	Ballet I: Renaissance to Romantic
DAN*H111	Jazz Dance I: Afro-Caribbean/American
DAN*H112	Jazz Dance II: Broadway & Film
DAN*H113	Modern Dance I: Pioneers of America
DAT*H106	Digital Design
DAT*H116	Interactive Media Design
DAT*H212	3D Graphics and Animation I
DAT*H290	Digital Arts Project
GRA*H150	Introduction to Graphic Design
MUS*H111	Fundamentals of Music I
MUS*H158	Chamber Music/Jazz Ensemble I
MUS*H163	Ear Training I
MUS*H164	Ear Training II
MUS*H176	Gospel Choir
MUS*H179	Opera Performance Ensemble
MUS*H184	Applied Private Music Lessons
MUS*H206	Intro to Music Education
MUS*H208	Intro to Music Therapy
MUS*H213	Music Theory III
MUS*H214	Music Theory IV
MUS*H254	Concert Band
MUS*H218	Electronic Music Composition/Audio Technology I
THR*H110	Acting I
THR*H120	Stagecraft
THR*H190	Theater Practicum I

VISUAL and PERFORMING ARTS

Theater Arts Option

The *Theater Arts Option* offers a challenging course of study for both the novice student and experienced theater artist. Through a combination of classroom training, production experience opportunities, and community service outreach, NVCC theater students develop a definite set of skills, knowledge, and values that lead to growth as individuals, artists, and future theater professionals. Ultimately, the NVCC theater program strives to develop the creative and intellectual potential in both arts and non-arts majors at the college. Graduate employment may include assistantships as directors, stage managers, theater technicians, box office managers, marketing coordinators, sound engineers, lighting assistants, or acting interns.

> *Common core course listings and definitions appear on pages 50-52. Placement testing will determine the sequencing of courses. Additional courses may be required. The suggested sequence for full-time students is shown below. Refer to page 51 for a listing of courses that will satisfy elective requirements.*

General Education Core		Credits
ENG*H101	Composition	3
ENG*H102	Literature and Composition	3
COM*H100	Introduction to Communication	3
HIS*H101 or 102	West. Civ. I or II	
or		
HIS*H121 or 122	World Civ. I or II	3
Elective	Arts & Humanities	3
Elective	Behavioral Science	3
Elective	Mathematics†	3
Elective	Science	3-4
		24-25

Specialized Core		
CSA*H105	Introduction to Software Applications	3
ART*H101	Art History I	3
or		
ART*H102	Art History II	
DAN*H101	History and Appreciation of World Dance	3
DAT*H101	Introduction to Digital Arts	3
MUS*H101	Music History and Appreciation I	3
THR*H101	Introduction to Theater	3
		18

Theater Option		
THR*H110	Acting I	3
THR*H210	Acting II	3
THR*H120	Stagecraft	3
THR*H190	Theater Practicum I	3
THR*H290	Theater Practicum II	3
		15

††Directed Electives		
Arts		3
Arts		3
Arts		3
		9
	Total Credit Hours	**66-67**

†MAT*H135 or higher, excluding MAT*H137.
  Students intending to transfer to a public state university should select from MAT*146, 167, or 172.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate knowledge of historical events in film and theater.
2. Demonstrate the art of stage technology: costuming, set construction, and lighting.
3. Demonstrate specific performance skills in acting, including character analysis, blocking, interpretation, voice and diction.
4. Master the art of theatrical auditioning.
5. Develop a repertory of theatrical roles through participation in plays and theater events.
6. Develop an appreciation of world culture through the beauty and discipline of the art of theater.

††Arts Directed Electives

ART*H101	Art History I
ART*H102	Art History II
ART*H160	Crafts
ART*H122	Three-Dimensional Design
ART*H131	Sculpture I
ART*H132	Sculpture II
ART*H141	Photography I
ART*H142	Photography II
ART*H161	Ceramics I
ART*H162	Ceramics II
ART*H167	Printmaking I
COM*H157	American Film
COM*H175	Voice and Diction
DAN*H102	Ballet I: Renaissance to Romantic
DAN*H111	Jazz Dance I: Afro-Caribbean/American
DAN*H112	Jazz Dance II: Broadway & Film
DAN*H113	Modern Dance I: Pioneers of America
DAT*H106	Digital Design
DAT*H116	Interactive Media Design
DAT*H212	3D Graphics and Animation I
DAT*H290	Digital Arts Project
GRA*H150	Introduction to Graphic Design
MUS*H103	History of American Music
MUS*H104	World Music
MUS*H111	Fundamentals of Music I
MUS*H158	Chamber Music/Jazz Ensemble I
MUS*H163	Ear Training I
MUS*H164	Ear Training II
MUS*H176	Gospel Choir
MUS*H179	Opera Performance Ensemble
MUS*H184	Applied Private Music Lessons
MUS*H206	Intro to Music Education
MUS*H208	Intro to Music Therapy
MUS*H213	Music Theory III
MUS*H214	Music Theory IV
MUS*H254	Concert Band
MUS*H218	Electronic Music Composition/Audio Technology I
THR*H225	Directing
THR*H226	Musical Theater Production
THR*H231	Drama

Associate Degree Programs

CERTIFICATES, CREDIT PROGRAMS

The certificate programs are designed primarily to assist students in securing employment and to emphasize skills required for that employment. The courses, comprising a sequence of semester hours in a specialty area, are made available to persons who do not seek a degree but who may wish to upgrade their particular skills. Some courses are not offered every semester. Please consult with the Division Director offering the certificate.

Courses may require prerequisites. Refer to the course descriptions located in the back of the catalog.

Accounting
Business Division

Course No.	Title	Credits
	CORE AREA: (Required)	
ACC*H113	Principles of Financial Accounting	3
ACC*H117	Principles of Managerial Accounting	3
ACC*H123	Accounting Software Applications	3
ACC*H271	Intermediate Accounting I	3
ACC*H272	Intermediate Accounting II	3

Elect three of the following: (9 credit hours)

ACC*H241	Federal Taxes I	
ACC*H231	Cost Accounting I	
BBG*H101	Intoduction to Business	
BBG*H231	Business Law I	
BMG*H220	Human Resources Management	
BBG*H210	Business Communication	9
	Total Credit Hours	**24**

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Demonstrate the use of the concepts and techniques of generally accepted accounting principles in the recording and reporting of financial information.
2. Describe accounting system procedures and techniques.
3. Analyze and use financial reports for decision making.
4. Explain the use of financial information in controlling and evaluating performance.
5. Use the vocabulary of financial and managerial accounting and economics for communicating.
6. Explain how budgeting, activity based costing and strategic cost management foster the effective use of resources and help an organization accomplish its goals.
7. Use computerized spreadsheets and accounting software.

Administrative Support
Business Division

The Administrative Support Certificate offers students a broad range of computer skills, competent management skills and a keen understanding of the business environment. By choosing an area of focus in Accounting, Legal, Technology or General Business studies, students are prepared for career-oriented positions such as entry-level accounting and bookkeeping, information technology specialists, human resources generalists, legal assistants, legal secretaries, and administrative assistants. Concentrations offer an easy transition into the Business Management Associate Degree program. It also may transition to Associate Degree programs in Business Administration, Business Finance, Legal Assistant/Paralegal, and Marketing. Students are encouraged to complete this Certificate Program as a first step towards earning the Associate Degree. The program may be pursued on a full or part-time basis. Students requiring basic skills development courses in reading, English or math as determined by placement testing area advised to begin their program with these basis skills courses to ensure success in the required business courses. For further information, please contact the Business Division Director.

Course No.	Title	Credits
	CORE AREA: (Required, 9 credits)	
CSA*H105	Intro to Software Applications	3
	or	

Course No.	Title	Credits
CSA*H101	Introduction to Computers	3
BMG*H202	Principles of Management	3
CSA*H205	Advanced Software Applications	3
	FOCUS AREAS: (6 credits)	
Accounting		
MAT*H137	Intermediate Algebra (Required)	
ACC*H113	Principles of Financial Accounting	3
ACC*H117	Principles of Managerial Accounting	3
	or	
Legal		
BBG*H231	Business Law I	3
BBG*H232	Business Law II	3
	or	
Technology		
CSC*H231	Database Design I	3
CSA*135	Spreadsheet Applications	3
	or	
General Business		
BMG*H220	Human Resource Management	3
BMG*H105	Supervision and Organizational Behavior	3
	Total Credit Hours	**15**

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Demonstrate basic knowledge of the components of the business environment and environmental factors affecting business today.
2. Demonstrate understanding of the functions of management: planning, leading, organization and controlling.
3. Demonstrate the skills needed to organize thoughts and ideas and the skills needed to communicate them, verbally and in writing, in a manner that can be easily understood in the business environment.

Advanced English Proficiency
Arts and Humanities Division

The English as a Second Language Certificate of Advanced English Proficiency provides non-native speakers of English with personal and professional development opportunities, encourages lifelong learning, and provides employers with measurable proof of proficiency in English. Each of the courses in the program addresses English language skills and abilities necessary for success in academic studies or in careers. Both full and part-time students whose native language is not English are eligible for this program.

Course No.	Title	Credits
ESL*H152	ESL Reading/Writing V †	6
ESL*H162	ESL Reading/Writing VI †	6
ESL*H139	ESL Pronunciation III	
	or	
ESL*H157	ESL Oral Communications V	3
ENG*H101	Composition	3
COM*H100	Introduction to Communication	3
	Total Credit Hours	**21**

† Students who are placed into ESL*H162 when entering the College, or who take ESL*H152 but skip ESL*H162 must substitute any two of the following courses in order to complete the required twenty-one credit hours for the certificate: ENG*H102 Literature & Composition, ENG*H200 Advanced Composition, ENG*H202 Technical Writing, COM*H157 American Film, COM*H226 Journalism I, COM*H227 Journalism II, HIS*H201 U.S. History I, HIS*H202 U.S. History II.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate competence in handling a variety of writing assignments.
2. Comprehend diverse texts which are conceptually abstract and linguistically complex.
3. Understand extended discourse on contextualized and abstract topics such as in lectures, speeches, and reports.
4. Show fluency and comfort in the use of English to express their own ideas.
5. Write with precision and detail.
6. Use spoken English with sufficient accuracy to participate effectively in formal and informal conversations on practical, social and professional topics.

Alternative Energy Systems Technology

Engineering Technologies Division

This certificate shall provide students with the knowledge and skills needed for entry-level employment in the alternative energy field as well as prepare them for continued learning and education in that field including transfer into an associate degree or four-year program. With a foundation of courses in manufacturing and engineering technology, students will be exposed to cutting-edge knowledge and technology for alternative energy systems, including energy-efficient building construction, fuel cells, solar thermal and photovoltaic technologies, geothermal systems, and alternative-fuel vehicles. Topics include the evolution of energy production, energy efficiency, electrical energy production and distribution, and environmental and economic impacts.

Course No.	Title	Credits
TCN*H130	Alternative Energy Around Us	3
TCN*H131	Fuel Cell Technology	3
ATP*H280	Alternative Fuel Vehicles	2
CTC*H132	Sustainable Energy for Residences and Businesses	3
MFG*H104	Manufacturing Processes	4
TCN*H101	Intro to Engineering Technology	3
MAT*H137	Intermediate Algebra	3
Elective	Directed Elective	3
	Total Credit Hours	**24**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate basic knowledge and understanding of fuel cell technology, alternative energy systems, electronics, alternative fuel vehicles, and photovoltaics.
2. Differentiate between traditional energy sources, alternative energy sources, and renewable energy sources.
3. Demonstrate basic knowledge of sustainable energy as used in residential and business settings.
4. Differentiate between and explain uses of alternative fuels in transportation vehicles.
5. Understand the role of engineering technology, manufacturing, and technology in sustainable energy production and distribution.
6. Completion of this certificate program may begin to prepare students for the North American Board of Certified Energy Practitioners (NABCEP) PV (photovoltaic) Entry Level Certificate Exam, or Leadership in Energy and Environmental Design (LEED) Green Associate Exam.

Applied Behavior Analysis

Behavioral and Social Sciences Division

Applied Behavior Analysis (ABA) is a well-developed discipline among the helping professions, with an extensive body of scientific knowledge, established standards for evidence-based practice, specific interventions, recognized experience, and educational requirements for practice. Professionals in applied behavior analysis engage in the specific and comprehensive use of principles of learning, including operant and respondent learning, in order to address behavioral needs of widely varying individuals in diverse settings. Examples of these applications include: building the skills and achievements of children in school settings; enhancing the development, abilities, education, and choices of children and adults with different kinds of disabilities including Pervasive Developmental Disorders, most notably Autism Spectrum Disorders; and augmenting the performance and satisfaction of employees in organizations and businesses.

Course No.	Title	Credits
HSE* H101	Intro to Human Services	3
HSE* H115	Child Advocacy in Human Services	3
HSE* H202	Intro to Counseling & Interviewing	3
HSE* H281	Human Services Field Work	3
SOC* H101	Principles of Sociology	3
PSY* H111	General Psychology I	3
PSY* H258	Behavior Modification	3
PSY* H259	Laboratory in Behavior Modification	3
PSY* H261	Introduction to the Autism Spectrum *or*	
PSY* H260	Psychology of the Exceptional Child	3
PSY* H262	Applied Behavior Analysis	3
	Total Credit Hours	**30**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify the major problem areas and client populations in which behavior analysts can intervene.
2. Demonstrate a beginning understanding of a range of diagnoses that relate to people in need of behavior analytic services and be aware of the necessity of a collaborative working relationship with other professional service providers.
3. Utilize the skills necessary to read and analyze current and future trends as presented in literature related to the field of Applied Behavior Analysis (ABA).
4. Demonstrate an ability to utilize the principles, skills, and tasks required for engagement, assessment, intervention, and termination with a diverse population.
5. Describe and evaluate the ways in which datum are collected, applied, graphed, and evaluated.
6. Describe how the events of the political, social, educational, healthcare, and cultural climate have shaped the response of ABA to the needs of a diverse population.
7. Consider an intervention's rational, aims, limitations, practice, the individuals for whom it is intended, the likely outcomes and the evidence for its effects.
8. Describe evidenced based practices in identification, instruction, and intervention across the life span.
9. Access information regarding theories, research, medical and legal requirements and their relation to current promising practices in education for individuals with ASD and other developmental disabilities.
10. Provide varied instruction on and opportunity to practice play and leisure skills and methods and strategies for developing play and leisure skills in individuals with ASD and other developmental disabilities.
11. Explain Applied Behavior Analytic (ABA) procedures used to increase skills and replace problem behaviors in children with ASD including discrete trial, direct nstruction, and precision teaching.
12. Describe the verbal behavior analysis of language.
13. Understand public and educational policy and legal issues related to ABA.
14. Develop skills to effectively and objectively observe behavior and complete a functional behavior assessment (FBA).
15. Select and implement programs targeting behavioral acquisition and behavioral reduction.
16. Develop strategies to produce behavior change.
17. Successfully complete the BCaBA Behavior Analyst Task List-Third Edition as published by the Behavior Analyst Certification Board.

Athletic Coaching
Allied Health/Nursing/Physical Education Division
The Athletic Coaching certificate is divided into two areas of focus. The first area is designed to develop skills, strategies, understanding of rules and officiating, and organization necessary to coach athletic teams and individuals in grades K-12, youth leagues, and communities. The second area emphasizes the principles and practices of coaching philosophy, sports psychology, pedagogy, physiology, and sports medicine. A study of the prevention of athletic injuries and the care of injuries is included. The certificate will be awarded to those students who successfully complete the six credit program. After completion of course work, students may apply for a State Coaching Permit from the State Board of Education.

Course No.	Title	Credits
HPE*H220	Coaching Adolescents	3
HPE*H230	First Aid†	3
	Total Credit Hours	**6**

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Apply basic coaching philosophy, styles, and sports/skills techniques.
2. Apply management and liability in coaching.
3. Apply team management.
4. Apply first aid for prevention and initial treatment of injuries in sports and within their community (shock, fractures, poisoning, hypothermia, seizures, strokes, heart attacks).
5. Apply activation procedure for the Emergency Medical System
6. Apply Emergency Action Principles (Rescue Breathing, Airway Maintenance, CPR).

A student who completes the Athletic Coaching Certificate is eligible for the State Coaching Permit (from the State Board of Education) which is needed to coach in grades K-12.

†A current First Aid Certification may be accepted instead of HPE*H230.

Audio/VideoProduction
Arts and Humanities Division
The Audio/Video Production Certificate program focuses on the detailed study of audio production, sound design, audio engineering, acoustics, visual composition, lighting design, non-linear video editing, and motion graphics design. A primary function of this program is to serve individuals who have already completed an academic degree or designers currently employed in broadcast media professions interested in skill-enhancement opportunities. Students entering this certificate program should already have a basic foundation in video production and sound design attained through career performance or degree acquisition. If the individual does not possess either a degree or experience in this field, he/she should consider enrolling in the Digital Arts Technology/Audio-Video Option Associate of Science program. Certificate credits may also be applied toward the Digital Arts and Fine Arts degree programs.

Students must complete the following courses with a grade of "C" or better:

Course No.	Title	Credits
DAT*H108	Digital Imaging I	3
DAT*H110	Digital Video Production I	3
DAT*H218	Electronic Music Composition/Audio Tech I	3
DAT*H219	Electronic Music Composition/Audio Tech II	3
DAT*H220	Acoustics and Sound Design	3
DAT*H224	Digital Video Production II	3
DAT*H226	Motion Graphics for Film & Video	3
DAT*H237	Principles of Sound Recording	3
		24

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Analyze and evaluate the properties of sound, human hearing, psychoacoustics, electro-acoustic and digital sound reproduction systems.
2. Design and edit analog and digital audio files.
3. Synthesize and apply processes for transforming a concept into a complete video production.
4. Script, produce, edit, and complete original video projects.
5. Design state-of-the-art special effect techniques used in film and video.
6. Complete original projects terminating in deliverable media products with technical documentation.

Automotive Fundamentals
Engineering Technologies Division
The Automotive Fundamentals program seeks to meet the needs of individuals interested in a basic exposure to and/or an exploratory opportunity in the automotive technology field.
Purpose:
  • To provide an understanding of the basic operating principles of an automobile.
  • To provide in-depth theory of brake, steering and suspension systems.
Target Population:
  • Individuals interested in a basic exposure to automotive systems.
  • Individuals interested in an exploratory opportunity in automotive technology.

Course No.	Title	Credits
ATP*H100	Integrated Automotive Systems	3
ATP*H130	Brakes	3
ATP*H150	Steering and Suspension	3
Elective	Automotive	2-3
Elective	Mathematics	3
	Total Credit Hours	**14-15**

To ensure appropriate placement, placement test results and course prerequisites should be reviewed with the Program Coordinator and/or advisor.

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:Program should be able to:
1. Perform mathematics related to the occupation, including but not limited to: algebraic expressions, arithmetic, decimals and graphs.
2. Relate knowledge of theory and safety to accomplish certain tasks related to the occupation.
3. Identify and use appropriate tools, testing and measurement equipment to accomplish certain tasks related to the occupation.
4. Use current reference and training materials from accepted industry publications and standards to accomplish certain tasks related to the occupation.
5. Relate knowledge of general engine diagnosis and repair, including but not limited to the engine's: cylinder heads, valve train, block, lubrication, and cooling system.
6. Relate knowledge of suspension and steering systems (including wheel and tire), diagnosis, service, adjustments, alignment and repair.
7. Relate knowledge of general disc and/or drum brake system, hydraulics, power assist, and ABS (antilock brakes), maintenance, adjustment, diagnosis, and repair.

Automotive: Advanced Engine Performance
Engineering Technologies Division

The Advanced Engine Performance program enables a practicing automotive technician to develop the technical knowledge and skills associated with the advanced computer/electronic diagnostic systems and emission systems of today's automobile.

Purpose:
- To provide an understanding of automobile engine operation and repair.
- To provide an understanding of advanced electronic diagnosis and automotive emissions.
- To provide an understanding of the relationship between scientific principles and their application in the automobile.

Target Population:
- Individuals seeking employment opportunities in the automotive service field.
- Individuals seeking to upgrade their technical skills.
- Individuals preparing for career advancement opportunities in the automotive service field.

Course No.	Title	Credits
ATP*H100	Integrated Automotive Systems	3
ATP*H120	Engine Repair	3
ATP*H110	Automotive Electrical Systems	3
ATP*H210	Engine Performance	3
ATP*H220	Automotive Emissions	3
ATP*H291	Cooperative Work Experience ll	3
	Total Credit Hours	**18**

To ensure appropriate placement, placement test results and course prerequisites should be reviewed with the Program Coordinator and/or advisor.

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Perform mathematics related to the occupation, including but not limited to: algebraic expressions, arithmetic, decimals and graphs.
2. Use scientific methods and critical thinking to solve problems in science related to the occupation, including but not limited to: electricity, chemical reactions, heat, motion, and hydraulics.
3. Demonstrate workplace skills related to the occupation including but not limited to: preparing a resume, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics and teamwork.
4. Apply knowledge of theory and safety to accomplish certain tasks related to the occupation.
5. Identify and use appropriate tools, testing and measurement equipment to accomplish certain tasks related to the occupation.
6. Use current reference and training materials from accepted industry publications and standards to accomplish certain tasks related to the occupation.
7. Apply knowledge of general engine diagnosis and repair: including but not limited to the engine's: cylinder heads, valve train, block, lubrication, and cooling system.
8. Apply knowledge of general electrical/electronic systems, including but not limited to: starting, charging, lighting, wiring, accessories, diagnosis and repair.
9. Apply knowledge of general engine performance, including but not limited to: computer controls, ignition, fuel, exhaust, and emission systems, and their maintenance, diagnosis, adjustments, and repair.

Automotive: General Automotive Service
Engineering Technologies Division

The General Automotive Service program is designed to accommodate individuals desiring an understanding of engine operation and repair, along with knowledge of automotive electrical, brake, steering and suspension systems.

Purpose:
- To provide an understanding of automobile engine operation and repair.
- To provide an understanding of automotive electrical theory and its application.
- To provide in-depth theory of brake, steering and suspension systems.
- To provide an understanding of the relationship between scientific principles and their application in the automobile.

Target Population:
- Individuals seeking entry-level employment opportunities in the automotive service field.
- Individuals seeking to upgrade their technical skills.
- Individuals preparing for career advancement opportunities in the automotive service field.

Course No.	Title	Credits
ATP*H100	Integrated Automotive Systems	3
ATP*H110	Automotive Electrical Systems	3
ATP*H120	Engine Repair	3
ATP*H130	Brakes	3
ATP*H150	Steering and Suspension	3
ATP*H290	Cooperative Work Experience I	3
	Total Credit Hours	**18**

To ensure appropriate placement, placement test results and course prerequisites should be reviewed with the Program Coordinator and/or advisor.

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Perform mathematics related to the occupation, including but not limited to: algebraic expressions, arithmetic, decimals and graphs.
2. Use scientific methods and critical thinking to solve problems in science related to the occupation, including but not limited to: electricity, chemical reactions, heat, motion, and hydraulics.
3. Demonstrate workplace skills related to the occupation, including but not limited to: preparing a resume, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics and teamwork.
4. Apply knowledge of theory and safety to accomplish certain tasks related to the occupation.
5. Identify and use appropriate tools, testing and measurement equipment to accomplish certain tasks related to the occupation.
6. Use current reference and training materials from accepted industry publications and standards to accomplish certain tasks related to the occupation.
7. Apply knowledge of general engine diagnosis and repair, including but not limited to the engine's: cylinder heads, valve train, block, lubrication, and cooling system.
8. Apply knowledge of suspension and steering systems (including wheel and tire), diagnosis, service, adjustments, alignment and repair.
9. Apply knowledge of general disc and/or drum brake system, hydraulics, power assist, and ABS (antilock brakes), maintenance, adjustment, diagnosis, and repair.
10. Apply knowledge of general electrical/electronic systems, including but not limited to, starting, charging, lighting, wiring, accessories, diagnosis and repair.

CADD Modeling (Advanced)
Engineering Technologies Division

The need to attract more students into engineering is a national concern. The Advanced CADD Modeling Certificate is the third of the CADD certificates and continues to prepare a student, upgrading their skills, for employment and career advancement opportunities. NVCC's Engineering Technologies programs prepare graduates to be engineering technicians who are able to respond to the changing demands of Connecticut's "high tech" industries.

Course No.	Title	Credits
MFG*H201	Computer-Aided Mfg II	3
CAD*H220	Parametric Design	3
CAD*H275	CAD Animation 3D Studio Max	4
CAD*H294	Senior Project	4
Elective	Directed Elective	3
	Total Credit Hours	**17**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate a thorough understanding of engineering graphics and conventional drafting practices such as geometric constructions, orthographic, projection, isometric, section, detail, auxiliary views, and geometric dimensioning and tolerancing.
2. Develop an engineering concept through the detail design process and produce professionally finished engineering drawings.
3. Demonstrate a high level of proficiency in the use of state-of-the-art CADD software and be able to adapt to new CADD systems as they are developed.
4. Do basic and advanced manual CNC programming.
5. Write computer generated CNC programming.
6. Be aware of new developments in CADD and related areas.
7. Organize activities and perform work in an efficient, accurate manner.
8. Utilize advanced design methods, such as parametric feature based modeling, animation, simulation, and web-based design.

2D Computer-Aided Drafting (CAD)
Engineering Technologies Division

The need to attract more students into engineering is a national concern. The 2D Computer-Aided Drafting Certificate meets the need of individuals interested in a basic exposure to, and/or exploration of, using and applying 2D CAD. This opportunity prepares a student to use and/or pursue a career using CAD in numerous fields. NVCC's Engineering Technologies programs prepare graduates to be engineering technicians who are able to respond to the changing demands of Connecticut's "high tech" industries.

Course No.	Title	Credits
CAD*H150	2D CAD Drafting	3
MFG*H104	Manufacturing Processes	4
ENG*H101	Composition	3
MAT*H137	Intermediate Algebra	3
Elective	Directed Elective	3
	Total Credit Hours	**16**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate basic knowledge and understanding of engineering graphics and conventional 2-dimensional drafting practices such as geometric constructions, orthographic, projection, isometric, section, detail, and auxiliary views.
2. Demonstrate proficiency in the use of CAD/D software for 2-dimensional applications.
3. Explain concepts and requirements for drawings used in the manufacturing process.
4. Create 2D professionally finished drawings from working drawings under the supervision of a senior draftsperson.
5. Demonstrate the proper setup and procedures for various manufacturing processes.
6. Apply Language Arts skills related to the occupation, including but not limited to: critical thinking, reading, and writing.
7. Apply Mathamatics required for basic drafting and manufacturing applications.

3D CADD Modeling
Engineering Technologies Division

The need to attract more students into engineering is a national concern. The 3D Computer-Aided Drafting Certificate continues to prepares a student to use and/or pursue a career using CADD and meets the need of individuals:
- seeking entry-level employment opportunities.
- seeking to upgrade their technical skills.
- preparing for career advancement opportunities.

NVCC's Engineering Technologies programs prepare graduates to be engineering technicians who are able to respond to the changing demands of Connecticut's "high tech" industries.

Course No.	Title	Credits
MFG*H106	Computer-Aided Mfg I	3
CAD*H200	3D CAD Modeling	4
CAD*H220	Parametric Design	3
Elective	Directed Elective	3
	Total Credit Hours	**13**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate a thorough understanding of engineering graphics and conventional drafting practices such as geometric constructions, orthographic, projection, isometric, section, detail, auxiliary views, and geometric dimensioning and tolerancing.
2. Starting with an engineering design concept, create 3D geometric models, develop tolerance requirements, perform basic analysis functions under the supervision of a degreed engineer, and produce professionally finished engineering drawings, suitable for use in manufacturing.
3. Demonstrate a thorough understanding of 3-dimentional wire frame, surface, and solid modeling concepts, procedures, and applications.
4. Perform basic manual CNC programming.

Child and Family Services
Behavioral & Social Sciences Division

The increase in the number of families in crisis and the rising number of maltreated children in our communities make it necessary to have trained Human Services professionals who are skilled and knowledgeable about the unique needs of these populations. The Child & Family Services Certificate curriculum focuses on such areas as juvenile justice, single-parent families, divorce, sexuality, abuse, neglect, poverty, adoption, child protection, disability services, mental health and cultural diversity.

Course No.	Title	Credits
HSE* H101	Intro to Human Services	3
HSE* H202	Intro to Counseling & Interviewing	3
HSE* H281	Human Services Field Work	3
SOC* H101	Principles of Sociology	3
SOC* H210	Sociology of the Family	3
SOC* H201	Contemporary Social Issues	
	or	
SOC* H221	Social Inequality	3
HSE*H115	Child Advocacy in Human Services	3
PSY* H111	General Psychology I	3
Elective	Psychology Elective†	3
PSY* H258	Behavior Modification	3
	Total Credit Hours	**30**

†Directed Electives:
PSY* H203, Child Development, PSY*H207 or Adolescent Psychology or PSY*H204, Child & Adolescent

Program Outcomes

Upon successful completion of all certificate requirements, graduates will be able to:

1. Demonstrate a beginning understanding of a range of issues that people in need of human services experience.
2. Utilize critical thinking skills necessary to read and analyze current and future trends as presented in literature in the field of human services and child and family services.
3. Identify socio-cultural dynamics that underlay issues in American society and politics.
4. Demonstrate an ability to utilize the skills, and tasks required for engagement, assessment, case planning, intervention and termination with a diverse population.
5. Present a well organized, comprehensive oral report before a group.
6. Compare and contrast the ecological, functional, and conflict perspectives to understand and analyze social issues such as alienation, poverty, crime and health.
7. Describe how the events and influences of the political, social, and economic climate have shaped the American response to human needs and the historical development of social welfare.
8. Develop an understanding of the expectations of a personal and professional code of ethical standards.
9. Demonstrate an ability to provide referrals to services, concrete information, and emotional support to clients with a goal of promoting empowerment skills.
10. Identify causes, consequences and solutions to inequality due to race, age, gender, religion and economics.

CNC Machining
Engineering Technologies Division

Entry-level programmers as well as machinists/tool makers are needed in the college's service region. The CNC Machining Certificate primarily supports two career ladders;

- An individual with no prior experience in machining or manufacturing, who after the completion of the CNC Machining Certificate, should be able to be employed as an entry level programmer.

- An individual with prior experience using manual machines wishing to upgrade skills.

NVCC's Engineering Technologies programs prepare graduates to be engineering technicians who are able to respond to the changing demands of Connecticut's "high tech" industries.

Course No.	Title	Credits
ARC*H133	Technical Drafting	3
MFG*H104	Manufacturing Processes	4
CAD*H150	CAD 2D	3
MFG*H106	Computer-Aided Mfg I	3
MFG*H201	Computer-Aided Mfg. II	3
Elective	Directed Manufacturing Elective	3
	Total Credit Hours	**19**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate basic knowledge and understanding of engineering graphics and conventional 2-dimensional drafting practices such as orthographic and isometric projection, section, detail, auxiliary views, and geometric dimensioning and tolerancing.
2. Demonstrate proficiency in the use of CAD software for 2-dimensional applications.
3. Explain concepts and skills required for manufacturing processes.
4. Demonstrate proper setup and procedures for various manufacturing processes.

5. Write basic and advanced MDI NC programs.
6. Produce NC programs using Mastercam®, being able to;
   a. import or generate CAD files
   b. utilize tool and material libraries.
   c. generate tool pass.
   d. verify tool pass.
   e. post process using appropriate controller.

Client/Server Systems
Business Division

This certificate program recognizes the need to explore and concentrate on the introduction to relational databases and object-relational databases in a client/server environment. It considers both the distributed and centralized computing environments within an enterprise information system. Programs such as Oracle, PowerBuilder, and Microsoft SQL Server will be used. Courses are designed to offer students immediate positions in industry, and will also provide a solid foundation for continuation in our two year associate's degree in Computer Information Systems Technology.

Course No.	Title	Credits
CSC*H183	Information Systems in Organizations	3
CSC*H213	Object-Oriented Programming Using C++	3
CSC*H231	Database Design I	3
CSC*H232	Database Design II	3
CSC*H236	Introduction to Client/Server Systems	3
CSC*H239	Programming Using PowerBuilder	3
	Total Credit Hours	**18**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate job knowledge in current technology, such as peer-to-peer networking, client/server applications, and object-oriented programming technology.
2. Demonstrate the ability to use software tools for program development.
3. Acquire a basic familiarization with programming concepts, logical relationships, and file structure.
4. Demonstrate a basic understanding of relational database concepts.
5. Create network and client/server applications.
6. Develop client/server database front-ends.

Computer Crime Deterrence
Behavioral and Social Sciences and Business Divisions

This certificate program is designed to enhance skill development for those people who are employed in a career field dealing with computer security or for people seeking entry into such a career field and for those people who want to use a computer in an assortment of ways. Upon completion of this certificate, students will possess the skills necessary to manage a computer security program or to protect their own personal computers from attack.

Credits earned in this certificate program are applicable toward an Associate of Science Degree in Criminal Justice/Public Safety. These courses are offered in the day or evening for the convenience of those adults who are employed full-time.

Required Courses

Course No.	Title	Credits
CJS*H224	Computer Crime	3
CJS*H234	Computer Security and Data Protection	3
CJS*H235	Introduction to Warfare and Security	3
CSC*H101	Introduction to Computers	3
CSC*H120	Introduction to Operating Systems	3
	Total Credit Hours	**15**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Discuss the various problems encountered in the area of information security.
2. Describe current strategies used to protect data.
3. Describe the range of services available for use over the Internet.
4. Discuss the legal issues affecting the recovery of evidence during investigations involving the Internet.
5. List and describe the civil liability issues associated with Internet investigations.
6. List and describe some of the more common viruses that have infected computer systems.
7. Apply State and Federal law and develop an investigative plan to address the relevant issues.
8. Identify basic concepts and computer terminology relative to hardware and software applications.
9. Understand the growing dependence and reliance on personal computers in our society.
10. Identify the availability of technology-based products on the market today.
11. Develop a level of comfort when using office productivity software such as MS Word, Excel, Powerpoint, and MS Access.
12. Understand the uses of database management software and its applicability to the business environment.
13. Identify a variety of Network Operating System Software and the features and functionality each provides.
14. The student will be able to work with all the MS-DOS commands, both internal and external.
15. The student will be able to understand the purpose and use of the memory management software.
16. The student will be able to author batch file scripts when necessary.
17. The student will work with the various components of WINDOWS 95 and the system registry.
18. The student will understand various Network Operating Systems (NOS) used in Local Area Networks (LANS).
19. The student will understand the various components, including physical designs of LANS.

Construction Technology
Engineering Technologies Division

This certificate program will prepare men and women for careers in Connecticut's construction industry by combining two distinct areas of learning: construction specific technical knowledge and construction process management. The program will provide students with a general knowledge of construction and the building process preparing individuals for positions such as: construction and building inspection, construction cost estimators, job cost estimators, construction supervisors, and construction managers, among others. This program will also prepare them for additional study in engineering, architecture and construction management, or entry-level employment in the construction field. The program will also offer skilled workers, who are currently in the construction industry, an opportunity to advance toward positions in construction management or design.

Course No.	Title	Credits
COM*H100	Introduction to Communication	3
CAD*H140	Architectural CADD	
	or	
CAD*H150	2D CAD Drafting	3
CTC*H218	Construction Documents	3
ARC*H227	Codes & Ordinances	3
BES*H118	Small Business Mgt.	3
ARC*H108	Building Materials	3
ARC*H107	Building Systems	3
ARC*H229	Introduction To Structures	3
MAT*H121	Application for Bus and other Careers	3
Elective	Directed Elective	3
	Total Credit Hours	**30**

Directed Electives

CAD*H200	3D CAD Modeling	3
CAD*H286	Advanced Modeling Techniques	3
ARC*H282	Construction Mgt.	3

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. building systems such as concrete foundations, windows and walls, steel roof decks, waterproofing, thermal and moisture barriers, etc.
2. interior mechanical systems including plumbing, heating, cooling, electrical and lighting systems
3. exterior finish systems such as brick and stone veneers, sidings, pitched and flat membrane roofs, etc.
4. concrete, steel and wood structural framing systems
5. interior finish systems such as gypsum board, flooring, coatings and millwork

In the process management area, students will be able to:

1. read and understand the preparation of construction drawings using the latest CAD and management software.
2. understand project phases from pre-construction design activities through construction completion.
3. study the importance of cost estimating.
4. examine the key aspects of a project's bidding, contract award and permitting procedures.
5. understand the implications building codes and zoning regulations on a building's design.
6. develop and practice effective communication (verbal and written) skills.
7. maintain project scheduling and documentation.
8. exercise conflict resolution and project leadership.
9. develop cost control methods.

Criminal Justice
Behavioral and Social Sciences Division

This certificate program focuses on skills development for those people who are already in the law enforcement and security services and for those who seek entry-level employment in those services. The program may be pursued on a full or part-time basis. For further information, consult the Division Director or the Program Coordinator.

Course No.	Title	Credits
CJS*H101	Introduction to Criminal Justice	3
CJS*H102	Introduction to Corrections	3
CJS*H103	Introduction to Security	3
CJS*H105	Introduction to Law Enforcement	3
CJS*H211	Criminal Law I	3
CJS*H217	American Legal Systems	3
CJS*H220	Criminal Investigation	3
CJS*H293	CJS Cooperative Work Experience	3
	Total Credit Hours	**24**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Explain the basic structure and functions of the American Criminal Justice System.
2. Explain the structure of the federal and state court systems.
3. Identify the functions and services of private security.
4. Explain the computer crime problem.
5. Explain the development of probation, parole and community supervision.
6. Explain the development of the corrections system in the United States.
7. Demonstrate the various methods of taking written statements and confessions.

8. Define the term investigation and the objectives of a criminal investigation.
9. Explain some of the basic issues and problems in policing, the courts, and corrections in America today.
10. Explain the Bill of Rights and those specific rights guaranteed by the First, Fourth, Fifth, Sixth, Eighth and Fourteenth Amendments.
11. Explain the concept of criminal law, including its purpose as an agent of social control.
12. Define and explain the elements which identify the offenses of assault, sex crimes, burglary, arson, larceny, robbery and homicide.
13. Explain how state and local law enforcement agencies originated in the United States and how they currently function.
14. Identify the areas that establish a police officer's authority to arrest.
15. Demonstrate work skills relevant to a criminal justice agency.
16. Integrate the theoretical and practical application of the Criminal Justice Program.

Culinary Arts
Business Division

The Culinary Arts certificate program consists of 25 or 27 credits of specific skill courses which will prepare people for careers in food services. Students may pursue the program on a full or part-time basis. Students who wish to pursue the Associate in Applied Science degree may apply the certificate credits to the Foodservices Management or Hotel Management degree. As with other certificate programs, the student must first apply to the Admissions Office. All students must be interviewed by the Hospitality Management Program Coordinator prior to registration into the certificate program. Students requiring basic skills development courses in reading, English, or math as determined by placement testing are advised to begin their program with these basic skills courses to ensure success in the required hospitality courses.

Because of the nature of the program, special tuition and fees for foods, etc., may be required. The program takes four semesters of courses (fall, spring, fall and spring). Please refer to the section on course descriptions for prerequisites.

Course No.	Title	Credits
HSP*H100	Introduction to the Hospitality Industry	3
HSP*H101	Principles of Food Preparation	3
HSP*H102	Food Production & Purchasing	3
HSP*H109	Food Safety Certification	1
	or	
HSP*H108	Sanitation and Safety†	3
HSP*H135	Service Management	3
HSP*H202	Catering & Event Management	3
BIO*H111	Introduction to Nutrition	3
Elective	Hospitality Management	3
	Chose one baking elective below:	
HSP*H103	Principles of Baking I	
	or	3
HSP*H215	Principles of Baking II	
	or	
HSP*H216	Artisan Bread	
	Total Credit Hours	**25 or 27**

† Students interested in the degree program should take HSP*H108

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:
1. Identify, organize, plan and allocate resources in foodservice operations such as time, materials and facilities, money, and human resources.
2. Demonstrate a working knowledge of food preparation theories and techniques, and utilize food production knowledge (quantity and quality standards) to meet production requirements of a foodservice operation within a projected budget.
3. Effectively work with others as a member of a team, serving clients and customers, teaching others new skills, exercise leadership behaviors, negotiate, and work with others from diverse backgrounds.
4. Obtain nationally recognized professional certification in such areas as food sanitation (as required by State Statute) and food, beverage, & labor cost controls. Demonstrate appropriate personal hygiene.
5. Organize and evaluate information from a variety of sources including food preparation and service techniques and costs, food and related purchasing specifications, catered events planning, research data, and computer applications and Internet output. Communicate the results to others using oral, written, graphic or multimedia methods.
6. Apply concepts of procurement and inventory to purchase, receive, store, issue and distribute food and related items in a foodservice operation.
7. Identify current trends in foodservice industry delivery systems and functions, and operate effectively within them. Make suggestions to modify existing systems to improve products or services, and develop new or alternate systems.
8. Judge which set of foodservice procedures, tools or machines, including computer applications, will produce the desired results, and apply such technology to task.
9. Demonstrate behavior and self-management reflective of personal and professional ethical conduct.
10. Perform basic mathematical computations accurately and appropriately, especially with regard to food and beverage production, purchasing and cost controls.
11. Identify and apply basic concepts of human nutrition and health in the preparation and service of food.
12. Describe and apply basic marketing, sales and merchandising methods in hospitality operations.
13. Demonstrate work readiness through resume preparation, appropriate business dress and behavior, and assertive communication skills.

Dance
Arts and Humanities Division

This certificate in dance is designed for individuals who are looking to enhance their technique, broaden their repertoire, and build their choreographic options and production skills. This program is tailored for those who wish to work or presently work with either children or adults in studio, theatre, early childhood or community service environments. Individuals wishing to broaden their dance foundation for working in the art or entertainment industries also may be served.

Many individuals who teach dance have a limited access to higher education in dance. There is a need for technical as well as artistic training. This program will address these needs by providing a firm foundation in the major aspects of dance so that the student may feel confident in his/her involvement in the dance world.

A Formal Pathways to Dance Certification K-12 has been designed for the public school teacher wishing to obtain the State of Connecticut's pending certification.

Students entering this program should have a basic foundation in dance. If the individual does not possess either a degree or experience, he/she may consider enrolling in the Visual and Performing Arts/Dance Degree option. Credits may be applied toward the degree program. Students may substitute, with permisssion, other dance offerings to fit their needs.

Students must successfully complete the following credit courses with a "B" average:

Course No.	Title	Credits
DAN*H101	History & Appreciation of World Dance	3
DAN*H102	Ballet I: Renaissance to Romantic	3
DAN*H111	Jazz Dance I: Afro-Caribbean/American	
	or	
DAN*H112	Jazz Dance II: Broadway and Film	3

DAN*H113	Modern I: Pioneers of America	3
DAN*H202	Ballet II: Classical to Contemporary	3
DAN*H213	Modern Dance II	3
DAN*H221	Repertory/Ensemble I	3
DAN*H222	Choreographic Principles/Ensemble I	3
	Total Credit Hours	**24**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate mastery skills and techniques necessary for studio and/or theatre dance.
2. Execute a comprehensive historical repertoire of various dance genres using appropriate movement vocabulary.
3. Demonstrate dance as a means of communication and as a reflection of one's society.
4. Make an accurate assessment of personal & students' (if teaching) technical and artistic strengths and weaknesses.
5. Execute effectively production skills from the choreographic process to the performance.

Dietary Supervision

Business Division

The certificate is designed primarily for health care food service personnel seeking professional development. In order to satisfy industry standards, students must successfully complete the following credit courses with a grade of "C" or better, and pass the Food Protection Certification Exam offered through the Educational Foundation of the National Restaurant Association. Credits may be applied toward the degree program in Foodservice Management.

Course No.	Title	Credits
HSP*H101	Principles of Food Preparation††	3
	or	
HSP*H102	Food Production & Purchasing†††	
HSP*H109	Food Safety Certification†	1
BIO*H111	Introduction to Nutrition	3
	Total Credit Hours	**7**

†HSP*H108 - Foodservice Sanitation & Hotel Housekeeping (3 credits) may be substituted for HSP*H109.

††Course substitution may be allowed with written approval of the Hospitality Management Program Coordinator.

†††Course substitution may be allowed with written approval of the Hospitality Management Program Coordinator. Prerequisite of HSP*H101 may be waived with approval of the Hospitality Management Program Coordinator.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify agents and vectors of food-borne illness.
2. Employ proper sanitary procedures in the purchasing, receiving, storing, issuing, preparing, and serving of food products.
3. Design basic sanitation training for foodservice employees.
4. Discuss federal, state and local regulations and standards of foodservice sanitation.
5. Inspect, from a sanitation viewpoint, equipment and facility design.
6. Qualify for certification in applied foodservice sanitation from the Educational Foundation of the National Restaurant Association.
7. Define, discuss, and employ basic food preparation theories and techniques.
8. Recognize and use a variety of kitchen tools, equipment, and raw food products.
9. Plan, organize, prepare, and evaluate finished food items from the raw state.
10. Memorize, interpret, and evaluate written recipes; mathematically expand and reduce these recipes; be able to pre-cost the recipes; understand computer applications regarding these calculations.
11. Define, discuss, and employ beginning kitchen management theories and techniques. Plan, organize and communicate (through written papers) information gained through journal research.
12. Define, discuss, and explain the importance of nutrition to health status.
13. Define and apply the components of nutrition to various age groups.
14. Apply acquired nutrition knowledge to daily living experiences.
15. Demonstrate knowledge of current nutrition information through compilation of weekly written reaction sheets.
16. Identify their personal nutritional status through use of computer nutrition program used in conjunction with written daily food diary.

Disabilities/Mental Health

Behavioral and Social Sciences Division

This program is designed for students who will work in a variety of mental health settings (many of which have been created through deinstitutionalization) in both the mental illness and developmental disabilities fields. Students will train for positions that will be found in a wide variety of agencies such as crisis centers, community residencies, sheltered workshops, halfway houses, social rehabilitation clubs, etc. which specifically service this population.

Course No.	Title	Credits
HSE*H101	Introduction to Human Services	3
HSE*H133	Disabilities and Mental Health	3
PSY*H111	General Psychology I	3
SOC*H101	Principles of Sociology	3
SOC*H201	Contemporary Social Issues	
	or	
HSE*H221	Social Inequality	3
Elective	Psychology	3
HSE*H202	Introduction to Counseling & Interviewing	3
PSY*H258	Behavior Modification	3
PSY*H245	Abnormal Psychology	3
HSE*H281	Human Services Field Work I	3
	Total Credit Hours	**30**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate a beginning understanding of a wide range of diagnoses that relate to people in need of social work service, and be knowledgeable about the necessity of a collaborative relationship with area support.
2. Identify the diverse challenges facing people with mental illness, and use effective advocacy strategies to address such challenges.
3. Describe confidentiality guidelines, and Human Services ethical standards of practice, and recognize his or her own personal limitations and professional behavior as a helper.
4. State the psychological theories that may help the Human Services Provider.
5. Explain what effects the social conditions in the United States have on the developmental disabilities and how to deal with them.
6. Understand sociocultural dynamics that underlay social issues in America today.
7. Be knowledgeable about formal and informal assessment practices that reflect both the needs and strengths of disadvantaged people.
8. Provide disadvantaged people the support and information necessary to build self-esteem and empowerment skills.
9. Apply knowledge and skills needed to work with people with mental illness in a variety of agency settings.
10. Demonstrate the ability to utilize the skills and tasks required for engagement, assessment, case planning, intervention and termination.

Drug and Alcohol Recovery Counselor (DARC)
Behavioral and Social Sciences Division

The purpose of the DARC Certificate is to assist students towards becoming a Certified Addictions Counselor (CAC), allowing them to enter employment earlier than if they waited to complete their Associates Degree in DARC. Students who complete these DARC courses will meet the Connecticut Certification Board (CCB) 360 hours of education/training requirements in preparation towards becoming credentialed as a Certified Addictions Counselor (CAC). Additional hours of paid direct work experience are needed to meet the requirements for Provisional or Standard certification as an Addictions Counselor by the State of Connecticut. The certificate may be pursued on a full or part time basis, and credits earned in the certificate can be applied towards completion of the Associates Degree in DARC. For further information, contact the Program Coordinator.

Course No.	Title	Credits
DAR*H101	Public Health Issues in Abuse and Addiction	3
DAR*H111	Addiction Counseling I	3
DAR*H112	Group Counseling Theory and Techniques	3
DAR*H158	Biology of Addiction	3
DAR*H213	Addiction Counseling II	3
DAR*H251	Counseling Internship I	6
DAR *H220	Co-Occurring Counseling	3
DAR *H252	Counseling Internship II	6
	Total Credit Hours	**30**

Program Outcomes
Upon successful completion of the DARC Certificate the successful graduate should be able to:

1. Describe the physical, emotional and psychological basis of addiction
2. Define the causes and characteristics of substance abuse and addiction relevant to various populations and cultures
3. Define and apply counseling theories to addiction counseling which include Adlerian, Existential, Person-Centered, Gestalt, Reality, Behavior, Motivational Interviewing, Brief Therapy, and Cognitive Behavioral perspectives
4. Define and demonstrate ethical behavior within the counseling profession
5. Demonstrate knowledge and skills related to relapse prevention education
6. Describe the categories of drugs and effects on physiological functioning
7. Describe the characteristics of individuals with co-occurring disorders
8. Demonstrate the ability to develop/implement treatment plans for individuals with co-occurring disorders
9. Co-facilitate group counseling sessions under supervision
10. Demonstrate ability to develop/write a treatment/discharge plans
11. Demonstrate understanding of the screening, intake and evaluation process in addiction treatment
12. Demonstrate ability to keep accurate records of group/individual process, treatment and discharge planning
13. Describe the steps involved in crisis intervention
14. Describe different self-help groups available for individuals with co-occurring disorders and addiction issues
15. Describe the effects of substance abuse on the family and stages of recovery for families
16. Describe the stages of change model and its application to treatment of addiction
17. Describe the use of multicultural counseling skills related to the assessment, treatment and aftercare issues for persons of different gender, ethnicity, disability, adolescents, the elderly and homeless.
18. Accurately describe the overall role of the counselor as a member of the care-giving team
19. Describe and demonstrate the transdisciplinary foundations and competencies required of addiction counselors (TAP 21)

Early Childhood Education
Behavioral and Social Sciences Division

The certificate program consists of thirty (30) credits in Early Childhood. These are designed to develop the basic skills and knowledge necessary in Early Childhood Education. The curriculum is a form of a connector, or intensified refresher program, for those who have either been away from academic studies for a while and/or have been engaged in group child care without formal training in the area. For further information, contact the Program Coordinator.

Course No.	Title	Credits
ENG*H101	Composition	3
PSY*H111	General Psychology I	3
PSY*H203	Child Development	3
ECE*H101	Introduction to Early Childhood Education	3
ECE*H103	Creative Experiences for Children	3
ECE*H109	Science and Math for Children	3
ECE*H141	Infant/Toddler Development	3
ECE*H176	Health, Safety & Nutrition	3
ECE*H210	Observation and Participation	3
ECE*H231	Early Language and Literacy Development	3
	Total Credit Hours	**30**

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:

1. Utilize the writing skills for developing lessons and composing reports.
2. Be knowledgeable about various theories as they apply to young children.
3. Be able to apply theories to the physical, social emotion and cognitive development of children.
4. Learn how theories can be applied to understanding children's behavior.
5. Demonstrate a basic knowledge of Early Childhood Education & the skills required to make objective observations of young children in the classroom setting.
6. Be able to systematically observe and record children's behavior.
7. Understand the different aspects of speech and communication.
8. Become acquainted with various communication impairments or delays and set realistic goals for young children in the area of language development.
9. Make an initial assessment of a child's language development.
10. Understand how a child's sensorimotor development influences a child's ability to learn.
11. Recognize possible signs of physical handicaps and developmental delays.
12. Be aware of the interrelationships between child development and the areas of health, safety and nutrition.
13. Be knowledgeable about the control and prevention of communicable diseases.
14. Provide general curriculum adaptations and guidelines to help children meet their special needs.
15. Gain the experience to create a supportive and interesting learning environment.
16. Be able to write goals, objectives and developmentally appropriate activities.
17. Develop a curriculum using a multisensory approach to teaching.
18. Plan, organize, execute and evaluate classroom activities on a weekly basis.
19. Write developmentally appropriate explorations prescription based upon a child's individual learning style.

Electronic Music and Audio Production
Arts and Humanities Division

The certificate in Electronic Music and Audio Production is designed for individuals who wish to learn, or enhance, their skills in the areas of electronic music composition and audio production. The certificate program will serve the specialized needs of students of Digital Arts and Fine Arts as well as individuals interested in electronic music composition and audio production. Students will be exposed to important historical aspects that have influenced compositional styles as well as the impact of technology on music and art.

Students must complete the following courses with a grade of "C" or better:

Course No.	Title	Credits
MUS*H101	Music History & Appreciation I	3
DAT/MUS*H218	Electronic Music Composition/ Audio Tech I	3
DAT/MUS*H237	Principles of Sound Recording	3
*Directed Elective	Arts/Digital Arts	3
		12
MUS*H126	20th Century/Modern Music	3
DAT/MUS*H219	Electronic Music Composition/ Audio Tech II	3
DAT*H220	Acoustics and Sound Design	3
		9
	Total Credit Hours	**21**

*Directed Electives:
   DAT*H110, DAT*H226, DAT*H290,
   MUS*H103, MUS*H115, MUS*H290

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Analyze and evaluate the properties of sound, human hearing, and sound reproduction systems.
2. Use principles of acoustics and psychoacoustics to design state-of-the-art sonic environments.
3. Apply industry-standard techniques and tools to complete two-track and multi-track recording projects.
4. Use digital signal processing tools to manipulate and shape sound.
5. Compose original electronic music compositions.

Engineering Exploratory Certificate
Engineering Technologies Division

The Exploratory is designed to prepare students for Engineering Technology programs and enable them to evaluate career choices in Engineering Technologies.

Course No.	Title	Credits
TCN*H101	Introduction to Engineering Technology	3
MFG*H104	Manufacturing Processes	4
CAD*H150	CAD 2D	
	or	
ARC*H133	Technical Drafting	3
EET*H104	Electrical CAD and Fabrication	1
	or	
EET*H102	Electrical Applications†	3
	Total Credit Hours	**11-13**

†EET*H102 can be taken instead of EET*H104 but may require additional math courses.

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:

1. Evaluate career choices in Engineering technologies.
2. Discuss the history of technology.
3. Meet with faculty in various Engineering Technologies.
4. Demonstrate proper setup and procedures for various manufacturing processes.
5. Use OrCAD Capture and Layout software.
6. Populate a double sided PC board.
7. Use drafting instruments.
8. Prepare a set of working drawings for a small machine assembly.
9. Differentiate between the various technologies used to complete a major engineering project.

Environmental Systems
Mathematics/Science Division

Connecticut's manufacturers have made a considerable investment in pollution abatement equipment in order to meet the increasingly stringent demands of state and federal environmental regulatory agencies. The sophistication of the equipment and the complicated regulations very often surpass the knowledge of the personnel assigned to operate these systems and to interpret the regulations. Naugatuck Valley Community College, conscious of its strong ties to the state's industrial community, foresaw the need to initiate an environmental studies program for industry personnel.

In preparing the curriculum, the College formed an Environmental Advisory Committee of outstanding industrial practitioners, Connecticut Department of Environmental Protection personnel, college faculty and staff. The courses have been designed to represent the operational and regulatory aspects of this increasingly important function of protecting our environment, while maintaining a competitive position in the marketplace. Participants in these courses will be exposed to a pragmatic approach to the subject, and should acquire a broader and deeper understanding of the field. The goal of the Environmental Systems Certificate Program is to prepare students for a position in industry dealing with the compliance of environmental regulations.

Course No.	Title	Credits
MAT*H172	College Algebra	3
ENV*H120	Introduction to Hazardous Materials	3
ENV*H110	Environmental Regulations	3
ENV*H230	Environmental Control Processes	3
CHE*H111	Concept of Chemistry	4
		16
ENG*H101	Composition	3
COM*H100	Introduction to Communication	3
ENV*H205	Foundations of Environmental Chemistry	3
ENV*H160	Environmental Measurement	3
ENV*H235	Waste Minimization & Treatment	3
		15
	Total Credit Hours	**31**

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Devise a plan to sample for contamination in the air, water, or soil.
2. Operate common environmental sampling and analysis equipment.
3. Understand how sampling procedures can affect the data obtained.
4. Select treatment methods to control air and water emissions.
5. Use chemical principles to explain how environmental control processes work.
6. Compare control process capability with government regulations.
7. Suggest pollution prevention strategies in an industrial situation.
8. Show the economic advantages of the source reduction of pollutants.
9. Evaluate the economics of recycling.
10. Evaluate waste disposal options such as incineration, landfilling, and biological degradation.
11. Use an understanding of separation techniques to select processes that recover useful materials from wastes.
12. Know the regulatory requirements governing the movement and use of hazardous materials.

13. Have the ability to implement a risk assessment program.
14. Be familiar with the routes of entry of chemicals into the body.
15. Be capable of selecting, using, and maintaining personal protective equipment.
16. Interpret a CFR citation.
17. Implement management systems approach to compliance.

Family Child Care Provider
Behavioral and Social Sciences Division

This certificate program is intended to define, evaluate and recognize skills needed to offer competent care to young children in a family child care setting, as well as in various types of early childhood education programs. A family child care provider is a person who cares for up to six full-time children in their own home and must be licensed by the state of Connecticut. Upon completion of this certificate, students will possess the skills necessary to manage a well run program and meet the needs of infants, toddlers and preschoolers.

Students who complete the first nine (9) credits of the certificate program also have the option of simultaneously applying for a Child Development Associate (CDA) Credential. These nine (9) credits will satisfy the 120 hours of training required for a CDA credential.

In addition, the credits earned with a grade of "C" or better in the certificate program can be applied toward an Associate of Science Degree in Early Childhood Education. All ECE courses are offered at Naugatuck Valley Community College in the evening for the convenience of those adults working in family homes or center-based settings.

Course No.	Title	Credits
ECE*H101	Introduction to Early Childhood Education	3
ECE*H103	Creative Experiences for Children	3
ECE*H176	Health, Safety & Nutrition	3
ECE*H206	Administration and Supervision of Early Childhood Programs	3
ECE*H290	Student Teaching I†	3
	Total Credit Hours	**15**

†ECE*H290 Student Teaching I may be done in your home setting.

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Demonstrate a basic knowledge of Early Childhood Education and the skills required to make objective observations of young children in the home setting.
2. Systematically observe & record children's behavior.
3. Recognize that the process of creating is as important as the end product.
4. Use their own creative abilities in working with young children.
5. Demonstrate an understanding of the concept of creativity through planning environments and activities.
6. Be aware of the interrelationships between child development and the areas of health, safety and nutrition.
7. Be knowledgeable about the control and prevention of communicable diseases.
8. Provide general curriculum adaptations and guidelines to help children meet their special needs.
9. Gain the experience to create a supportive and interesting learning environment.
10. Write goals, objectives and developmentally appropriate activities.
11. Develop a curriculum using a multisensory approach to teaching.
12. Become familiar with CT State Licensing Regulations; C.D.A. Competency Standards & N.A.E.Y.C. Accreditation Procedures.

Finance
Business Division

The Finance Certificate is designed for individuals who are seeking professional development and advancement in the financial services area. Students entering this program are assumed to have a business foundation either by career or degree. Credits may be applied toward the degree program in Business Finance. Students must successfully complete the following credit courses with a grade of "C" or better.

Course No.	Title	Credits
CORE AREA	(Required)	
BFN*H201	Principles of Finance	3
FIN-H202	Money and Banking	3
BFN*H220	Principles of Financial Management	3
BFN*H203	Investment Principles	3
One elective to be chosen from:		
BRE*H205	Real Estate Law	3
BFN*H208	Financial Analysis	3
	Total Credit Hours	**15**

Further information can be obtained by contacting the Coordinator of the Finance Program.

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Demonstrate knowledge of business finance including financial planning, long and short-term financing, fixed assets management, and management of long-term debt.
2. Identify strategies and practices in government and consumer financing.
3. Demonstrate knowledge of monetary, fiscal and debt management policies of government.
4. Demonstrate knowledge of basic analytical techniques, problem-solving and decision-making.
5. Identify the basic concepts of Asset Management and be able to provide an overview of Liability- and Deposit-Management as relates to the financial services industry.
6. Identify techniques for managing working capital and demonstrate knowledge of the capital budgeting process.
7. Provide an understanding of how the United States economic system is organized, how it functions and how it impacts the global economy.
8. Identify the major goals and functions of financial management.
9. Understand the principle components of financial analysis in all levels of the business organization.
10. Demonstrate an understanding of the interrelationships between Finance and **all** other areas within a business, including working with other departments to achieve overall strategic goals.

Gerontology
Behavioral and Social Sciences Division

Social services for the elderly are provided by many different kinds of agencies with diffferent purposes, client groups, funding sources, and philosophies. The curriculum which leads to the certificate in Human Services, Gerontology Option is designed to provide an understanding of the behavior and needs of older persons.

Course No.	Title	Credits
HSE*H171	Death and Dying	3
HSE*H101	Introduction to Human Services	3
HSE*H170	Introduction to Gerontology	3
SOC*H101	Principles of Sociology	3
PSY*H101	General Psychology I	3
SOC*H201	Contemporary Social Issues	
	or	
HSEH221	Social Inequality	3
HSE*H202	Introduction to Counseling & Interviewing	3

Elective	Psychology elective	3
PSY*H258	Behavior Modification	3
HSE*H281	Human Services Field Work I	3
	Total Credit Hours	**30**

†Directed Electives
   PSY*H201 Lifespan Development or
   PSY*H208 Psychology of Adult Development & Aging

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Be knowledgeable about the issues surrounding the universal prospect of death and about the mourning process.
2. Have a beginning understanding of a wide range of diagnoses that relate to people in need of social work service and be knowledgeable about the necessity of a collaborative relationship with area support systems.
3. Identify social and psychological aspects and processes of aging.
4. Locate local, state, and federal programs and services available for the solution of the problems of the elderly.
5. Explain what effects the social conditions in the United States have on the aging.
6. Understand sociocultural dynamics that underlay social issues in America today.
7. Provide elders the support and information necessary to build self-esteem and empowerment skills.
8. Demonstrate the ability to utilize the skills and tasks required for engagement, assessment, case planning, intervention and termination.
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Graphics & Animation
Arts and Humanities Division
As a result of completing the Graphics & Animation Certificate, students will be able to design two-dimensional digital graphics, three-dimensional object modeling, digital animation sequences, and interactive media applications. Graduates will be qualified to seek positions in the fields of graphic art production, character animation, electronic publishing, broadcasting, and Web design.

Students must complete the following courses with a grade of "C" or better:

Course No.	Title	Credits
GRA*H150	Introduction to Graphic Design	3
DAT*H106	Digital Design	3
DAT*H108	Digital Imaging I	3
DAT*H212	3D Graphics & Animation I	3
		12
DAT*H116	Interactive Media Design	3
DAT*H230	Digital Imaging II	3
DAT*H234	3D Graphics & Animation II	3
		9
	Total Credit Hours	**21**

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Design, edit and manipulate digital graphics and image files.
2. Utilize advanced techniques for character modeling and the design of virtual space.
3. Design, model, and animate complete 3-dimensional landscapes.
4. Develop state-of-the-art 3D special effects for film and video productions.
5. Complete significant projects terminating in deliverable software/media products with technical documentation.

Health Career Pathways
Allied Health, Nursing and Physical Education
This program is designed to assist the student to achieve success in health care programs. Students will be provided with the foundation necessary for health care professions. Credits from this program may be applied toward health care programs requirements within Connecticut's Community College system. However, completion of this program does not guarantee an automatic acceptance into any health care program. Students are responsible for verifying specific requirements for their program of interest.

Course No.	Title	Credits
HLT*H103	Investigations in Health Careers	3
ENG*H101	English Composition	3
MAT*H136	**or** 137 **or** 138	
	Intermediate Algebra	3
BIO*H105	**or** 115 **or** 121	
	Intro to Bio., Human Bio., Gen Bio I	4
CHE*H111	Concepts in Chemistry	4
PSY*H111	General Psychology I	3
BIO*H211	Anatomy & Physiology I	4
BIO*H212	Anatomy & Physiology II	4
	Total Credit Hours	**28**

Please consult the catalog for prerequisites and eligibility to the courses.

Program Outcomes
Upon successful completion of all program requirements, the graduates will be able to:
1. Demonstrate competence in written and oral communication.
2. Demonstrate critical thinking, logical reasoning and problem solving skills.
3. Effectively utilize and interpret medical terminology.
4. Identify a variety of career opportunities and roles available in health care professions.
5. Meet most requirements for entrance into health care programs.
6. Demonstrate an understanding of the impact of psychological principles and how they relate to the health care field.
7. Use and apply scientific methods.

Horticulture
Mathematics/Science Division
The Horticulture certificate program is designed to develop the skills and understanding needed for students to take responsible positions in grounds maintenance, tree and shrub nurseries, wholesale plant growing, landscaping, garden centers and retail greenhouses, golf courses, lawn care, and parks/recreation departments. The certificate will be awarded on completion of all courses and a cooperative work experience.

Course No.	Title	Credits
HRT*H101	Landscape Mechanics	4
HRT*H102	Woody Plants	3
HRT*H103	Herbaceous Plants	3
HRT*H202	Landscape Design I†	
	or	
HRT*H124	Floral Design I	3
HRT*H207	Landscape Maintenance	3
HRT*H219	Arboriculture	3
	or	
HRT*H224	Plant Propagation and Hybridization	4
HRT*H222	Greenhouse Management I	4
HRT*H290	CWE Horticulture Co-op	3
Elective	Horticulture††	3
	Total Credit Hours	**29-30**

†Prerequisite HRT*H102-Woody Plants or waiver by coordinator.

††Horticulture Electives

HRT*H105	Fruit and Vegetable Production	
HRT*H115	Turf Management	
HRT*H203	Landscape Design II	
HRT*H204	Landscape Design III	
HRT*H206	Landscaping Small Properties	
HRT*H215	Pest Control in Ornamentals and Turf	
HRT*H223	Greenhouse Management II	
HRT*H240	Nursery Management	

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify common trees and shrubs, ground covers, various annuals, biennials, and perennials by botanical and common names, and describe the outstanding characteristics of each; summarize landscape, garden center and greenhouse uses; and know the cultural requirements of these plants.
2. Identify foliage plants commonly used indoors by botanical and common names, state distinguishing characteristics of each, and describe their use and culture in various indoor landscape areas.
3. Control the common weeds, insects, pests and diseases of ornamentals and turf.
4. Select the proper procedures, define the physiological basis, and describe practical applications of the reproduction of plants by asexual and sexual methods.
5. Describe proper design and operation of greenhouse environmental systems, and evaluate their advantages and disadvantages in commercial production.
6. Demonstrate a responsible attitude in relationships with employers, fellow employees, and toward the world of work.
7. Select appropriate techniques for the establishment and management of lawns and utility turf areas.
8. Manage the procedures used in landscape constructions and in the maintenance of small engines.
9. Design flower beds, and mixed borders; place trees and shrubs for a variety of gardens for both residential and commercial properties.
10. Access available resources to incorporate technological innovations.
11. Demonstrate those skills, abilities and values which allow a person to function as a free and responsible citizen.
12. Apply mathematics to calculating area, volume and application rates of fertilizers and pesticides.
13. Evaluate site conditions to design attractive, functional landscapes.

Landscape Design Certificate
Mathematics/Science Division

The Horticulture Landscape Design Certificate is designed to prepare students for certification as Professional Landscape Designers. The certificate is designed to develop those skills in plant identification and culture, landscape mechanical skills, maintenance of landscapes, as well as hand drawing and sketching, computer aided designing portfolio assessments, leading to certification by the American Professional Landscape Designers. This program is affliated with American Professional Landscape Design Association (ALCA).

Course No.	Title	Credits
HRT*H101	Landscape Mechanics	4
HRT*H102	Woody Plants	3
HRT*H103	Herbaceous Plants	3
HRT*H202	Landscape Design I	3
HRT*H203	Landscape Design II	3
HRT*H204	Landscape Design III	3
HRT*H206	Landscaping Small Properties	3
HRT*H207	Landscape Maintenance	3
ART*H111	Drawing I	3
	Total Credit Hours	**28**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify the current repertoire of trees, shrubs, ground covers, vines, annuals, biennials, and perennials by botanical and common names, describe the outstanding characteristics of each; summarize landscape uses, know their cultural requirements; design herbaceous and mixed borders.
2. Evaluate landscape areas and needs; select and place plants in a design; design and place hardscape features in a landscape; draw plans using traditional equipment and computer-aided tools; outline techniques for low maintenance needs in both residential and commercial properties.
3. Transfer portions of aerial designs into perceptual designs, using sketching techniques; develop a plan for pricing out landscape projects and bids; demonstrate oral skills to clients on design ideas; design landscape garden plans using computer design programs; manipulate computer designs to illustrate to landscape design development over time.
4. Demonstrate how to bring color to the landscape through the four seasons with herbaceous and woody plants; how to establish and manage mass planting through the year.
5. Demonstrate and explain how to prune deciduous and evergreen trees and shrubs for a variety of purposes.
6. Interpret fertilizer needs for particular plants from the general recommendations of a soil analysis; recognize signs of nutrient deficiency.
7. Demonstrate techniques for designing small properties; plan and select plants for different kinds of gardens (examples: for woods, meadows, marshes, water, rock gardens).
8. Relate the historical development of the garden through the ages and be able to recognize the contributions and influences of great designers on gardens today.
9. Relate and demonstrate how to use all the subtleties of color and design in the garden in two dimensional and three dimensional formats.
10. Initiate, develop and present a significant design as an independent study project.
11. Demonstrate a responsible attitude in relationships with employers, fellow employees, and toward the world of work.
12. Access available resources to incorporate technological innovations.
13. Be prepared for certification as a Professional Landscape Designer.
14. Initiate landscape design through computer-aided programs.

Lean Manufacturing Certificate Program
Engineering Technology Division

The Lean Manufacturing Certificate was developed as a response to the expressed future and current needs of the manufacturing community. The U.S. Department of Labor along with local industry has demonstrated a demand and need for courses in the areas of lean management. This certificate provides students with the skills that will increase their employability in the manufacturing field as well as set them on a path that will enable them to further their education.

Course No.	Title	Credits
MFG* H171	Introduction to Lean Manufacturing	3
MFG* H271	Advanced Lean Manufacturing	3

Legal Studies/Paralegal
Business Division

The Legal Studies/Paralegal certificate program is designed to develop and enhance the skills and understanding needed to fill responsible positions in banks, insurance companies, real estate companies, private law offices, corporate law offices, and local, state and federal government legal departments. The Legal Studies/Paralegal Certificate program is a member of the American Association for Paralegal Education. See admission

requirements to the Legal Studies/Paralegal Certificate Program below.
The topic of ethics and the paralegal's role in the legal profession are emphasized throuhout the courses in the program.
Eight courses are required for completion of the Legal Studies/Paralegal Certificate Program. The certificate will be awarded on completion of the following courses:

Course No.	Title	Credits
LGL*H101	Introduction to Paralegalism	3
LGL*H102	Legal Research and Writing	3
LGL*H104	Real Estate Practice	3
LGL*H202	Advanced Legal Research and Writing	3
LGL*H209	Probate Practice & Estate Administration	3
LGL*H208	Litigation	3

Choose two of the following:

LGL*H270	Cooperative Education Work Experience	3
LGL*H210	Family Law	3
LGL*H204	Criminal Procedure	3
LGL*H230	Advanced Legal Issues Seminar	3
LGL*H206	Bankruptcy Law	3
	Total Credit Hours	**24**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Interview client(s) and condense fact patterns into a concise legal analysis.
2. Explain the structure of the State and Federal Court system, including Trial Court function(s) and Appellate Court functions.
3. Identify historical, sociological and political trends that have changed, and continue to change, the American legal system.
4. Explain the role of forensic science in evidentiary matters pertaining to civil and criminal litigation.
5. Research a particular fact pattern to identify all legal issues, and describe the competing arguments that can be advanced by parties to a controversy.
6. Explain the role of the judiciary in providing a balance to the legislative and executive functions of government.
7. Differentiate between liability issues and damage issues in legal controversies.
8. Identify inherent restrictions in the civil and criminal legal process that inhibit the ability of the legal system to function as a tool of social justice.
9. Identify and present a logical plan for a client taking into account the strengths and weaknesses of adopting various legal positions.
10. Maintain organized financial data concerning a client's case file.
11. Foster good relations between the law firm, department, or public entity and the clients served.
12. Demonstrate organization in handling multiple client case files and maintain strict docket control for timely case file review.
13. Understand conflict resolution as viewed from the theoretical perspective and the pragmatic perspective.
14. Apply common law principles and statutory principles where appropriate.
15. Recognize fundamental tort and contract principles that are found in different areas of the law.

Management: Business
Business Division

The Management Certificate Program is intended to provide students with a broad background in the field of management. Students completing this certificate program will be qualified to accept entry-level positions in a variety of profit and non-profit fields.

Course No.	Title	Credits
	CORE AREA: (Required)	
BBG*H101	Intoduction to Business	3
BMG*H202	Principles of Management	3
BMG*H105	Supervision and Organizational Behavior	3
ACC*H113	Principles of Financial Accounting	3

Elect three of the following, totaling 9 credits:

BMG*H220	Human Resources Management	
BBG*H210	Business Communication	
BBG*H231	Business Law I	
BMK*H201	Principles of Marketing	
QUA*H260	Principles of Supervision	
ACC*H117	Principles of Managerial Accounting	
		9
	Total Credit Hours	**21**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate basic knowledge of management, human resources, and organizational development in an entry level management position.
2. Identify the skills needed to organize thoughts and ideas, and demonstrate the ability to communicate, verbally and in writing, in a manner that can be easily understood in the business environment.
3. Solve math problems related to various aspects of management including accounting, finance and operations.
4. Understand and practice the various functions of management as well as the nature and responsibilities of a manager.
5. Develop an understanding of the decision-making process and demonstrate effective decision-making.
6. Demonstrate an ability to define management problems, examine alternatives and decide on the best course of action, and submit these in writing to higher management.
7. Develop a personal philosophy of management, enabling him/her to perform as a manager, staff specialist or as a subordinate.
8. Develop an understanding of the nature of change and how to adapt to the accelerating, global environment.
9. Demonstrate a knowledge and use of technological innovations as they apply to management.
10. Develop an ability to interpret management information from various sources such as financial statements, annual reports, and publications.
11. Demonstrate an understanding of the competitive pressures brought by effectiveness, efficiency and innovation issues on organizations.
12. Demonstrate a responsible attitude in relationships with employers, fellow employees, working groups, and the macro environment.

Management Information Systems (MIS)

This certificate program will prepare students for applications and system programming positions within a business environment. Courses are designed to offer students immediate positions in industry, and will also provide a solid foundation for continuation in our two year associate's degree in Computer Information Systems Technology.

Two Required Courses (6 credits)

Course No.	Title	Credits
CSC*H205	Visual Basic I	3
CSC*H231	Database Design I	3

Four Elective Courses (12 credits) selected from this list

CSC*H183	Information Systems in Organizations	3
CSC*H206	Visual Basic II	3
CSC*H211	VB & ASP .NET Web Programming	3
CSC*H250	Systems Analysis and Design	3
CSC*H252	Information Systems Project Management	3
CSC*H236	Intro to Client Server Systems	3
CSC*H237	Database Programming with VB .NET	3
	Total Credit Hours	**18**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Acquire a familiarization with terminology and structure of various programming languages.
2. Demonstrate the ability to use software tools for program development.
3. Write, compile and run effective business applications.
4. Troubleshoot common programming problems and test solutions.
5. Demonstrate a basic understanding of relational database concepts.

Manufacturing
Engineering Technologies Division

The certificate program in Manufacturing is designed to prepare individuals for "hands-on" entry-level positions in the manufacturing sector, i.e., inspectors, machine operators, CNC operators or progress planners. The certificate holder will possess enough fundamental knowledge in basic math, blueprint reading and manufacturing processes to function on the shop floor at the entry level as compared to our associate degree program in Automated Manufacturing Engineering Technology, where the graduate is more concerned with the "technical" engineering concepts of manufacturing.

The student presently seeking an entry-level "hands-on" job in industry would benefit most from this program. Persons presently in the work force could also benefit by improving their skills in manufacturing. Once employed, individuals could continue their education at the associate degree level. With a combination of work experience and education, employees could advance to more responsible positions in the manufacturing field. A student who does not live within easy commuting distance of a community-technical college offering an associate degree program in Manufacturing, but does live near another community-technical college would also benefit by being allowed to complete the majority of courses at a local institution. Fifty percent of the courses would be transferable to community-technical colleges offering associate degrees in Manufacturing, Mechanical or CAD/D Engineering Technology.

Course No.	Title	Credits
MFG*H104	Manufacturing Processes	4
CAD*H150	CAD 2D	3
TCN*H101	Introduction to Engineering Technology	3
MAT*H137	Intermediate Algebra	3
MFG*H106	Computer-Aided Manufacturing I	3
MFG*H120	Metrology	3
MFG*H230	Statistical Process Control	3
	Total Credit Hours	**22**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate fundamental knowledge in basic math, blueprint reading, and manufacturing processes.
2. Demonstrate proficiency in basic manufacturing analysis and problem-solving.
3. Understand product variation concepts and utilization of statistical process control.
4. Program NC machines using manual data input mode.
5. Apply knowledge of computer applications including word-processing and spreadsheets.

Marketing Electronic Commerce
Business Division

The world of Marketing is undergoing great change driven by the "Internet — Electronic Marketplace." The Internet is fast becoming the ultimate distribution system to disseminate marketing data, identify customers and provide salesforce attention, customer service activity, and ordering. This short-term certificate is designed to provide you with the basic electronic commerce skills to effectively prepare and execute electronic commerce "Marketing Plans." The critical skill areas emphasized are: the understanding of marketing, customer service capabilities, sales skills, computer expertise in electronic commerce, verbal and written communications abilities, and logical analysis problem-solving.

Course No.	Title	Credits
BMK*H220	Sales	3
BMK*H201	Principles of Marketing	3
BMK*H207	Consumer Behavior	3
BMK*H216	Internet Marketing†	3
CSA*H207	Computer Applications in Management and Marketing†	3
	Total Credit Hours	**15**

†A proficiency in computer skills is required and encompasses Windows, electronic spreadsheet, database applications and the Internet. This can be satisfied by work experience in these programs, a Web Page Design Certificate, a Webmaster Certificate, successful completion of CSA*H105, Introduction to Software Applications (or similar course), or permission of the Marketing Coordinator or Division Director.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify and develop solutions to meet customers' needs via the world wide web and electronic commerce.
2. Apply the concepts of "Total Quality Management" and "Total Customer Service" to electronic commerce.
3. Prepare marketing material to be disseminated via electronic modalities to include: literature, proposals, point-of-sale literature, and promotion plans for the consumer, trade and sales force.
4. Possess the following computer skills: database management, wordprocessing, internet marketing, desktop publishing, and sales and customer service system configuration/operations.

Microcomputer Networking Customer Support
Business Division

This certificate program is designed to develop technical knowledge and communication skills in the Computer Networks field. The program prepares students for careers in which they provide technical customer service support.

Course No.	Title	Credits
CSC*H101	Introduction to Computers	3
CST*H120	Introduction to Operating Systems	3
CST*H130	Networking Essentials I	3
CSC*H183	Information Systems in Organizations	3
CST*H235	Network Systems	3
CST*H239	Service and Support of LANS	3
CSC*H295	CIS Co-op Work Experience	3
	Total Credit Hours	**21**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Provide the student with personal computer skills necessary to effectively function in today's workplace.

2. Offer a "hands-on" learning experience in the personal computer networking software most commonly used in business and industry.
3. Provide students with the business communication skills, including electronic communications, required to function effectively in high technology customer support positions.
4. Provide entry-level opportunities to individuals seeking positions requiring computer networking and communication skills.
5. Upgrade the personal computer knowledge and skill of individuals currently employed.

Microcomputer Networking Specialist
Business Division

This certificate is designed for those individuals who desire an understanding of personal computer networks and their use in the workplace. The course of study will provide the student with a thorough knowledge of local area network design, network management, installation, servicing and support. Students will possess an understanding of PC network technology and programming, set-up, communications, utilities, and system management.

Course No.	Title	Credits
CSC*H205	Visual Basic I	3
CST*H120	Intro to Operating Systems	3
CST*H130	Network Essentials I	3

Three Elective Courses (9 credits) from this list

CST*H235	Network Systems	3
CST*H236	Advanced Network Systems	3
CST*H239	Servicing & Support of LANS	3
CST*H274	Network Security Technology	3
	Total Credit Hours	**18**

Program Outcomes
Upon successful completion of all program requirements, graduates will be able to:
1. Provide the student with the personal computer skills necessary to effectively function in today's workplace.
2. Offer a "hands-on" learning experience in the personal computer networking software most commonly used in business and industry.
3. Provide the opportunity for a more advanced technical understanding of personal computer local area networks, their design, installation and management.
4. Provide entry-level opportunities to individuals seeking positions requiring computer networking skills.
5. Upgrade the personal computer knowledge and skills of individuals currently employed.

Modern Manufacturing Design Certificate
Engineering Technologies Division

The Modern Manufacturing Design Certificate is designed for students seeking employment and advancement in support positions in a variety of manufacturing disciplines which require CAD, manufacturing, and mathematics skills. The credit hour requirement for this certificate facilitates completion within one year, and therefore meets the Workforce Investment Act criteria for training programs.

Course No.	Title	Credits
CST*H150	CAD2D	3
MFG*H104	MFG. Processes	4
TCN*H101	Intro to Eng Tech	3
CAD*H220	Parametric Design	3
MFG*H120	Metrology	3
MAT*H135	or Higher	3
	Total Credit Hours	**18**

Program Outcomes
Upon successful completion of all the program requirements, graduates will be able to:
1. Demonstrate basic knowledge and understanding of engineering graphics and conventional 2-dimensional drafting practices such as orthographic and isometric projection, section, detail, auxiliary views, and geometric dimensioning and tolerancing.
2. Demonstrate proficiency in the use of Cad software for 2-dimensional applications.
3. Explain concepts and skills required for manufacturing processes.
4. Demonstrate proper setup and procedures for various manufacturing processes.
5. To demonstrate the ability to use appropriate mathematical and computational skills needed for entry-level work in manufacturing.
6. To combine oral, graphical, and written communication skills to present and exchange information effectively and to direct manufacturing activities.

Multimedia/Web Authoring
Arts and Humanities Division

The certificate in Multimedia/Web Authoring is designed for individuals who have already earned advanced degrees, are currently employed in interactive multimedia/Web design professions, and are looking for skill-enhancement opportunities. Students entering this certificate program should already have a foundation in the core components of multimedia design and development attained through career performance or degree acquisition. If the individual does not possess either a degree or experience, he/she should consider enrolling in the Digital Arts/Multimedia Authoring degree option. Certificate credits may also be applied toward related degree programs.

Course No.	Title	Credits
DAT*H104	Multimedia Authoring I	3
DAT*H106	Digital Design	3
DAT*H116	Interactive Media Design	3
DAT*H205	Multimedia Authoring II	3
DAT*H215	Multimedia/Web Authoring	3
DAT*H240	Multimedia Authoring III	3
	Total Credit Hours	**18**

Program Outcomes
Upon successful completion of all program requirements graduates will be able to:
1. Utilize current development methods to design advanced multimedia systems.
2. Utilize the phases of the project development life-cycle to assist in the design and completion of multimedia project applications.
3. Conduct a user-needs assessment for the development of multimedia systems.
4. Design and implement accessibility-compliant user interfaces.
5. Design interactive application technologies for the World Wide Web.
6. Complete significant projects terminating in deliverable software products with technical documentation.

Object-Oriented Programming
Business Division

This certificate program recognizes the need to educate students in the area of object-oriented programming and systems design. Students will take courses in the area of Object-Oriented Systems (OOS). Programming languages include C++, VISUAL BASIC, and JAVA. An introduction to client/server systems applications is also included in this certificate program. Courses are designed to offer students immediate positions in industry, and will also provide a solid foundation for continuation in our two-year associate's degree in Computer Information Systems Technology.

Two Required Courses (6 credits)

Course No.	Title	Credits
CSC*H205	Visual Basic I	3
CSC*H231	Database Design I	3

Four Elective Courses (12 credits) from this list

Course No.	Title	Credits
CSC*H206	Visual Basic II	3
CSC*H211	VB & ASP .NET Web Programming	3
CSC*H213	Object Oriented Programming Using C++	3
CSC*H214	Advanced C++ Programming	3
CSC*H220	Object Oriented Programming Using Java	3
CSC*H237	Database Programming with VB .NET	3
	Total Credit Hours	**18**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Demonstrate the use of objects in application programs.
2. Define and implement efficient object-oriented solutions using C++, JAVA, and VISUAL BASIC. 3. Write, compile, and execute programs using C++, JAVA, and VISUAL BASIC programming languages.
4. Create applications using object-oriented features.
5. Use inheritance and interfaces to create robust, reusable, programming code.
6. Demonstrate a basic understanding of relational database concepts.

Sales Support and Service
Business Division

The key entry-level positions in marketing are sales support and customer service. This short-term certificate is designed to provide you with the basic business skills to perform these entry-level positions in industry or retailing and, at the same time, build toward a rewarding career by fitting in with further degrees. The critical skill areas emphasized are: the understanding of marketing, customer service capabilities, sales skills, computer expertise, verbal and written communications abilities and logical analysis problem-solving.

Course No.	Title	Credits
BMK*H220	Sales	3
BBG*H210	Business Communication	3
BMK*H201	Principles of Marketing	3
BMK*H207	Consumer Behavior	3
CSA*H207	Computer Applications in Management and Marketing*	3
	Total Credit Hours	**15**

*A proficiency in computer skills is required and encompasses Windows, electronic spreadsheet, database applications and the Internet. This can be satisfied by work experience with these programs, a successful completion of CSA*H105 (or similar course) or permission of the Marketing Coordinator or Division Director.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:

1. Identify and develop solutions to meet customers' needs in the area of sales support and customer service.
2. Apply the concept of "Total Quality Management."
3. Apply the concept of "Total Customer Service" and function as a customer service representative.
4. Apply the sales and customer service process to the business' needs.
5. Prepare marketing material to include: sales literature, customer proposals, point-of-sale literature, and promotion plans for the consumer, trade and sales force.

Supply Chain Management Certificate Program
Engineering Technologies Division

The Supply Chain Management Certificate was developed as a response to the expressed future and current needs of the manufacturing community. The U.S. Department of Labor along with local industry has demonstrated a demand and need for courses in supply chain management. This certificate provides students with the skills that will increase their employability in the manufacturing field as well as set them on a path that will enable them to further their education.

Course No.	Title	Credits
MFG* H172	Intro to Lean Supply Chain Mgmt.	3
MFG* H272	Implementation Lean Supply Chain Mgmt.	3
	Total Credit Hours	**18**

Technical Communications
Arts and Humanities Division

The certificate in Technical Communications prepares and empowers the student to be an effective communicator with the ability to write and speak about technical subjects to co-workers, management and customers. At almost every level of employment, business and industry are seeking employees who can communicate technical information to others. Most jobs call for writing skills to prepare correspondence, instructions, charts, graphs and proposals in order to explain, illustrate and convince. Workers also need to speak well enough to explain procedures, communicate with customers and to teach others.

This certificate is focused on working adults who have a desire to improve their technical communications skills. A unique feature is the five-course duration allowing the student to complete the program in a few semesters. Courses carry college credit and are offered in the evening for the convenience of working students. The following courses comprise the certificate in Technical Communications:

Course No.	Title	Credits
COM*H100	Introduction to Communication	3
ENG*H101	Composition	3
CSA*H105	Introduction to Software Applications	3
ENG*H202	Technical Writing	3
DAT*H101	Introduction to Digital Arts	
	or	
GRA*H150	Introduction to Graphic Design	3
	Total Credit Hours	**15**

To ensure the applicant's appropriate placement within the program, reading and writing competencies will be assessed. Applicants in need of improvement will be advised to enroll in the College's academic skills and/or basic writing courses.

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:
1. Demonstrate increased competencies in writing and speaking skills.
2. Effectively articulate technical procedures to co-workers, management, and customers.
3. Utilize current computer software, audio, and video tools in preparing technical presentations.

Visual Art

Arts and Humanities Division

The Arts certificate program in Visual Art is a generalized program of primarily two-dimensional studio art and art appreciation courses for the student who wishes to begin college-level credited art courses or to continue such study. Not all courses are offered in all semesters.

Course No.	Title	Credits
ART*H111	Drawing I	3
ART*H151	Painting I	3
ART*H101	Art History I	
	or	
ART*H102	Art History II	3
ART*H112	Drawing II	3
ART*H152	Painting II	3
ART*H121	Two-Dimensional Design	3
ART*H131	Sculpture I	3
Electives	Art	6
	Total Credit Hours	**27**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:
1. Demonstrate mastery of skills and techniques necessary for studio art.
2. Assemble a comprehensive portfolio of artwork.

Wastewater

Mathematics/Science Division

The Department of Environmental Protection has worked cooperatively with the Connecticut Community Colleges to develop this certificate as a means to providing current employees an opportunity to prepare for Class I and Class II certification examinations leading to job advancement possibilities at the wastewater treatment facilities in the state.

Course No.	Title	Credits
MAT*H172	College Algebra	3
BIO*H105	Introduction to Biology	4
CSA*H105	Introduction to Software Applications	3
WWT*H110	Wastewater I	3
WWT*H112	Wastewater II	3
CHE*H111	Concepts of Chemistry	4
ENG*H101	Composition	3
WWT*H114	Wastewater III	3
WWT*H116	Wastewater IV	3
	Total Credit Hours	**29**

Program Outcomes

Upon successful completion of all program requirements, graduates will be able to:
1. Understand the basics of safe and effective operation and maintenance of wastewater treatment plants.
2. Understand the basics of applications of the theoretical principles of wastewater treatment processes, using specific examples from wastewater treatment laboratories.
3. Understand the basics of safe and effective operation and maintenance of wastewater treatment facilities with an emphasis on larger, conventional treatment plants.
4. Take Class I and Class II Certification Examinations.

The College offers a variety of non-credit learning activities to meet the career and professional development as well as personal enrichment needs of our communities. Our programs serve the specialized needs of the people and the industries in State of Connecticut. The diversity of the region helps makes the college a dynamic social, cultural, and intellectual environment for people of all ages. Learners range from youth in elementary and middle school to young adults just out of high school to mature adults returning for employment, retraining or leisure time activities. Businesses and industries access additional training, learning resources, and cultural enrichment for their employees.

Community advisory groups meet throughout the year to provide timely information on industry trends and community needs. Individuals are encouraged to contact our directors listed below with ideas for programs that provide solutions to emerging trends and needs.

Classes are offered days, evenings and weekends at our main campus in Waterbury, as well as at the new Danbury Center at 183 Main Street, Danbury. At Naugatuck Valley Community College you can find classes to improve your computer skills, prepare for a new career, earn a required license or certification, master the art of motorcycle riding or simply explore your creative side through workshops in music, dance, painting, Pilates, baking, and many other leisure activities. Listed below are the names of the staff to contact who can answer questions you may have and provide additional information about our program offerings.

For more information on programs contact:

Mary Ann Fontaine, Director
Center for Business and Industry Training
(203) 596-2143
mfontaine@nvcc.commnet.edu

Laurie Hornbecker, Director
Health Careers and Community Education
(203) 575-8031
lhornbecker@nvcc.commnet.edu

Lay Kuan Toh, Director
English as a Second Language
(203) 575-8156
ltoh@nvcc.commnet.edu

Career and Workforce Development Programs

The Center for Business and Industry Training (CBIT)

CBIT offers a wide selection of certification preparation courses, pre-licensing examination preparation courses, and short courses in Career Advancement, Human Resources, Manufacturing/Engineering, Security Officer, Construction, Solar PV, Solar Thermal, Real Estate, Computers, Accounting, Teaching, Computer Aided Design, Welding and many more.

Health Careers (HC)

NVCC provides entry-level job training opportunities for individuals beginning their career in healthcare, such as CertifiedNurse Aide, Patient Care Technician, Phlebotomy Technician, Central Sterile Processing Technician, Health Unit Coordinator, and Medical Coding & Billing Specialist. The Center for Health Care Careers also provides continuing education opportunities for current healthcare professionals needing this education as part of their re-certification, re-licensure, and/or professional development.

Customized Training

Companies who want their employees to achieve specific objectives contract for programs tailor designed and conducted at their company site, or on campus. We provide individually customized training and assessment that focus on the needs of business, industry, healthcare, government, and professional associations in the areas of training and testing that address skills to improve job performance and productivity including: technical skills, management and supervision, employability skills, workplace literacy, and English-as-a-Second Language.

Community Education & Personal Enrichment Programs

Community education programs provide lifelong learning opportunities over a wide range of areas. Offerings change as the needs and interests of the community change. A selection of current offerings include:

> College Test Preparation
> Fitness & Wellbeing
> Performing Art Ensembles
> Music
> Dance
> Photography
> Studio Arts
> Sewing and Baking
> Boating Safety
> Motorcycle Rider Education
> Gardening/Landscaping
> Grapes/Wine
> English as a Second Language (ESL)

Lifelong Learning, Non-Credit

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COURSE DESIGNATION	COURSE PREFIX	DIVISION
Accounting	ACC*H	Business
American Sign Language	SGN*H	Arts and Humanities
Anthropology	ANT*H	Behavioral and Social Sciences
Art	ART*H, GRA*H	Arts and Humanities
Architecture	ARC*H	Engineering Technologies
Astronomy	AST*H	Mathematics/Science
Automotive Technician	ATP*H	Engineering Technologies
Aviation Science	AVS*H	Mathematics/Science
Biological Sciences	BIO*H	Mathematics/Science
Business	BBG*H, BES*H, BMK*H, BMG*H	Business
Business Finance	BFN*H, BRE*H	Business
Chemistry	CHE*H	Mathematics/Science
Communications	COM*H	Arts and Humanities
Computer-Aided Drafting/Design Technology	CAD-H, CAD*H	Engineering Technologies
Computer Information Systems	CSC*H, CST*H	Business
Computer Science	CSA*H	Business
Cooperative Education	CWE-H	Cooperative Education
Criminal Justice/Public Safety	CJS*H	Behavioral and Social Sciences
Dance	DAN*H	Arts and Humanities
Digital Arts Technology	DAT*H	Arts and Humanities
Drug and Alcohol Recovery Counselor	DAR*H	Arts and Humanities
Early Childhood Education	ECE*H	Behavioral and Social Sciences
Economics	ECN*H	Business
Electrical Engineering Technology	EET*H	Engineering Technologies
EMT-Basic	EMT*H	Allied Health/Nursing/Phys. Ed.
EMT-Paramedic	EMT*H	Allied Health/Nursing/Phys. Ed.
Engineering Technology	TCN*H	Engineering Technologies
English	ENG*H	Arts and Humanities
English as a Second Language	ESL*H	Arts and Humanities
Environmental Science	ENV*H	Mathematics/Science
Fire Technology and Administration	FTA*H	Engineering Technologies
Foodservice Management	HSP*H	Business
General Studies		Counseling Center
Geography	GEO*H	Behavioral and Social Sciences
Geology	GLG*H	Mathematics/Science
History	HIS*H	Behavioral and Social Sciences
Horticulture	HRT*H	Mathematics/Science
Hospitality Mgt. *(Foodservice Mgt and Hotel Mgt)*	HSP*H	Business
Hotel Management	HSP*H	Business
Human Services	HSE*H	Behavioral and Social Sciences
Humanities	HUM*H	Arts and Humanities
Interdisciplinary Studies	IDS–H	Academic Affairs
Languages	FRE*H, GER*H, ITA*H, POR*H, SGN*H, SPA*H	Arts and Humanities
Legal Assistant/Paralegal	LGL*H	Business
Liberal Arts and Sciences		Counseling Center
Management	BES*H, BMG*H	Business
Manufacturing Engineering Technology	MFG-H, MFG*H	Engineering Technologies
Marketing	BMK*H	Business
Mathematics	MAT*H	Mathematics/Science
Mechanical Engineering Technology	MEC*H	Engineering Technologies
Meteorology	MET*H	Mathematics/Science
Music	MUS*H	Arts and Humanities
Nursing	NSG*H, NUR*H, HLT*H	Allied Health/Nursing/Phys. Ed.
Philosophy	PHL*H	Arts and Humanities
Physical Education	HPE*H	Allied Health/Nursing/Phys. Ed.
Physical Therapist Assistant	PTA*H	Allied Health/Nursing/Phys. Ed.
Physics	PHY*H	Mathematics/Science
Plastics and Rubber Engineering Technology	PLA*H	Engineering Technologies
Political Science	POL*H	Behavioral and Social Sciences
Psychology	PSY*H	Behavioral and Social Sciences
Quality Assurance	QUA*H	Engineering Technologies
Radiologic Technology	RAD*H	Allied Health/Nursing/Phys. Ed.
Respiratory Care	RSP*H	Allied Health/Nursing/Phys. Ed.
Sociology	SOC*H	Behavioral and Social Sciences
Theater	THR*H	Arts and Humanities
Wastewater	WWT*H	Mathematics/Science

Course Descriptions

The following are descriptions of courses offered by Naugatuck Valley Community College. It is the responsibility of the students to check their programs of study, and to carefully check the schedule of course offerings which is provided by the Records Office prior to each semester, in order to ascertain which courses will be offered for a particular semester.

In the following course descriptions, the number of credit hours for each course is indicated. Also included are numbers of lab and lecture hours. Students are urged to consult their counselor for information about transferability of courses to four-year institutions.

WAIVER OF COURSE PREREQUISITES

In certain circumstances, course prerequisites may be waived. The student must demonstrate to the program coordinator and/or division director that he/she has mastered the basic concepts of the prerequisite course. Permission to waive a prerequisite should not be taken for granted. Waivers are NOT automatic and will be handled and granted on an individual basis.

Note: All courses listed in this catalog may not be offered during the current academic year.

CREDIT COURSES WHICH DO NOT APPLY TO ELECTIVES OR DEGREES

The following courses do not satisfy the elective or degree requirements in any program except where specifically listed.

CWE-H100 - Portfolio Preparation
EET*H295
ENG*H043, 053, 063
ESL*H132, 135, 137, 142, 145, 152, 155, 157, 162 ††
HLT*H093
MAT*H073, 075, 095

†† Note: ESL students may use up to six credits of Intermediate and Advanced levels of ESL courses to fulfill the Modern Language requirements.

HELPFUL DEFINITIONS WHEN SELECTING YOUR PROGRAM AND COURSES

1. Credit Hours (cr.) - College work is measured in units called credit hours. A credit-hour value is assigned to each course and is normally equal to the number of hours the course meets each week. Credit hours may also be referred to as semester hours.

2. Lecture Hours (lec.) - The number of clock hours in the fall or spring semester the student spends each week in the classroom. This time frame is different for the shorter summer sessions.

3. Laboratory Hours (lab.) - The number of clock hours in the fall or spring semester the student spends each week in the laboratory or other learning environment. This time frame is different for the shorter summer sessions.

4. Prerequisite - A course that must be successfully completed, or a requirement such as related life experiences that must be met before enrolling in another course.

5. Corequisite - A course that must be taken during the same or earlier semester as the course in which one is enrolling.

6. Common Core - A term which refers to courses as listed under Groups I, II, III, IV of Naugatuck Valley Community College's Common Core of General Education which the faculty of the College considers essential to its degree programs. Refer to pages 50-52.

7. Electives - Courses which may be chosen from items 8, 9, or 10.

8. Liberal Arts Electives - All courses listed in the common core under Groups I, II, III, IV and advanced courses with the same designations.

9. General Electives - All courses listed in the catalog. Students who have taken restricted courses may apply the courses as general electives if they change programs. Students should consider transferability of courses when choosing general electives.

10. Directed Electives - Credit courses that satisfy specific program requirements. These courses are listed with each program area.

11. Language Equivalencies - The following equivalencies satisfy the modern language requirements:
- Three years of high school work in a single foreign language, ancient or modern, or
- Two years of high school work and an added semester of a college course at a more advanced level in a single foreign language, or
- Two semesters of a single foreign language in college.

Note: Students may also take CLEP (College Level Examination Program) to satisfy the modern language requirements. Information on these tests is available from the Testing Center.

This College continues to add and adjust courses, course designations, and course numbers to its offerings. The common core and the definitions will be adjusted accordingly.

SELF-PACED COURSES

Some of the courses listed in the description are offered as "self-paced" which means that they are conducted in an alternate way to the regular class scheduled meetings. These courses are offered through the standard text books, and specially prepared materials, and/or video/audio tapes. Students are guided through the courses by a relevant member of the faculty. Students should be aware that self discipline is required for the successful completion of self-paced courses. Permission from a counselor, the relevant faculty member or Division Director is required before students register for self-paced courses. The student may register at any time. The course must be completed by the end of the succeeding semester.

INDEPENDENT STUDY

Independent study courses may not be taken if the course is being offered in the same semester.

ACCOUNTING
Business Division

ACC*H113   Principles of Financial Accounting   3 cr.
Prerequisites: ACC*H113 is a rigorous college level course. Students should have completed all developmental course work. The course offers an introduction to financial accounting with an emphasis on the use and interpretation of financial accounting information. It introduces the student to the balance sheet, income statement, statement of retained earnings, the cash flow statement and the operation of an accounting information system. The course focuses on the fundamental theory and principles of accounting, and utilizes accounting procedures to clarify and demonstrate the underlying concepts. The computer is used in this course.

ACC*H117   Principles of Managerial Accounting   3 cr.
Prerequisite: ACC*H113. The major objectives of this course are to introduce management tools and models that use accounting information. The use of accounting information for planning, controlling, and decision-making is explored in topics including cost behavior, budgeting and cost accounting. The analysis and interpretation of information are stressed in this rigorous one semester management accounting course. The computer is used in this course.

ACC*H123   Accounting Software Applications   3 cr.
Prerequisites: Grade of "C" or better in ACC*H113, CS*H105, and MAT*H137. Corequisite: ACC*H117. Recognizing the importance of computer skills in accounting, this course is designed to acquaint the student with techniques and procedures in using microcomputers as a problem-solving tool in accounting and related disciplines. A PC accounting package and a computerized spreadsheet package will be used in the course. The course will be appropriately rigorous, and the spreadsheet usage will be centered around problems typical of a second semester accounting course.

ACC*H231   Cost Accounting I   3 cr.
Prerequisite: ACC*H117. This rigorous course deals with the study of cost accounting concepts and theories that are used in assisting management in planning future policies and operations. The accounting for job order costing and process costing will be fully developed, as well as cost drivers and activity-based costing.

ACC*H241   Federal Taxes I   3 cr.
The Federal Income Tax course is a one-semester study of the Internal Revenue Code as it pertains to individuals. Its purpose is to introduce the student to the federal income tax laws and the application of those laws to the preparation of tax returns.

ACC*H271   Intermediate Accounting I   3 cr.
Prerequisite: Grade of "C" or better in ACC*H117. This course is designed to develop a high level of technical competence. Beginning with basic accounting issues, the course develops students' skills to the point at which they can handle complex professional level problems requiring not only a knowledge of procedures, but also a keen awareness of the concepts behind them. Consideration is given to analysis and interpretation of financial data.

ACC*H272   Intermediate Accounting II   3 cr.
Prerequisite: Grade of "C" or better in ACC*H117. ACC*H272 is a continuation of the studies begun in CCT-H201. Particular emphasis is on the topics involving financial statement reporting and disclosure. Subjects covered in depth include current and long-term liabilities, long term investments, the accounting for corporate capital, retained earnings and dividends, the preparation of the Cash Flow Statement, and Income Tax Accounting.

ACC*H290   Cooperative Education Work Experience   3 cr.
Prerequisites: 9 credits in Accounting to include ACC*H113, 117, 271 and CSA*H105 or , ACC*H113, 117, 123 and CS*H105 (grade of "C" or better in all.) This elective course is designed to provide accounting majors with an opportunity to integrate classroom theory with practical, on-the-job training in an appropriate accounting setting. It consists of: **1.** Two-hour Professional Development Workshop   **2.** Minimum 225-hour Cooperative Work Experience   **3.** Weekly one-hour Co-op Seminar.

ACC*H291   Cooperative Education Work Experience II   3 cr.
Prerequisite: ACC*H290, "C" or better. This second elective course is available for the more advanced accounting student (not recommended for transfer). It consists of: **1.** Minimum 225-hour Cooperative Work Experience   **2.** A special project under the direction of an Accounting faculty member (arranged through Co-op Office).

ANTHROPOLOGY
Behavioral and Social Sciences Division

ANT*H101   Introduction to Anthropology   3 cr.
Prerequisite: Eligibility for ENG*H101. This course is an introduction to physical and cultural anthropology. Topics include a study of genetics and evolution, the origins of man and the development of culture, human variation and race, archaeology, language and communication, marriage and family patterns, kinship and descent, religion, the arts, economic and political organization, personality and culture, and cultural change.

ANT*H105   Cultural Anthropology   3 cr.
This course is an examination of the concept of culture as the central mode through which humans become people. Students will examine the concept of culture vs. instinct, human cultural adaptation and variation, along with cultural universals, language and communication, marriage and family patterns, kinship and descent, religion, the arts, economic and political organization, personality and culture, and cultural change.

ANT*H121   Introduction to Archaeology   3 cr.
Archaeology is the study of past cultures and societies through examination of their material remains. The class will explore different varieties of archaeology and examine theory, methods, and techniques for investigating, reconstructing, interpreting, preserving, and ultimately, learning from the past. Students will then briefly review human cultural chronology from the time of the first people, the earliest Paleolithic ages, to the present, and deal with not only the artifact remains but also important social, economic, and even ideological questions, such as those on the origins of food production, social inequality, and civilization. Two major emphases throughout the course are archaeology as anthropology and the relevance of archaeology to modern human society and politics. The class will also examine discoveries that make the news during the semester.

ARCHITECTURE
Engineering Technologies Division

ARC*H107   Building Systems   3 cr.
In lecture format, this course offers the student a broad overview of the individual systems that constitute a building. The student will gain basic understanding of the principles of Mechanical systems: plumbing, heating, cooling, electrical; Structural systems: floors, walls, roof, foundations; and Finish systems: interior and exterior. Three class hours weekly.

ARC*H108   Building Materials   3 cr.
A lecture course which familiarizes the student with language of construction as it relates to materials, their origins, use and limitations and continuing development. Three class hours weekly.

ARC *H227   Codes and Ordinances   3 cr.
Introduction to Architectural Design and Technology students to the origins, scope and administration of local, state and federal codes of ordinances. Students will be exposed to the elements of these codes and ordinances and to the impacts they have on the design, construction, and occupancy of a project. Students will develop a working knowledge of the subject material as they track a hypothetical project from preliminary zoning research, though design and construction and ultimately the issuance of a "certificate of occupancy".

ARC *H229   Introduction to Structures   3 cr.
Structural design systems for buildings. This course covers fundamental load analysis, structural system in wood, steel, concrete, and masonry.

ART
Arts and Humanities Division
The Division of Arts and Humanities encourages students to register for Art courses in order to develop appreciation of, and skills in, the Arts. Some of the courses are required in career programs; others are designed for students' interests and personal development. Consultation with counselors will help determine specific needs. For information, contact the Division of Arts and Humanities at 575-8036.

Course Descriptions

ART*H101   Art History I   3 cr.
This course is a survey of Western art and architecture from prehistory (20,000 BC) to and including the Baroque (17th century) through a historical, cultural and technological perspective. The class will include lectures, video, and slide presentations. For the art major or general student.

ART*H102   Art History II   3 cr.
This course is a survey of Western art and architecture from the Baroque (17th century) to the present day through an historical, cultural and technological perspective. The class will include lectures, video, and slide presentations. For the art major or general student.

ART*H111   Drawing I   3 cr.
Fundamentals of drawing and the use of line as an expressive medium are examined to show structure of form and space in still life, landscape, and the human figure. Work in a variety of media including pencil, pen and ink, wash, charcoal, and pastel is included.

ART*H112   Drawing II   3 cr.
*Prerequisite: ART*H111 or permission of the Division Director.* This is a continuation of ART*H111. Planned experiments using various media and the development of a personal style in drawing are offered.

ART*H121   Two-Dimensional Design   3 cr.
This is an introduction to color and design in two-dimensional work in various media.

ART*H122   Three-Dimensional Design   3 cr.
*Prerequisite: ART*H121.* This is a continuation of ART*H121 with emphasis on three-dimensional work in various media.

ART*H131   Sculpture I   3 cr.
This course is an introduction to sculptural form and composition through direct techniques in a variety of materials including wood, plaster, clay and plastics.

ART*H132   Sculpture II   3 cr.
*Prerequisite: ART*H131 or permission of the Division Director.* This is a continuation and development of techniques introduced in ART*H131 as well as involvement in more advanced processes such as kinetic, metals and large scale work. Independent work will be encouraged.

ART*H141   Photography I   3 cr.
Fundamentals of photography concentrating on the use of the camera as a form of expression and communication will be studied. Camera techniques and basic darkroom procedures will be covered. NOTE: Students enrolled in ART*H141 are responsible for purchasing:
   • A manually controlled 35 mm single lens reflex (SLR) camera with
      a 50 mm lens (no automatics);
   • Paterson University Film Developing Tank (preferred unit); and
   • Photographic paper and film as needed.

ART*H142   Photography II   3 cr.
*Prerequisite: ART*H141. See ART*H141 for equipment requirements.* An advanced course emphasizing photography as art. In addition to field trips, scene pre-visualization, the zone system, film and print manipulation, and print presentation will be covered.

ART*H151   Painting I   3 cr.
*Prerequisite: ART*H111.* This is a beginning course in painting in which the student is introduced to the methods and materials of painting and is encouraged to develop some proficiency in the technique of oils, acrylics, or watercolor through exploration and experimentation

ART*H152   Painting II   3 cr.
*Prerequisite: ART*H151 or permission of Division Director.* This is a continuation of ART*H151. Emphasis is on the development of skills and individual expression in the use of oils or acrylics.

ART*H160   Crafts   3 cr.
This course is an introduction to a variety of crafts, techniques and materials, with emphasis on individual exploration of areas of specific interest including fiber, paper, and simple printmaking. Other crafts such as enamels, leather, textiles, clay and metals may be included at the discretion of the instructor.

ART*H161   Ceramics I   3 cr.
This is an introduction to the creative possibilities of ceramic clay in pottery and sculpture through basic hand modeling techniques such as coil, slab, drape, and potter's wheel. Firing and kiln procedures will also be covered.

ART*H162   Ceramics II   3 cr.
*Prerequisite: ART*H161 or permission of Division Director.* This course is a continuation of ART*H161. Concentration is on wheel thrown and hand built forms, kiln operation and glaze formation.

ART*H167   Printmaking I   3 cr.
Introduction to basic techniques in such graphic processes as silk screen, block printing, offset and dry-point etching.

GRA*H150   Introduction to Graphic Design   3 cr.
This course is an introduction to the basic principles and processes of Graphic Design. Students will learn basic design, layout, and imaging skills through the use of IBM software applications for computer graphics (Quark Xpress and Adobe Illustrator). Previous drawing/design experience and computer skills are helpful.

ASTRONOMY
Mathematics/Science Division

AST*H101   Principles of Astronomy   3 cr.
*Prerequisite: MAT*H095 or placement test score.* This course explores man's rapidly growing knowledge of the Cosmos. Topics include: the sun as a star; the birth and death of stars; the nature of black holes, pulsars, and quasars; the origins of our solar system and the Universe; the identification of stars and constellations in the night sky; and the nature of time as man's invention. Observatory sessions and projects planned as weather permits.

AST*H111   Introduction to Astronomy   4 cr.
*Pre-requisite MAT*H095 or placement score.* This course is designed to give an overview of the major topics in astronomy and requires basic algebra. The topics covered include: the night sky, the origins of astronomy, a brief description of physics in astronomy, our solar system, stars, galaxies and cosmology. The lab portion will support the understanding of concepts and computation in astronomy. Sessions in the NVCC Observatory will be an integral part of the course. Three hours of lecture and two hours of laboratory weekly.

*AUTOMATED MANUFACTURING
ENGINEERING TECHNOLOGY*
Engineering Technologies Division
    Refer to Manufacturing Engineering Technology.

AUTOMOTIVE TECHNICIAN
Engineering Technologies Division

ATP*H100   Integrated Automotive Systems   3 cr.
This is an introductory course for the Automotive Technician providing the theory for a foundation in the field. Emphasis will be on basic automotive service procedures and the inter-relationship of the various automotive systems. Shop safety, proper care and use of tools are included. Two-hour lecture and two and one-half hours laboratory weekly.

ATP*H110   Automotive Electrical Systems   3 cr.
*Corequisite: MAT*H095 or satisfactory completion of College placement test or with permission of the Coordinator. The* study of electrical theory and nomenclature along with applications of electrical/electronic systems. To include, but is not limited to: starting, charging, lighting, wiring, accessories, diagnosis and repairs. Two-hour lecture and two and one-half hours laboratory weekly.

ATP*H120   Engine Repair   3 cr.
*Corequisite: ATP*H100 or with permission of the Coordinator.* Diagnosis of automotive engines and their lubrication and cooling systems. Included is engine construction, operation along with disassembly and assembly techniques. Two-hour lecture and two and one-half hours laboratory weekly.

ATP*H130   Brakes   3 cr.
Corequisite: ATP*H100 or with permission of the Coordinator. Covers the maintenance, diagnosis and repair procedures of disc and/or drum brake systems including ABS (antilock brakes) along with their mechanical, hydraulic and electrical components. Two-hour lecture and two and one-half hours laboratory weekly.

ATP*H140   Automotive Heating and Air Conditioning   3 cr.
Corequisite: ATP*H100 or with permission of the Coordinator. Theory-related instruction of the automotive heating and air conditioning systems. Emphasis is placed on basic refrigerant cycles, heat transfer, trouble shooting, and diagnosis of both refrigerant and electronic control systems. Two-hour lecture and two and one-half hours laboratory weekly.

ATP*H150   Suspension and Steering   3 cr.
Corequisite: ATP*H100 or with permission of the Coordinator. The diagnosis and repair of steering and suspension systems and their inter-relationship to wheel alignment. The course includes a thorough knowledge of wheel and tire maintenance. Two-hour lecture and two and one-half hours laboratory weekly.

**ATP*H185   Automotive Service and Parts
            Department Management**   2 cr.
Prerequisite: ATP*H100 or with the permission of Coordinator. Topics in this course include marketing techniques, financial analysis, personnel management, work scheduling and distribution, and use of pricing manuals. An in-depth study of parts numbering, storage, cataloging, retrieval, ordering, and stocking management techniques will be discussed. Two lecture hours weekly.

ATP*H190   Metallurgy/Welding   2 cr.
In the automotive field, the use of the oxyacetylene torch and the mig welder is common place. Automotive technicians need to be able to use the processes of welding and brazing, etc. safely and skillfully. This course offers both theory and a practical lab section so students will be both skilled and knowledgeable in all the welding technology covered. One-hour lecture and two hours of laboratory weekly.

ATP*H210   Engine Performance   3 cr.
Prerequisite: ATP*H110 or with permission of the Coordinator. Fuel theory and nomenclature necessary to service and repair computerized automotive fuel systems. This includes but is not limited to computer controls, ignition, fuel, exhaust and emission systems and their maintenance, diagnosis, adjustments and repair. Two hours lecture and two and one-half hours laboratory weekly.

ATP*H220   Automotive Emissions   3 cr.
Prerequisite: ATP*H210 or with permission of the Coordinator. This is a continuation of ATP*H210, emphasizing practical application on the cause and effect of HC, CO, and NOx emissions. This includes various systems diagnosis, containing but not limited to, general powertrain, computerized powertrain controls, fuel and air induction, emissions control, and I/M failure. Two-hour lecture and two and one-half hours laboratory weekly.

ATP*H260   Transmission and Drive Systems   3 cr.
Corequisite: ATP*H100 or with permission of Coordinator. A study of automatic transmissions, clutches, standard transmissions, overdrive, propeller shafts, and drive axles, operation, diagnosis, maintenance and repair. Two-hour lecture and two and one-half hours laboratory weekly.

ATP*H261   Manual Drive Train and Axles   2 cr.
Corequisite: ATP*H100 or with permission of the Coordinator. The diagnosis and repair of manual drive transmissions and transaxles. This includes clutches, drive (half) shaft, and universal joints along with rear axle and four wheel drive components. One-hour lecture two hours lab weekly.

ATP*H262   Automatic Transmission and Transaxle I   2 cr.
Corequisite: ATP*H100 or with permission of the Coordinator. The operation, diagnosis and maintenance of automatic transmission and transaxles to include in-vehicle and off-vehicle adjustments and repair. One-hour lecture and two hours lab weekly.

ATP*H270   Introduction to Diesel Mechanics   3 cr.
Prerequisites: ATP*H100, 120 or with permission of Coordinator. The course introduces the diesel engine, its capabilities, operations, and its unique engine fuel delivery systems. Two-hour lecture and two and one-half hours of laboratory weekly.

ATP*H280   Alternative Fuel Vehicle Fundamentals   2 cr.
This course is designed to prepare automotive technicians, dealers, and repairers to take the ASE Alternative Fuel Vehicle Certification examinations. It covers fundamental procedures, operations, safety, regulations and inspection of Alternative Fuel Vehicles. One-hour lecture and two hours of laboratory weekly.

ATP*H290   Cooperative Work Experience I   3 cr.
Prerequisites: ATP*H100, 110, 120, 130, 150, ENG*H101, minimum 30 credits of course work completed and a 2.5 GPA, or with permission of Coordinator. This required course is designed to bridge the gap between academic theory and practical work experience. It consists of a minimum 250-hour Cooperative Work Experience

ATP*H291   Cooperative Work Experience II   3 cr.
Prerequisites: ATP*H290, 210, CSA*H105 and a minimum of 40 credits of course work completed and a 2.5 GPA, or with permission of Coordinator. This required course is designed to bridge the gap between academic theory and practical work experience. It consists of a minimum 250-hour Cooperative Work Experience.

AVIATION SCIENCE
Mathematics/Science Division

AVS*H101   Private Pilot Lecture   3 cr.
This ground school course includes coverage of basic flight concepts, principles of meteorology, aeronautical charts and publications, pre-flight planning, flight computer and plotter, basic radio navigation, Federal Aviation Regulations, basic aerodynamics, aircraft avionics, and emergency procedures. This course prepares students for the FAA Private Pilot Knowledge Test.

AVS*H103   Instrument Lecture   3 cr.
Prerequisite: AVS*H101, AVS*H201. This ground school course includes coverage of human factors and aviation physiology, the construction, use and interpretation of aircraft instruments used in instrument flight, Federal Aviation Regulations, instrument navigation, the ATC system, aeronautical charts and publications related to instrument flight, instrument approaches, weather analysis for instrument operations, and instrument emergency procedures. This course prepares students for the FAA Instrument Rating Knowledge Test.

AVS*H104   Commercial Pilot Lecture   3 cr.
Prerequisite: AVS*H103, AVS*H203. This ground school course includes coverage of advanced human factors and aeronautical decision making for commercial operations, advanced navigation, advanced aircraft systems, advanced aerodynamics and commercial maneuvers, and emergency procedures for commercial operations. This course prepares students for the FAA Commercial Pilot Knowledge Test.

AVS*H108   Certified Flight Instructor Lecture   3 cr.
Prerequisite: AVS*H104, AVS*H204. This ground school course includes coverage of the fundamentals of instruction, private and commercial ground and flight operations from an instructional viewpoint, Federal Aviation Regulations applicable to recreational, private, and commercial operations, and emergency procedures and stall/spin training. This course prepares students for the Fundamentals of Instruction and Flight Instructor-Airplane FAA Knowledge Tests.

AVS*H120   Foundations of Aviation   3 cr.
This course explores the events that have shaped the development of aviation from the earliest attempts at flight up to the present day. The historical foundation of aviation is used to develop an understanding of the economic, social, and political impact of aviation on society.

AVS*H130   Air Transportation System   3 cr.
This course provides a historical background and an overview of the major segments of the air transportation industry. Current state and federal agencies and the regulations influencing air transportation, as well as the basis for their establishment, are also discussed. Requirements of the past, present and future with respect to aircraft and engine design, airports and supporting facilities are reviewed and evaluated. Students are introduced to the economics of airline operations and maintenance, and the general factors that influence an airline's survival and profitability.

AVS*H140 **Aerospace Safety** 3 cr.
This course is designed to provide the student with an understanding of the role of government agencies in ensuring aerospace safety. The ways in which airlines and airports ensure public safety and security will also be discussed. Emphasis will be on critical analysis of case studies involving investigations and prevention of aircraft accidents.

AVS*H150 **Airport Management I** 3 cr.
This course provides an overview of the operational requirements needed for airports and airport terminals with an emphasis on the facilities that comprise an airport system, including airspace, airfield, terminal, and ground access operations. The financial aspects of airport planning as well as airport capacity considerations are also discussed.

AVS*H151 **Airport Management II** 3 cr.
Prerequisite: AVS*H150*.* This course is a continuation of AVS*H150. Emphasis is on managing daily airport operations, airport organization and administration, and financial management of the airport facility. Airport improvements and the relationship of airports with tenants and the general public are also discussed.

AVS*H201 **Private Pilot Flight Training Lab** 3 cr.
Corequisite: AVS*H101*. **ALL FLIGHT TRAINING COSTS ARE THE RE-SPONSIBILITY OF THE STUDENT.*** Students will receive approximately 50 hours of flight instruction covering topics that include pre-flight operations, aircraft systems, ground operations, basic flight maneuvers, ground reference maneuvers, normal and emergency procedures, cross-country operations, and flight by reference to instruments. Co-op instruction is designed to augment students' flight training and includes the use of a flight simulator as well as classroom discussion of selected topics. This course prepares students for the FAA Private Pilot Practical Test (ASEL).

AVS*H203 **Instrument Flight Training Lab** 3 cr.
Corequisite : AVS*H103*. **ALL FLIGHT TRAINING COSTS ARE THE RE-SPONSIBILITY OF THE STUDENT.*** Students will receive approximately 50 hours of flight instruction covering topics that include pre-flight operations, full and partial panel procedures, systems and equipment malfunction, instrument navigation techniques, holding and approach procedures, and emergency procedures for instrument flight. Co-op instruction is designed to augment students' flight training and includes the use of a flight simulator as well as classroom discussion of selected topics. This course prepares students for the FAA Instrument Rating Practical Test (ASEL).

AVS*H204 **Commercial Flight Training Lab** 3 cr.
Corequisite : AVS*H104*. **ALL FLIGHT TRAINING COSTS ARE THE RESPONSIBILITY OF THE STUDENT.*** Students will receive approximately 120 hours of flight instruction covering topics that include pre-flight operations, aircraft systems, advanced ground operations, advanced flight maneuvers, normal and emergency procedures, commercial cross-country operations, and complex aircraft operations. Co-op instruction is designed to augment students' flight training and includes the use of a flight simulator as well as classroom discussion of selected topics. This course prepares students for the FAA Commercial Pilot Practical Test (ASEL).

AVS*H208 **Certified Flight Instructor Lab** 3 cr.
Corequisite : AVS*H108*. **ALL FLIGHT TRAINING COSTS ARE THE RE-SPONSIBILITY OF THE STUDENT.*** Students will receive approximately 30 hours of flight instruction covering topics that include transition to flying from the right seat, providing instruction on private and commercial pilot ground and flight operations and maneuvers, recovery from stalls/spins, and emergency procedures. Co-op instruction is designed to augment students' flight training and includes the use of a flight simulator as well as classroom discussion of selected topics. This course prepares students for the FAA Flight Instructor Practical Test (ASEL).

AVS*H255 **Human Factors in Aviation** 3 cr.
This course explores physiological and cognitive factors such as hypoxia, disorientation, stress, fatigue, anxiety and the effects of alcohol and other drugs on critical judgment and decision making processes of operational personnel in aviation. Investigation of our unique human capabilities and limitations is used to develop strategies to improve the performance of flight crews, air traffic controllers, flight management and other operational personnel as they identify and respond to critical, time-sensitive situations in aviation operations.

BIOLOGICAL SCIENCES
Mathematics/Science Division

BIO*H105 **Introduction to Biology** 4 cr.
The general principles of biology are taught using a combination of multimedia lectures, discussion groups, and a laboratory component. Topics covered include cell biology, diversity, biotechnology, basic chemistry, cellular respiration and photosynthesis, ecology, genetics, behavior, and evolution. Laboratory includes an animal dissection. Three hours of lecture and three hours of laboratory weekly.

BIO*H110 **Principles of the Human Body** 3 cr.
Open to students needing a three-credit science course in their program of study including Liberal Arts and Sciences and General Studies. This course is an introduction and survey of human anatomy and function including the digestive, circulatory, respiratory, immunological, urinary, nervous, sensory, muscular, skeletal, endocrine, and reproductive systems of the body. The course will include discussions of the evolution of the human body and its dynamic interaction with the Environment. Not open for credit to students who have passed any higher-numbered anatomy and physiology course.

BIO*H111 **Introduction to Nutrition** 3 cr.
A basic introduction to the science of nutrition with an emphasis on making healthy food and lifestyle choices. Health and disease, metabolism, cultural diversity and food processing are studied in relationship to individual nutrients as well as to total dietary patterns. Information presented enables analysis and modification of diets to promote health, reduce the risk of deficiencies and chronic diseases related to nutrition and evaluate dietary advertising, controversies and nutritional policies.

BIO*H115 **Human Biology & Lab** 4 cr.
Students may not receive credit for both BIO*H110 and BIO*H115. This introductory course will focus on the overarching themes of health, homeostasis, evolution and the environment as they relate to human body systems. Laboratory experiments include microscopic examination of cells and tissues, anatomy, physiology of nerves and muscles, blood typing, and principles of inheritance. Three hours of lecture and three hours of laboratory weekly.

BIO*H121 **General Biology I - Cellular Biology** 4 cr.
The general principles of biology are taught integrating lectures, laboratory experiments, computer simulations, discussions, and other activities to help students gain an understanding of the essential biological concepts. The foci of this course are scientific method, cell biology, viruses, prokaryotic organisms, protists, basic cell chemistry, photosynthesis, cellular respiration, mitosis & meiosis, genetics, and biotechnology (plant tissue culture, genetic transformation). Cooperative learning, critical thinking, library research, as well as presentation skills are utilized culminating in a team project that includes a written paper and a short presentation. This course is one part of a two semester sequence in general biology primarily for students seeking transfer into a four-year degree program. BIO*H121 (Cellular Biology) and H122 (Organismal Biology) can be taken in any order and are transferable. This course satisfies the common core science requirement. *Integrated 3 hours lecture & 3 hours lab.*

BIO*H122 **General Biology II - Organismal Biology** 4 cr.
Utilizing the same integrative approach as BIO*H121, students will investigate biotechnology (gel electrophoresis for DNA and protein analysis), systematics, biological statistics, population genetics, evolution, plant biology (life-cycles and growth of fungi, non-vascular, and vascular plants), animal biology (early development and histology, comparison of invertebrate and vertebrate life cycles and physiological systems), and ecology. Science process skills are emphasized. Collaboratively, students will investigate a scientific research topic culminating in a written report and oral presentation to their peers. This course is one part of a two semester sequence in general biology primarily for students seeking transfer into a four-year degree program. This is the second semester of general biology; however, BIO*H121 (Cellular Biology) and H122 (Organismal Biology) can be taken in any order. This course satisfies the common core science requirement for both non-majors & majors. *Integrated 3 hours lecture & 3 hours lab.*

BIO*H126 **Concepts of Biotechnology** 4 cr.
This course studies the fundamental concepts underpinning the expanding field of biotechnology with an emphasis on agricultural and environmental applications. It is a hands-on course where students will actively investigate essential cell biology; genetics (transmission, molecular, and population); applications of biotechnology utilizing plants, microorganisms, animals; impact of biotechnology in medicine (allergic immune response, gene therapy, stem cells), as well as related regulatory and societal issues. Actual experimentation, computer simulations, student presentations/reports, and field trips are also used to facilitate active learning. This course will satisfy a science laboratory core requirement. *Integrated 3 hours lecture & 3 hours lab.*

BIO*H145 **General Zoology** 4 cr.
This lecture-laboratory is a survey of the animal kingdom. Topics discussed include morphology, anatomy and physiology, life cycles, reproduction, evolution, and ecological relationships of various animal forms. Three hours of lecture and three hours of laboratory weekly.

BIO*H155 **General Botany** 4 cr.
The focus of this course is how plants function. It is an introduction to plant physiology and development, explaining growth processes, metabolism and hormonal responses. Additional topics, such as soils, plant breeding, and propagation will be addressed. The laboratory component is designed to involve students with important concepts discussed in lecture. *Integrated 3 hours lecture & 3 hours lab.*

BIO*H171 **Field Biology** 4 cr.
Lecture-laboratory. This is an introduction to ecology with special emphasis on identification of Connecticut plants and animals in the outdoors. A wide range of topics will be presented including map reading, edible wild foods, and collecting. Three hours of lecture and three hours of laboratory weekly.

BIO*H180 **Principles of Environmental Science** 3 cr.
This is a survey course of Environmental studies. Topics discussed include basic ecology; human populations; water, soil, forests and pollution; renewable and non-renewable energy; legislation; citizens action. Dynamic Environmental systems are explored via computer simulations.

BIO*H181 **Environmental Science & Lab** 4 cr.
*Note: Students may not receive credit for both BIO*H180 and BIO*H181.* This course has the same lecture as BIO*H180; however, there is an additional laboratory component. Laboratory experiences include water and soil analyses, pond and river studies, computer simulations, field trips to Environmental quality facilities and laboratories. Three hours of lecture and three hours of laboratory weekly.

BIO*H211 **Anatomy and Physiology I** 4 cr.
*Prerequisite: Completion of BIO*H105, BIO*H115 or BIO*H121 with a grade of "C" or better or by permission of the Division Director.* Lecture-laboratory. This is the first semester of a two semester comprehensive course designed for those students who plan to continue in the science field or science-related areas. Major topic areas include molecular biology, cells, tissues and the integumentary, skeletal, muscular and nervous systems of the human body. Laboratory includes an animal dissection. Three hours of lecture and three hours of laboratory weekly.

BIO*H212 **Anatomy and Physiology II** 4 cr.
*Prerequisite: Completion of BIO*H211 with a grade of "C" or better or permission of the Division Director.* Lecture-laboratory. Major topic areas include the cardiovascular, lymphatic/immune, respiratory, digestive, endocrine, urinary and reproductive systems of the human body. Laboratory includes an animal dissection. Three hours of lecture and three hours of laboratory weekly.

BIO*H225 **Introduction to Biotechnology** 4 cr.
This course studies the fundamental concepts underpinning the expanding field of biotechnology with an emphasis on agricultural and environmental applications. It is a hands-on course where students will actively investigate essential cell biology, plant tissue culture, genetics, population genetics, fermentation-microbial food production, genetically modified crops, gel electrophoresis, allergic immune response, as well as related agricultural, ecological, and societal issues. Computer simulations, student presentations and field trips are also used to facilitate active learning. This course will satisfy a science laboratory core requirement. Three hours of lecture and three hours of laboratory weekly.

BIO*H227 **Biotechnology II** 4 cr.
*Prerequisites: BIO*H225 and BIO*H235 or permission of professor.* This course builds on principles and practices learned in Introduction to Biotechnology (BIO*H225) and Microbiology (BIO*H235). Students will develop an understanding of the theoretical basis of this technology as well as develop laboratory skills, through hands- on experiences, that are essential for employment in biotechnology. With an emphasis on molecular biology, students will investigate the following areas of biotechnology: animal cell culture, genetic transformation, DNA isolation, restriction digests including DNA fingerprinting, plasmid transformation, PCR amplification, DNA sequencing, southern blot analysis and separation technology. This course will satisfy a science laboratory core requirement. Three hours of lecture and three hours of laboratory weekly.

BIO*H235 **Microbiology** 4 cr.
*Prerequisite: BIO*H105, or H115 or H155 or H121, or H225, or permission of the Division Director.* This course introduces the student to bacteria and other microorganisms. Particular emphasis is placed on the biology of bacteria and bacterial diseases. Fungi, viruses, protozoans are also studied. Immunology, microbial genetics and biotechnology are discussed. The emphasis in the laboratory is on the identification, safe handling and cultivation of microbes. Activities include staining techniques, identification of unknowns, electrophoresis, computer simulations and growth experiments with comparative analysis of results. Three hours of lecture and three hours of laboratory weekly.

BIO*H260 **Principles of Genetics** 3 cr.
*Prerequisite: BIO*H105 or equivalent.* This is an introduction to the principles of genetics. It covers Mendelian analysis, chromosome theory, extensions of Mendelian analysis, molecular genetics, as well as quantitative and population genetics.

BIO*H262 **Genetics & Lab** 4 cr.
*Prerequisite: BIO*H105 or equivalent. Credit cannot be given for both BIO*H260 and BIO*H262.* Same lecture as BIO*H260 but with a laboratory component. The laboratory investigations include experiments with Drosophila and bacteria. Computer simulations, bacterial transformations, and gel electrophoresis are also carried out. Three hours of lecture and three hours of laboratory weekly.

BUSINESS
Business Division

BBG*H101 **Introduction to Business** 3 cr.
A survey of the fundamental principles of business will be discussed including marketing, management, finance, accounting, and human resource development. This course is required for most students majoring in business.

BBG*H210 **Business Communication** 3 cr.
*Prerequisites: ENG*H101.* This course is an analytical approach to the development of content in business writing with emphasis on the relationship of creative and logical thinking to the solution of business problems through concise, coherent written and oral communications.

BBG*H231 **Business Law I** 3 cr.
The legal rights, duties, and responsibilities of the business person are examined. Topics include a general introduction to the meaning and nature of the law, and the structure of the American legal system. Emphasis is placed upon the basic principles of the law of contracts, torts, criminal law and procedure, agency, real property, wills, and decedent's estates.

BBG*H215 **Global Business** 3 cr..
This course provides an introduction to the nature and Environment of international business. Topics will include the nature of international business, international organizations and monetary systems, foreign Environments and management tools necessary for international business opportunities and operations. Social, political and economic factors which impact on international business interactions are also studied.

BBG*H232   Business Law II   3 cr.
This course further develops and examines the American legal system, as well as the international legal system. Topic include the uniform Commercial Code, ethics, consumer protection laws, secured transactions, intellectual property law, corporate law, partnership law, limited liability companies and numerous aspects of international law. It is recommended that Business Law I be taken before Business Law II.

BES*H118   Small Business Management   3 cr.
This course is designed to assist students with the knowledge and skills needed to operate and/or develop a small business. Emphasis will be placed on the entrepreneurial aspects of creating, managing, and gaining profit from a small business.

BMK*H220   Sales   3 cr.
*Prerequisites: BMK*H201, 207.* Basic principles underlying the sales process and their practical application to sales situations are studied. Economics and psychological and sociological relationships in the marketplace, as they apply to sales of industrial and consumer goods and intangibles, are examined.

BMG*H105   Supervision and Organizational Behavior   3 cr.
*Prerequisite: BMG*H202.* Emphasis on the latest developments in the fields of management. Group discussions of case studies and problem are included. Also, emphasis on group work and the use of the computer as an aid in the decision-making process in a micro-organizational settings is included. Additional software may be required.

BMG*H202   Principles of Management   3 cr.
This course deals with management theory, science, and practice. Consideration is given to management thought and analysis. The external Environment, both domestic and international, is reviewed as well as the major functions of planning, organizing, directing, and controlling business. The coordinating function of the business manager is considered. Decision-making processes and techniques are also stressed.

BMG*H220   Human Resources Management   3 cr.
*Prerequisites: BBG*H101.* This course deals with personnel management in the process of manpower administration in the business organization. Treatment is given to procurement and human resource utilization and the role of labor unions in the industrial organization. The development of the role of the person and personality amidst the various social sciences and organization structures required to achieve an organization's goals are studied – as in motivation.

BMK*H201   Principles of Marketing   3 cr.
This course deals with the marketing function of the firm primarily from the management standpoint. Topics include marketing strategy, new products, channels of distribution, pricing, and promotion. The function of the marketing institution in economic and social context is considered.

BMK*H207   Consumer Behavior   3 cr.
Consumer behavior is a continuation and amplification of basic marketing principles begun in BMK*H201. This course stresses the understanding and application of the behavioral sciences, social sciences, and economic concepts as they affect the consumer's buying decision process and the development of the total marketing mix. The major areas will be consumer decision models, market segmentation, market positioning, hypothesis testing, and decision methodologies for making decisions under uncertainty, and in the creation and implementation of a marketing plan.

BMK*H216   Internet Marketing   3 cr.
Develop a working knowledge of the World Wide Web as a marketing vehicle providing fast/efficient electronic commerce and the ability to manage the Internet marketing process for a small to medium-sized business enterprise. Internet is fast becoming the ultimate distribution system to disseminate marketing data, identify/segment customers to provide sales force attention, customer service activity, and ordering. Electronic Commerce Marketing Principles will prepare a student to intelligently apply the Marketing Mix disciplines and concepts to a company's products/services in order to effectively prepare and execute "Marketing Plans" participating in the growing "electronic commerce" segment of business.

BBG*H295   Cooperative Work Experience I   3 cr.
*Prerequisites: BMG*H202 or 201, CSA*H105, "C" or better.* This elective course is designed to provide management/marketing majors with an opportunity to integrate classroom theory with practical, on-the-job training. Course is mandatory in Marketing Career Focus and elective in other options. The work experience will take place in appropriate management or marketing settings. Course consists of: **1.** A two-hour Professional Development Workshop   **2.** A minimum 225-hour Cooperative Work Experience   **3.** A weekly one-hour Co-op Seminar

BUSINESS FINANCE
Business Division

BFN*H201   Principles of Finance   3 cr.
This introductory course will provide an understanding of the role of finance in the economy, business management, government and consumer financing. Included are the fiscal, monetary and debt management policies of government.

BFN*H126   Principles of Insurance   3 cr.
*Prerequisite: BFN*H201 or permission of Division Director.* An informative course about the basic concepts in insurance and risk. Included is information on contracts, property, liability, surety, life and health insurance.

BFN*H220   Financial Management   3 cr.
*Prerequisite: BFN*H201 or permission of Division Director.* This course is an in-depth study of finance including the mathematics of finance, corporate securities; also included are short, intermediate and long term sources of funds; and liabilities, income administration, mergers and acquisitions, and working capital.

BRE*H201   Real Estate Principles   3 cr.
*Prerequisite: BFN*H201, Real Estate License or permission of Division Director.* The topics studied in this course include fundamentals of mortgage, deeds, loan applications, real estate credit, mortgage markets, and current legislation affecting real estate finance.

BFN*H125   Principles of Banking   3 cr.
Prerequisite: FIN-H202 or permission of Division Director. This course provides students with an analysis and study of lending practices, asset and liability management, and the integral relationship between banking, economics, law, finance, and accounting.

BFN*H203   Investment Principles   3 cr.
This course gives a broad perspective on investment objectives and values, as well as a study of securities, market and values. A study of securities, market procedures, analytical techniques, speculative and institutional markets is also included.

BRE*H205   Real Estate Law   3 cr.
This course examines the legal Environment of real estate including contracts, deeds, instruments, easements, estates in land, zoning, tenance, liens, foreclosure, transfers of titles, leases, and relevant court rulings. (LGL*H104 is a substitution for this course.)

BFN*H208   Financial Analysis   3 cr.
*Prerequisites: BFN*H201, 220, or ACC*H113, 117 – grade of "B" or better or permission of Division Director.* This course examines financial reports and involves students in the analysis of these reports. Students will construct financial statements, learn analytical techniques as they apply to real estate development, commercial, industrial and home improvement lending.

BFN*H296   Cooperative Work Experience-Finance   3 cr.
Prerequisites: six credits in Finance, "C" or better. This elective course is designed to provide finance majors with an opportunity to integrate classroom theory with practical on-the-job training. The work experience will take place in appropriate finance settings. The course consists of: **1.** A two-hour Professional Development Workshop   **2.** A minimum 225-hour Cooperative Work Experience   **3.** A weekly one-hour Co-op Seminar

CHEMISTRY
Mathematics/Science Division

CHE*H111   Concepts of Chemistry   4 cr.
Prerequisite: MAT*H137.   Lecture-laboratory. This is a foundation course designed to present chemical concepts including the metric system, scientific measurements, atomic theory, chemical bonding, periodic variation of the elements, nomenclature, equations, gas laws, stoichiometry, basic types of chemical reactions, and a brief survey of organic chemistry. This course is open to students with little or no background in chemistry.   Three lecture hours and three laboratory hours weekly.

CHE*H121   General Chemistry I   4 cr.
Prerequisite: MAT*H137, its equivalent or permission of instructor. Lecture-laboratory. The fundamental concepts and laws of chemistry are examined. Topics covered include atomic theory, chemical bonding, periodic table and periodic law, nomenclature, states of matter, solutions, stoichiometry, acid-base theory, oxidation, reduction, and coordination chemistry. Three lecture hours and three laboratory hours weekly.

CHE*H122   General Chemistry II   4 cr.
Prerequisite: completion of CHE*H121 with a grade of "C" or better. Lecture-laboratory. This course provides a more specific discussion of major topics within the four major divisions of chemistry. Topics covered include colloids, kinetics, equilibrium, thermodynamics, nuclear chemistry, electro-chemistry, discussion of physical and chemical properties of selected groups on the periodic table, ionic equilibria of weak electrolytes, buffer solutions and titration curves, solubility product, qualitative analysis, and a brief introduction to organic chemistry. Three lecture hours and three laboratory hours weekly.

CHE*H211   Organic Chemistry I   4 cr.
Prerequisite: CHE*H121-122 or acceptable one-year college chemistry course at another institution. Lecture-laboratory. This is a fundamental course involving systematic study of the reactions of organic compounds, the relationships between molecular structure and reactivity, and an introduction into spectroscopic analysis. The laboratory has been revised to include the ultra modern microscale technique. This approach includes some of the following advantages: elimination of fire or explosion danger, elimination of chemical waste disposal problems, expansion in variety and sophistication of experiments, and creation of a much healthier laboratory environment. Three lecture hours and three laboratory hours weekly.

CHE*H212   Organic Chemistry II   4 cr.
Prerequisite: CHE*H211. Lecture-laboratory. This course is a continuation of CHE*H211, dealing with more complex classes of carbon compounds including sugars, amino acids and proteins, heterocyclics, and polymers. The laboratory has been revised to include the ultra modern microscale technique. This approach includes some of the following advantages: elimination of fire or explosion danger, elimination of chemical waste disposal problems, expansion in variety and sophistication of experiments, and creation of a much healthier laboratory environment. Three lecture hours and three laboratory hours weekly.

COMMUNICATIONS
Arts and Humanities Division

COM*H100   Introduction to Communication   3 cr.
Prerequisite: ENG-053, ENG-063 or placement into ENG*H101. An introduction to the field of communication and to the strands of communication study: intrapersonal, interpersonal, small group, and public communication. Students will develop communication skills as they relate to the self and to interaction in small and large groups in everyday interpersonal situations.

COM*H101   Introduction to Mass Communications   3 cr..
This course acquaints students with the complex nature of the media through which they communicate. The course will introduce the various forms of communication media; the role of media as it informs, entertains and persuades; and the effects of media on individuals and society.

COM*H157   American Film   3 cr
Students survey American film from its beginnings to the present. The course will include the silent era, birth of sound, and typical genres.

COM*H158   International Cinema   3 cr.
A study of the origin and development of film as an art form, including the summation of outstanding films produced in France, Italy, Sweden, Denmark, India, and Japan. Discussions of documentary and short subject contributions toward this development are included.

COM*H172   Interpersonal Communication   3 cr.
This course examines the role of interpersonal communication in human relationships. The focus of this course is on improving interpersonal skills and helping students increase their communication competence in everyday social exchanges.

COM*H173   Public Speaking   3 cr.
This course provides students with an understanding, appreciation, and capacity for public speaking. Excellence in public speaking requires mastery of informative and persuasive techniques of language, organization, citation of evidence, and use of rhetorical patterns of introduction and conclusion. Exposure to theoretical elements and their application in public speaking will be explored in this class.

COM*H175   Voice and Diction   3 cr.
Theory, analysis, and practice in voice and speech patterns are studied. Practical exercises in phonetics and articulation are designed to develop and improve voice and speech.

COM*H178   Small Group Communication   3 cr.
The purposes of this course are (a) to provide an overview of theory and research in key areas of study in small group communication, (b) to teach skills in group decision making, and (c) to give students the opportunity to apply theory, research, and decision making skills by interacting in a group environment.

COM*H202   Intercultural Communication   3 cr..
Prerequisites: COM*H101 or H172. This course will be an introduction to the major principles and theories of intercultural communication. It will emphasize the application of skills and concepts for increasing cultural awareness and communication competency in a variety of cultural contexts. Exposure to communication systems and formations from different cultures will be used as a means to provide various ways of thinking about cultures.

COM*H226   Journalism I   3 cr.
Prerequisite: ENG*H101. Students explore methods and techniques of news gathering, news writing, and news analysis. By covering campus and community events, they make practical application of theory.

COM*H227   Journalism II   3 cr.
Students will apply knowledge learned in ENG*H231 to gather and write complex news stories. They will also be taught editing, layout, and some photography skills.

COM*H295   Internship I   3 cr.
Prerequisites: ENG*H101, COM*H100, with a "C" or better. Other background courses considered in placement: Journalism, Public Relations, Technical or Creative Writing, Public Speaking, Literature and Composition. This elective course is designed to integrate training in all previous courses and to bridge the gap between academic theory and practical work experience.

COMPUTER-AIDED DRAFTING/DESIGN TECHNOLOGY
Engineering Technologies Division
Note: All software used in these courses are subject to change.

CAD*H140   Architectural Computer-Aided Drafting   3 cr.
Co-requisite: MAT*H137. Introduction to two-dimensional computer-aided drafting. Included are drawing and editing of elementary geometric entities, dimensioning and plotting. Also, architectural examples such as floor plans, elevations, building structures, site plans and contour maps will be studied. One class hour and four laboratory hours weekly.

CAD*H150   CAD 2D   3 cr.
Co-requisite: MAT*H137. Introduction to two-dimensional computer-aided drafting using Autocad. Included are drawing and editing of elementary geometric entities, dimensioning and plotting. Also, mechanical drafting problems and examples will be studied. One class hour and four laboratory hours weekly.

CAD*H200   3D CAD   4 cr
Prerequisite: CAD*H150. The primary focus of this course is three dimensional geometric computer modeling using AutoCAD. Students will study the geometric construction and development of wireframe, surface, solid, and assembled solid models. They will also develop 2D orthographic drawings including sectional and auxiliary views from solid models. In addition, rendering to produce picture quality images of the various models will be covered. Mass property analysis and an introduction to the descriptive geometry may also be included. Two class hours and four laboratory hours weekly.

CAD*H220   Parametric Design   3 cr.
Prerequisite: CAD*H150 or approval of the instructor. Corequisite: MAT*H172 or approval of the instructor. Introduction to the paperless computer based design process using modern parametric 3-D design software. The course focuses on parametric modeling, and includes topics such as the design process, design engineering, assembly modeling, mechanism analysis, rapid prototyping, team design, geometric dimensioning and tolerancing, and the analysis of tolerance stickups. Students will participate in individual and group design projects as appropriate. One class hour and four lab hours weekly.

CAD-H2240   Computer-Aided Design II   4 cr.
Prerequisite: CAD*H220 or approval of the instructor. This course is a continuation of Computer-Aided Design I using parametric design software. It focuses on modeling techniques used in advanced applications such as sweeps, lofts, sheet metal applications, along with top-down assembly modeling. Advanced tolerance analysis, beam stresses, and the design modeling of molds and dies and advance topics in rapid prototyping are also covered. The course includes a major group design project and presentation. Two class hours and four lab hours weekly.

CAD*H275   CAD Animation 3D Studio Max   4 cr.
Prerequisite: CAD*H200 or experience in 3D computer modeling. This course will guide the student through the world of three-dimensional presentation. The student will create photo realistic still images, animated assemblies, camera fly-bys, robotic motion, and dynamic life-like animated presentations The concepts covered in this course can be applied to a variety of engineering disciplines. 6 contact hours (2 lecture and 4 laboratory)

CAD*H285   Computer Integrated Manufacturing (CIM) I   3 cr.
Prerequisite: CAD*H200, MAT*H172. This course is an introduction to the mechanical design process used to develop intelligent product models that can be used in Computer Integrated Manufacturing (CIM). The students will gain an understanding of the basic principals of 3D solid modeling, parametric relationships, and controlling design intent and object dependencies. Students will develop complete product designs, outputting 3D solid and sheet metal parts, tolerance analysis, family tables and assembly models, related detail and assembly drawings, and prototypes. 4 contact hours (2 lecture and 2 laboratory)

CAD*H286   Advanced Modeling Techniques   3 cr.
Prerequisite: CAD*H285. This course builds on the concepts developed in CAD*H285, Introduction to Advanced Modeling. It develops advanced modeling concepts, techniques and methods used in modern product modelers- topics such as user interface customization, user defined features, writing programs within the CAD system, sweeps, advanced rounds, and basic stress analysis. Students will work on their own and in groups to develop complete product designs, outputting 3D solid parts. 4 contact hours (2 lecture and 2 laboratory)

CAD *H294   Senior Project   4 cr.
Prerequisite: CAD*H220, Co-requisites: CAD*H275, or approval of the department chair. The course offers students a CAD engineering design activity utilizing an assigned, or approved, design project. The project will incorporate a wide range of learning activities including, but not limited to, library research, written status reports, discussions, oral presentations, time management and project planning, team work, the application of the design process, and the utilization of a variety of CAD applications. This class meets for 6 contact hours per week, 2 lecture and 4 lab.

COMPUTER INFORMATION SYSTEMS
Business Division

CSC*H101   Introduction to Computers   3 cr.
This is an introductory course in information technology concepts and software productivity tools intended for Computer Information Systems majors and other students interested in computers and Information Technology. Areas of instruction include computer concepts, current topics and trends in information technology, the role of computer systems in business problem solving, an introduction to the major career areas of Information Technology and Microsoft Office skills that are important to all college students.

CST*H120   Introduction to Operating Systems   3 cr.
An introduction to the personal computer, hardware, and Operating Systems software. The most popular microcomputer operating systems and graphical interfaces will be discussed in detail. After satisfactorily completing this course, the student will have a thorough understanding of the command structures of the operating systems. Students will receive a brief introduction to local area networks from a user perspective. Laboratory projects will be assigned throughout the course to reinforce course material.

CST*H130   Networking Essentials I   3 cr.
An in-depth study of communications in a networking Environment. Included is the history of networking, OSI model, data types, signaling, multiplexing, signal conversion, data transmission, topologies, channel access method, switching techniques, SDLC, HDLC, IEEE standards, Arcnet, Ethernet, Token Ring, TCP/IP IP, SNA, and the future of networking.

CSC*H183   Information Systems in Organizations   3 cr.
The focus of this course is on how organizations use information systems for decision making. In particular, the course stresses the role of managers in the analysis, design, development, implementation, maintenance and control of information systems as corporate resources. Course includes a hands-on approach to communications using workgroup software such as Lotus Notes/ Domino and/or Microsoft Exchange.

CSC*H201   COBOL I *(no longer offered)*   3 cr.
Prerequisite: CSC*H101. The course studies the COBOL programming language, its syntax, and structured programming techniques. Elements of the language are learned through writing, debugging, and execution of application programs related to the business Environment.

CSC*H202   COBOL II *(no longer offered)*   3 cr.
Prerequisite: CSC*H201. This course includes advance topics in COBOL programming using business applications. File structures are studied in detail with emphasis on file structures for the sequential, random, and dynamic access to data.

CSC*H205   VISUAL BASIC I   3 cr.
This course uses Visual Basic .NET, an object-oriented/event-driven language, to teach programming concepts. Through "hands-on" application of the concepts presented in the lectures and tutorials, the student will learn the Visual Basic .NET tools used to create applications that correspond to Windows standards. By the end of the course, the student will be able to design and code simple business applications and will be prepared for more advanced courses in programming using VB, C++, etc.

CSC*H206   VISUAL BASIC II   3 cr.
Prerequisite: CSC*H205. The course covers a wide range of advanced programming topics using Visual Basic.NET an object oriented, event driven programming language. The goal of the course is to develop computer programming skills beyond the basics covered in the introductory course. This includes arrays and collections, object variables, database programming, web programming, web services, and extensive use of the .NET classes.

CSC*H211   VB & ASP .NET Web Programming   3 cr.
Prerequisite: CSC*H205. This course covers a wide range of topics in the area of web application development using Microsoft ASP .NET. and the Visual Basic programming language. After an introduction to basic web design techniques, students will progress to more advanced e-commerce applications. Topics include working with server controls, validation techniques, managing state, authenticating users, and the use of themes. Relational databases are a big part of e-commerce applications and are also an important topic area in this course.

CSC*H213   Object-Oriented Programming Using C++   3 cr.
Prerequisite: CSC*H205, or any programming language equivalent. This course is designed for a more advanced programming student who wish to learn C++ with object-oriented techniques. The course will contain the basic concepts of an object-oriented programming language. Topics will include classes, constructor and destructor functions, function overloading, operator overloading, class inheritance, polymorphism, stream input/output, manipulator functions, templates and exception handling.

CSC*H214   Advanced C++ Programming   3 cr.
Prerequisite: CSC*H213. Topics include methods and techniques used in software development cycles. You will learn to move beyond a simple mastery of syntax. You will learn to increase productivity by combining tools, idioms, syntax, and libraries. Numerous hands-on exercises provide real-world experience in developing high quality C++. Throughout the course, you gain extensive hands-on experience with advanced C++ programming techniques. You will be required to develop complete programs from architectural design through to refining the implementation via a series of exercises.

CSC*H220   Object-Oriented Programming Using JAVA   3 cr.
Prerequisite: CSC*H205, or any programming language equivalent. This course will be an introduction to the JAVA programming language. We will develop JAVA applications as well as introduce World Wide Web browser JAVA applets. We will cover basic control structures and introduce the Object- Oriented (OO) paradigm utilizing classes and objects. We will introduce and develop programs which are event driven. There will be a wide use of the JAVA Abstract Window Toolkit. The OO model will be used in developing object-based and object-oriented programs. Finally, we will explore the toolkit to develop GUI-based, event-driven programs. There will be several programming assignments. Two tests will be given during the semester in addition to a final exam.

CSC*H231   Database Design I   3 cr.
An introduction to relational database design. Included will be topics on the evolution of database design, data structures, designing a database, normalizing a database design and implementation of databases utilizing one or more of the popular PC database packages available such as Microsoft SQL Server.

CSC*H232   Database Design II   3 cr.
Prerequisite: CSC*H231 and 236. Oracle is a complex, object-oriented DBMS that enables high-speed transactions, better business decisions and sophisticated applications. An understanding of its internal functions is essential to maintain integrity, enforce security, and improve performance. In this comprehensive introduction to the Oracle Environment, you will gain knowledge and skills you need to fully utilize Oracle features and develop robust, high performance databases.

CST*H235   Network Systems   3 cr.
Prerequisite: CST*H130, or a basic understanding of computer networks. This course teaches the student, through lectures, demonstrations, and classroom labs, the skills and knowledge necessary to configure, manage, and troubleshoot a Windows Server 2008 network infrastructure. The focus of this course will be the installation, configuration, management and support of DHCP and DNS. The course will also address security, the management and installation of services updates, and routing and remote access. Through the use of lab assignments, there is a heavy emphasis on the "hands-on" application of the concepts presented in the lectures and assigned readings.

CSC*H236   Introduction to Client/Server Systems   3 cr.
Prerequisite: CSC*H205 and 231. This course introduces client/server application development using VISUAL BASIC, Microsoft Access, and Microsoft SQL Server. Topics include the design of client/server database applications with Access and SQL Server. Data access methods are utilized to present two-tier and three-tier applications.

CST*H236   Advanced Network Systems   3 cr.
Prerequisite: CST*H235. This advanced course will cover higher level system management features of the Window Server Operating System. The focus will be planning, implementing and maintaining an Active Directory infrastructure. Through lectures and lab assignments, the student will learn about integration of Active Directory with DNS, administration of user accounts and groups, group policies, security, remote access, and performance monitoring.

CSC*H237   Database Programming with VB.NET   3 cr..
Prerequisite: CSC*H205. This course covers a wide range of relational database programming topics using Visual Basic .NET and ADO .NET objects. Students will learn programming techniques using the Microsoft SQL Server relational database, the .NET System.Data namespace and classes, and disconnected architecture. Topics include SQL queries to create typed and untyped datasets, table relationships, parameterized queries, bound and unbound controls, and data views. Crystal Reports, XML Schema Designer, and Server Explorer tools are used in a hands-on class/lab environment.

CST*H239   Servicing & Support of Local Area Networks   3 cr.
Prerequisite: CST*H130. A hands-on course allowing students to install, upgrade, maintain and troubleshoot on Microsoft server operating systems. Class discussion and laboratory exercises include Network Interface Cards (NIC's), networking cabling, disk expansions, installations, upgrades, troubleshooting techniques, and common network problems.

CSC*H250   Systems Analysis and Design   3 cr.
Prerequisite: CSC*H205 or any programming language equivalent. This course is an introduction to systems analysis and design concepts and techniques. Using a case study method, students will conduct system surveys, create feasibility studies, and design typical computer systems used in business and industry.

CSC*H252   Information Systems Project Management
Prerequisite: CSC H205 or any programming language equivalent. This course introduces students to the theory and practice of managing Information Systems and Business projects. Students will learn how to initiate, plan, execute, control, and complete projects in order to meet organizational goals. In addition to traditional project management tools like PERT and GANTT charts, students will learn to use a project management software simulation tool to assist them in managing classroom projects. A comprehensive final project will be assigned and completed either individually or in collaboration with a student project team.

CST*H274   Network Security Technology   3 cr.
Prerequisite: CST*H130. This course takes an in-depth look at network security concepts and techniques. Students will examine theoretical concepts that make the world of security unique. Also, this course will adopt a practical, hands-on approach when examining networking security techniques. Along with examining different network strategies, this course will explore the advancement of network implementation as well as timeless problem solving strategies.

CSC*H295   Co-op Education Work Experience   3 cr.
Prerequisites: 12 CSC credits to include CSC*H101, CST*H120 or 130, one programming elective, one other CSC course and approval of the Department Chairperson. This elective Co-op entails a supervised work experience in a job related to the student's major. This course provides the student with the opportunity to reinforce the techniques learned in the classroom by applying them in a business/industrial setting. The course consists of: **1.** 2-hour Professional Development Workshop **2.** Minimum 225-hour Cooperative Work Experience **3.** Weekly Co-op Seminar with faculty facilitator

COMPUTER SCIENCE
Business Division

CSA*H105   Introduction to Software Applications   3 cr.
Prerequisites: Successful completion of ASD-H97, ENG*H063, and MAT*H095; successful completion of placement tests. The computer plays a significant role as a productivity tool in many fields of study and in business. This course introduces the student to the basics of how to use computers as a tool rather than how computers work. It offers instruction and practice on the use of personal computers and a variety of application software. Included is work on word processing, spreadsheets, the operating system, and internet browsing. Basic computer science topics are included to the extent that they support the applications approach. A significant amount of lab work outside of class time is required.

CSA*H135 **Spreadsheet Applications** 3 cr.
*Prerequisites: CSA *105 with a grade of "C" or better.* The course centers on the use of the current version of MS Excel at an advanced level. Other spreadsheets will be examined, (including online-based versions) as well as the exploration of online collaboration (in Wiki fashion). The instructional methodology will consist of exploring and applying advanced spreadsheet concepts to everyday situations and problems as presented in the textbook and as created by the instructor for the class. These are selected examples: Web query (getting data from a Web site directly into Excel), Goal seek, Excel database concepts, multilevel sorts, subtotals feature, Auto Filter, templates, converting table into a range, adding calculated fields to a table, drilling entries, 3-D references, linking workbooks, advanced functions..

CSA*H145 **Database Management** 3 cr.
*No longer offered. Students should take CSC*H231 Database Design I.* This course is designed to extend the skills acquired by students in CSA*H105 by providing an understanding of the methods and procedures required to translate a business information system into a personal computer data base. The course content will include principles and practical application of database design methodologies. Students will also learn how to use data base management system software to build a database, create and execute queries, and design and build data entry forms and report layouts. Attention will be paid throughout the course to data validation and to creating a professional and easy-to-use user interface.

CSA*H205 **Advanced Applications** 3 cr.
*Prerequisites: CSA *105 with a grade of "C" or better.* This is a hands-on course that focuses on the advanced use of commonly used Microsoft Office applications (Word, Excel, PowerPoint, Access, and the integration of these). The following are selected examples of skills and concepts learned in this class: **1) WORD**: inserting "quick parts," advanced mail merges, adding editing comments, using the "Track Changes" feature, inserting bookmarks and hyperlinks, and creating equations; **2) EXCEL**: protecting worksheet in various ways, creating and modifying Excel tables, creating custom filters, and using advanced analysis tools, applying advanced functions; **3) ACCESS**: creating tables using correct field types and properties, creating calculated fields, forms, reports, and sophisticated queries; **4) INTEGRATION**: combining data and graphs in various ways using paste options, importing files from external applications, and exporting files in various formats.

CSA*H207 **Computer Applications in**
 Management & Marketing 3 cr.
*Prerequisite: CSA*H105 with a grade of "C" or better, BMK*H201 or BMG*H202.* Designed for the career track business student, this course will supply a strong background in the computer skills necessary and useful in business/management and marketing. Specific applications will be based on IBM compatible machines using the Windows Environment, and will include work on business presentations, preparation of brochures, project scheduling, workgroup computing, and business on the internet. Additional topics will be considered.

CONSTRUCTION TECHNOLOGY
Engineering Technology Division

CTC*H218 **Construction Documentation** 3 cr.
This course focuses on the key documents used in the construction industry. Construction drawings and specifications are explored in detail. The course also includes discussions about bidding procedures bidding documents, standard construction phase responsibilities for general contractors, sub-contractors, owners and design professionals. From actual drawings, students will learn how to read and understand the graphic standards that describe buildings. Both residential and commercial standards are discussed.

COOPERATIVE EDUCATION
Student Services Unit

CWE-H100 **Portfolio Preparation** 2 cr.
This course stresses analysis of prior learning and self-evaluation of this learning. Students will be expected to assess, organize, and communicate their learning experiences in portfolio form for review by a faculty panel of experts. Students must complete this course to be eligible for formal assessment. Credits do not apply toward a degree. Grade reflects success in coursework only; it does not guarantee or even suggest that portfolio credit will be granted or denied by the readers.

CWE-H290 **Cooperative Work Experience**
This generic course blends academic training with career-related employment. It includes a two-hour Professional Development Workshop, a weekly Co-op seminar and a required concurrent work experience. CWE courses convert upon successful completion to a specific course identified in your major. Refer to individual course descriptions in your program of study for prerequisite information.

COUNSELING CENTER
Student Services Unit

SDEV-H102 Career Planning 3 cr.
Students learn responsible career decision-making skills through increased self-awareness and career exploration. This is a comprehensive program for career and life planning. It includes a sequence of topics designed to have students learn appropriate skills to make good career and lifestyle choices, and skills to help secure a job in their chosen field. Students will learn career development stages, and apply the knowledge to their own situation. Life management skills have direct bearing on attaining good jobs and career success. Job search skills such as resume, cover letter, interviewing and job seeking strategies are useful throughout life. The course is a Hybrid. We meet for one and a half hours per week in the classroom as well as on line. The core of the course is in online (distance learning) format. Basic computer skills, appropriate internet access, and an ability to learn independently are prerequisite for taking this course. Course participation is extremely important. Assignments must be posted on time each week. The discussion board is a necessary part of the learning in this course. Attendance and participation in the Monday evening class will factor strongly into your grade.

CRIMINAL JUSTICE/PUBLIC SAFETY
Behavioral and Social Sciences Division

CJS*H101 **Introduction to Criminal Justice** 3 cr.
This is an introductory course designed to acquaint the student with the fields of law enforcement. Study includes an overview of crime and police problems, as well as organization of local, state, and federal law enforcement agencies. (fall/spring)

CJS*H102 **Introduction to Corrections** 3 cr.
An overview of the history and philosophy of the American correctional system, organization and operation of the components of the corrections systems, including correctional centers, prisons, probation, parole and community-based programs, correctional treatment programs ranging from pre-trial diversion to post incarceration procedures. Presentation and discussion of current issues and problems in corrections will be discussed. (fall)

CJS*H103 **Introduction to Security** 3 cr.
The historic, philosophical and legal basis of security, and the role of the security officer and his relationships with the public sector are studied. The functional operation of various specialized areas of security such as theft and risk control, security surveys and loss prevention, management in proprietary and government institutions, safety and fire protection and commercial and retail security is surveyed. (fall)

CJS*H105 **Introduction to Law Enforcement** 3 cr.
An introduction course that covers the basics of law enforcement, evolution of the police function, the police in the criminal justice system and the social and psychological stresses and their effects on police work, health and the family. The course also includes the study and analysis of the problems of law enforcement as they relate to the community. (spring)

CJS*H210 **Constitutional Law** 3 cr.
*Prerequisite: CJS*H101 with a grade of "C" or better.* This course traces the history and development of the U.S. Constitution. Topics will include the Commerce Clause, procedural due process, states' rights and civil liberties, the concept of federal supremacy, and state constitutions. (fall)

CJS*H211 **Criminal Law I** 3 cr.
This course is an introduction to the history, theory, and practice of substantive criminal law. Major elements of statutory offenses are discussed. Reference to the Connecticut Penal Code is included. (spring)

CJS*H217   American Legal Systems   3 cr.
This course studies the process through which justice is administered and the history of the American legal system. Also examined are the Constitution of the United States as it applies to police forces. Rules of evidence with attention given to judicial notice, presumptions, the nature of real and circumstantial evidence, burden of proof, documentary evidence, hearsay evidence, confessions and admissions will also be studied. Particular emphasis will be given to evidence, arrest procedures, as well as search and seizure. (fall)

CJS*H218   Legal Aspects of Security Operations   3 cr.
This course traces the development of the legal aspects of private security in the United States. Material includes the law as it relates to private security, search and seizure, civil and criminal liability, and evidence. Legal requirements such as licensing, training, and education are also examined. (fall)

CJS*H220   Criminal Investigation   3 cr.
This is an introduction to criminal investigation. Study includes: the presentation of rules and procedures of preliminary investigation; art of interrogation and recording of statements and confessions; collection and preservation of physical evidence at the crime scene; methods used in scientific interpretation of evidence; and preparation of cases for trial. (spring)

CJS*H224   Computer Crimes   3 cr.
This course is designed to give the student an understanding of the various aspects of computer crimes, including hacking, computer break-ins, computer fraud, the introduction of viruses, worms, and trojan horses into computer systems, mail fraud, child pornography, pirated software, sabotage, and espionage.. Study includes an overview of the various types of computer crimes likely to be encountered in today's computer Environment, as well as the methods of preventing, investigating, and prosecuting those crimes. (fall)

CJS*H225   Forensic Science   3 cr.
The purpose of this course is to familiarize the student with the recognition, preservation, and collection of physical evidence at the crime scene as well as the testing and analysis of the evidence at the forensic laboratory. The student will learn through lectures, class participation and discussion, and laboratory experiments.

CJS*H229   Crime Scene Investigation   3 cr.
This is an orientation course that covers the basics of crime scene investigation, including the crime scene, identifying and collecting evidence, and the capabilities and procedures of the crime laboratory. (fall)

CJS*H234   Computer Security and Data Protection   3 cr.
This course is designed to give the student a working knowledge of computer security and data protection. Topics that will be covered include: types of attacks on computer systems, risk analysis, strategies to counter these attacks and risks, internet security, hacking, and other criminal activity. (spring)

CJS*H235   Information Warfare and Security   3 cr.
This course traces the development of information warfare, terrorism, and espionage as they relate to the computer Environment. Topics include the threats to military as well as commercial and economic security. The roles of individuals, corporations, and governments in dealing with information-related attacks will be examined. The problems and remedies associated with the topics will also be examined.(spring)

CJS*H230   Security Management   3 cr.
Prerequisite: CJS*H101 with a grade of "C" or better. This course examines the functions of an integrated security program from a management perspective. Topics to be discussed include how a security organization is managed, actual situations that may be encountered, the duties of the security director, effective management skills, and the day-to-day management of the security function. (spring)

CJS*H232   Industrial and Retail Security   3 cr.
Prerequisites: CJS*H101 with a grade of "C" or better. This course examines the responsibilities of industrial security in preventing security related compromises against the company, individuals, and information. Thefts in companies and retail establishments will also be examined. Among other topics to be discussed are: sabotage, espionage, physical security, theft prevention, internal control, and techniques of detection, apprehension and prevention. (spring)

CJS*H233   Institutional Security   3 cr.
Prerequisites: CJS*H101 with a grade of "C" or better. This course is designed to give the student an understanding of the role of security as it applies to public and private institutions, such as hospitals, airports, and government agencies. The student will learn how an institution can be compromised by breaches of security. Topics to be discussed include: physical security, internal control, processing clearances, safeguarding classified information, and visitor and area control. (fall)

CJS*H241   Correctional Counseling I   3 cr.
Prerequisite: CJS*H101 with a grade of "C" or better. This course is an introduction to various concepts, principles, and techniques of counseling as applied by trained professionals in the correctional setting. Group methods, evaluation, and therapeutic Environments will be examined as a means of promoting the understanding of the counseling process. Discussions will include the various counseling models and the history of counseling in correctional institutions and the community. (fall)

CJS*H244   Community Based Corrections   3 cr.
Prerequisite: CJS*H101 with a grade of "C" or better. This course will examine alternatives to incarceration as viable sentencing options. Topics will include: the development of community corrections, parole, diversion, halfway houses, community service, house arrest, and electronic monitoring. The role of the victim in the correctional process will also be discussed. (spring)

CJS*H246   Juvenile Corrections   3 cr.
Prerequisite: CJS*H101 with a grade of "C" or better. This course presents the correctional aspects of the history, philosophy and development of the juvenile justice system. Topics to be discussed include the rights of juveniles, alternatives to incarceration, incarceration, treatment methods, and current and future trends. (fall)

CJS*H255   Ethical Issues In Criminal Justice   3 cr.
This course is designed to give the student an understanding of the necessity for high standards of ethical and moral behavior on the part of the law enforcement officer. Material will include the consequences of unethical and immoral behavior on the part of the law enforcement officer. Topics include gratuities, favoritism, temptations, dishonesty, abuse and misuse of authority. (fall)

CJS*H261   Victim and Offender Mediation   3 cr.
Prerequisite: CJS*H101 with a grade of "C" or better. The process of victim and offender mediation and reconciliation is examined in this course. The effectiveness of the process in the offender rehabilitation will be discussed. Topics to be discussed include: conflict resolution, bringing the victim and offender together, restitution of losses, reconciliation, mediation, and conflict management. (spring)

CJS*H280   Victimology   3 cr.
Prerequisite: CJS*H101 with a grade of "C" or better. This course is a study of crime, its causes, and effects from the victim's perspective. The course looks at victim precipitation, restitution, and the varied involvement in, and consequences of, crime on the victim. Major perspectives on victimization as well as patterns of victimization will be analyzed. (spring)

CJS*H293   Criminal Justice Cooperative Work Experience   3 cr.
Prerequisite: 12 credits in CJS*H courses, with grade of "C" or better. Cooperative Work Experience in Criminal Justice is essentially cooperative training between the school and agency. This required course introduces the student to a specific field in the Criminal Justice system. The course consists of: **1.** Two-hour Professional Development Workshop **2.** Minimum 145-hour (volunteer) or 225-hour (paid) Cooperative Work Experience **3.** Weekly one-hour Co-op Seminar (fall/spring)

DANCE
Arts and Humanities Division
The Division of Arts and Humanities encourages students to register for dance courses in order to develop appreciation of, and skills in, the performance arts. Some of the courses are required in career programs; others are designed for students' interests and personal development. Consultation with the dance advisor will help determine specific needs. Dance courses, except for DAN*H101, are studio courses with a focus on movement. The history and theories of these dance genres are included experientially in class and through reading and writing assignments outside of class. For these studio courses, students must be physically able to perform the skills required in a dance class.

DAN*H101   History & Appreciation of World Dance   3 cr.
World Dance is designed to introduce students to dance in its creative, cultural and historical aspects. It will explore "a number of important ways in which dance functions in human societies—always keeping in mind that

while dance is a universal human activity, it does not play the same role in every culture." *(Grauer)* This course includes seminar, video-viewing, and movement activities.

DAN*H102   Ballet I: Renaissance to Romantic   3 cr.
Ballet from the Renaissance to the Romantic period provides students with a basic understanding of the fundamental principles of ballet technique, encourages students to achieve a level of self-discipline and physical control, and instills an appreciation of the historical contributions of ballet to the overall development of dance as an art form. Studio course.

DAN*H109   Ballroom I   1 cr.
This course is designed to introduce students to the history, evolution, music, steps, and stylings of ballroom dancing. Three standard style dances, Tango or Swing, the Waltz, and the Foxtrot and three Latin style dances, the Rhumba, the Salsa, and the Cha, Cha, Cha, will be explored. Studio course.

DAN*H110   Rhythm Tap   1 cr.
This course is designed to introduce students to the rhythm tap genre—a collage of sound produced by using taps and body as an instrument. The cultural and historical perspectives of rhythm tap will be discussed. Studio course.

DAN*H111   Jazz I: Afro-Caribbean/American   3 cr.
Afro-Caribbean and American Vernacular Jazz Dance is designed to introduce students to the origins of jazz dance in America. Study emphasizes African and Caribbean, as well as "street" and "ballroom" influences. Basic skills of jazz movement, jazz music, and rhythmic awareness are included. Studio course.

DAN*H112   Jazz II: Broadway and Film   3 cr.
No prerequisite. Musical Theater and Film Dance is designed to segue from American Vernacular Jazz Dance into concert jazz dance and Broadway dance. It continues with the historical (1930's-2000's) and cultural perspective particular to this American dance genre as well as its differentiating styles and techniques. Studio course.

DAN*H113   Modern I: Pioneers of America   3 cr.
Pioneers of American Modern Dance is designed to introduce students not only to the basic techniques of modern dance, but also to the social, historical, and cultural changes of the twentieth century that made America ripe for new dance forms. Important figures in the dance world from the turn of the century to 1940 will be presented, along with their techniques, theories of movement and compositional ideas. Exposure to this study will enable the students to integrate the thought behind the movement with the action. Studio course.

DAN*H118   Dance Pedagogy for Early Childhood
                 (also listed as ECE*H118)   1 cr.
This course is designed to introduce students to the basic techniques and methodology for teaching dance to children, ages 2-5. Using the standards established by the State of Connecticut and the National Dance Education Organization, appropriate content for dance classes will be examined. We will view the dance class from a developmental perspective, identifying appropriate movement activities and strategies for teaching.

DAN*H119   Dance Pedagogy for Elementary Education   1 cr.
This course is designed to introduce students to the basic techniques and methodology for teaching dance to children, ages 5-10. Using the standards established by the State of CT. and the National Dance Education Organization, appropriate content for dance classes will be examined. We will view the dance class from a developmental perspective, identifying appropriate activities and strategies for teaching.

DAN*H120   Dance Pedagogy for Secondary Education   1 cr
This course is designed to introduce students to the basic techniques and methodology for teaching dance to students in grades 7–12. Using the standards established by the State of Connecticut and the National Dance Education Organization, appropriate content for dance classes will be examined. We will view dance class from a developmental perspective, identifying appropriate activities and strategies for teaching. There is no prerequisite for this class.

DAN*H140   Pilates/Wellness *(also listed as HPE*H140)*   1 cr.
This course focuses on the quality of movement, posture and breathing by increasing strength, flexibility, and balance. The holistic perspective includes physical awareness, cognitive reflection, nutrition, and insights from feelings and focuses on mind-body centering. Pilates/Wellness is designed for the dancer, athlete, health professional or persons interested in overall well-being. This class meets the first ten weeks of the semester. Comfortable clothing is necessary.

DAN*H175   Kinesiology for Dancers   3 cr.
This course, designed especially for those involved in dance, athletics or somatics, looks at the structure and function of the human body. Anatomical and mechanical principles are analyzed. We will focus on the musculoskeletal system as a mechanism for motion. Students are expected to have a foundation in dance or other body movement. This course will satisfy the science requirement for dance majors.

DAN*H202   Ballet II: Classical to Contemporary   3 cr.
Prerequisite: DAN*H102. Ballet from the Classical to Contemporary periods is designed to further the student's study of the technique of classical ballet and its history in the twentieth century. Studio course.

DAN*H209   Ballroom Dance II   1 cr.
It is strongly advised that students take DAN*H109 Ballroom I prior to taking this course or have a foundation in ballroom dance. This course is designed to expand students' study of the history, evolution, music, steps, and styles of ballroom dancing. Three standard style dances, Swing, the Waltz, and the Foxtrot, and three Latin style dances, the Rumba, the Salsa, and the Tango, will be covered.

DAN*H213   Modern Dance II: Second Generation America   3 cr.
Prerequisite: DAN*H113 or permission of instructor. This course encompasses the techniques, theories and philosophies of movement as presented by America's second generation from Cunningham to Alvin Ailey. The social and cultural changes that influenced this periods dance also will be explored. Exposure to this study will enable the student to integrate the thought behind the movement. Studio course.

DAN*H221   Repertory/Ensemble I   3 cr.
Prerequisite: Permission of instructor. Modern, Jazz or Ballet compositions by faculty or renowned choreographers will be taught, rehearsed and presented in concert. Performance skills of projection, clarity, staging, spacing and truth to choreographers' techniques will be practiced. Works for repertory may include Charles Weidman's *Brahm's Waltzes,* Anna Sokolow's *Rooms,* Ballanchine's *Tarantella,* and Pilobolus' *Improvisational Techniques*. Studio course. Additional rehearsals required.

DAN*H222   Choreographic Principles /Ensemble I   3 cr.
Prerequisite: Permission of instructor. Choreographic Principles/Ensemble is designed for students to discover sources of movement and develop the tools for structuring movement in time and space. It includes assigned composition problems and structured movement improvisation. Students may find their own personal statement in movement and develop a solo dance, and/or they may focus on making a group work. Students develop creative decision-making in working with a group. Elements of performance—costume, decor, lighting, staging—will also be explored and executed in formal concert. The Ensemble is the performing arm of the College. Studio course. Additional rehearsals required.

DAN*H223   Repertory/Ensemble II   3 cr.
Prerequisites: DAN*H221 and permission of instructor. This course is designed to expand students' study of dance compositions by faculty and renowned choreographers who will teach their work. Modern dance is emphasized but works may be from the jazz dance or ballet genre. The studied works will be videotaped and then rehearsed by the instructor. Students, working as an ensemble, will present these works in formal or informal concert. Performance skills of projection, clarity, staging, spacing, and truth to choreographers' intent and technique will be further practiced. Students will continue to develop and execute production skills related to production. Participation in Dance Concert is mandatory.

DAN*H224   Choreographic Principles /Ensemble II   3 cr.
Prerequisite: DAN*H222 and permission of instructor. This course is designed for students to expand their knowledge of movement and dance and to continue to develop the tools for structuring movement in time and space. It includes assigned compositional problems and structured movement improvisation. Students will continue to explore their own personal statement in movement and develop solos and/or group work. Students will continue to develop and demonstrate creative decision-making in working with an ensemble, both choreographically and in production. Tools and vocabulary continue to be offered in an environment open to creative communication. Elements of performance (costume, decor, lighting, staging) and production (publicity, press releases, stage and house management, scheduling) will be explored also. Participation in Dance Concert is mandatory.

DAN*H232   Ballet III   2 cr.
Prerequisite: DAN*H202. This course continues to provide students with an understanding of the fundamental principles of ballet technique, to encour-

age students to achieve a level of self-discipline and physical control, and to instill an appreciation of the historical contributions of ballet to the overall development of dance as an art form. Reading and writing component are done outside of class. Extra rehearsal hours in the studio are required.

DAN*H233   Modern Dance III: Technique/Humphrey-Limon 2 cr.
*Prerequisite: DAN*H113 and or DAN*H213.* This studio course is designed to continue students' study in the Humphrey-Limon techniques of modern dance. This twentieth century technique is the foundation of the modern dance study at this college. Presented along with Doris Humphrey's and Jose Limon's techniques will be their theories of movement and compositional ideas. Exposing the student to this study will enable him/her to integrate the thought behind the movement with the action. Extra rehearsal hours in the studio are required.

DIGITAL ARTS TECHNOLOGY
Arts and Humanities Division

DAT*H101   Introduction to Digital Arts   3 cr.
*Prerequisite: CSA*H105 or equivalent experience.* This course is an introduction and overview of the digital arts. The basic elements, components and skills required for digital art development and production will be defined and explored. Topics include; applications of digital arts, presentation software, visual design principles, digital media design, Web design, configuring a multimedia system, emerging technologies, multimedia components, and interactive multimedia development.

DAT*H104   Multimedia Authoring I   3 cr.
*Prerequisite: DAT*H101.* Multimedia Authoring I is an introduction to the planning, development and management of multimedia software projects, Interaction Design, and algorithm analysis. Topics include; multimedia and instructional design, multimedia and interaction design, multimedia and the WWW, arrays, functions and methods, events and event handlers, objects, logic structures, repetition structures, programming and scripting languages, and variables.

DAT*H106   Digital Design   3 cr.
*Prerequisites: DAT*H101.* This course explores the uses of fundamental visual design principles in emerging technologies used to design and develop interactive electronic documents such as multimedia databases, multimedia electronic books, applications for hand-held devices, and other technologies. Topics include; elements of design, principles of design, XML, and delivery engines.

DAT*H108   Digital Imaging I   3 cr.
*Prerequisite: DAT*H101.* Digital Imaging I provides an in-depth study of digital image files and their uses in the realm of digital graphics, imaging and video. Topics include; alpha channels, composition and lighting, color theory, data compression, filters, raster graphics, vector graphics, gradients, layering, screen resolution and bit depth, and video display formats.

DAT*H110   Digital Video Production I   3 cr.
*Prerequisite: DAT*H101.* Digital Video Production I is an introduction to the three phases of video production; pre-production, production, and post-production. Students will script, storyboard, shoot, and edit original short films. Topics include; alpha channels, aspect ratio, audio production, broadcast standards, computer monitors vs. video monitors, camera techniques, composition, compositing, compression, lighting, rolling credits, transitions, titles, and project management.

DAT*H116   Interactive Media Design   3 cr.
*Prerequisite: DAT*H104.* Interactive Media Design is a practical and theoretical approach to the development and application of interactive digital media for desktop, portable devices, and Web-based applications. Learners will utilize the latest technologies to design, develop and present interactive digital media content. Topics include; principles of interaction design, human-computer interaction, intermediate JavaScript and XML programming, and developing interactive PDF documents.

DAT*H205   Multimedia Authoring II   3 cr.
*Prerequisite: DAT*H104.* Multimedia Authoring II is an intermediate-level course in the application of advanced project development tools used in the creation of interactive multimedia for the edutainment, entertainment and Web industries. Students will learn and apply techniques used to create interactive multimedia for broadcast, electronic games, and WWW applications. Topics include; algorithm analysis, animation, Interaction Design and interactivity,

introduction to Human-Computer Interaction, keyframing and tweening, objects and events, Lingo scripting, timeline-based authoring, and Shockwave.

DAT*H212   3D Graphics & Animation I   3 cr.
*Prerequisite: DAT*H108.* The 3D Graphics & Animation I course is an introduction to the design and application of digital character modeling and animation. Students will learn to design 3D modeled objects and examine and apply fundamental 2D and 3D graphic algorithms. Topics include; animation, camera and rendering, extrusions, lighting, modeling, polygons and primitives, surfaces, terrain, texture maps, transforms, and vectors.

DAT*H215   Multimedia Web Authoring   3 cr.
*Prerequisite: DAT*H205.* Multimedia Web Authoring utilizes the latest software technologies and methodologies to develop and deliver complete interactive multimedia software systems for Web-based applications. Topics include; advanced algorithm analysis, complex problems in Human-Computer Interaction, and advanced JavaScript and Action Script programming.

**DAT *H218   Electronic Music Composition/
                Audio Technology I**   3 cr.
*Prerequisite: CSA*H105 and permission of the instructor.* This course is an introduction to the art and techniques of electronic music and audio production. The history, elements, and tools of electronic music and audio will be defined and explored. Topics include; acoustic theory, analog and digital audio principles, composition, recording engineering techniques, sound sampling, electronic synthesis, MIDI, and audio for multimedia and the World Wide Web.

DAT*H219   Electronic Music Composition/Audio Technology II   3 cr.
*Prerequisite: DAT*H218/MUS*H218.* This course provides intermediate instruction in digital synthesis, digital sequencing software, and electronic composition methods. Students will complete a series of directed and independent compositional projects in a variety of styles. Topic include; construction of timbres, additive and subtractive synthesis, digital sampling, signal processing, and algorithmic composition.

DAT*H220   Acoustics and Sound Design   3 cr.
*Prerequisite: DAT*H101.* The advanced functions of the properties of sound, human hearing, electro-acoustic instruments, digital sound reproduction systems, sound synthesis, and psychoacoustics are examined. Students will develop and participate in a number of practical sound design and audio engineering projects.

DAT*H224   Digital Video Production II   3 cr.
*Prerequisite: DAT*H110.* This course examines advanced project development methods and tools for video production. Students will study and apply the processes involved in transforming a concept to a finished video product. Topics include; analysis, budget, copyright, scripting, storyboarding, sequencing, pre-production, production, and post-production. The learner will design, script, produce, edit, and complete an original video project.

DAT*H226   Motion Graphics for Film & Video   3 cr.
*Prerequisite: DAT*H110.* The study and application of state-of-the-art special effect techniques used in film and video industries will be explored. Topics include; compositing of multiple layers, masks and mattes, advanced motion controls, and advanced color keying.

DAT*H230   Digital Imaging II   3 cr.
*Prerequisite: DAT*H108.* The advanced study of the design and manipulation of digital graphic and image files will be realized through a series of experiential projects. Topics include; photo retouching, drawing with vector paths, creating special effects with multiple layer effects, and designing images for interactive electronic media.

DAT*H234   3D Graphics & Animation II   3 cr.
*Prerequisite: DAT*H212.* This course will explore advanced techniques for character modeling and the design of virtual space. Topics include; lighting and atmospheres, environmental structures, organic modeling, and character construction. The learner will design, model, and animate a complete 3-dimensional virtual world.

DAT*H237   Principles of Sound Recording   3 cr.
*Corequisite: DAT/MUS*H218.* This course presents an in-depth study of the techniques and methodologies used in studio and live recording. In addition to classroom assignments and exercises, students will be expected to complete field work resulting in the recording, editing, and mastering of a

*Course
Descriptions*

live or studio project. Topics include; two-track and multi-track recording, studio acoustics and design, analog and digital mixing consoles, microphone placement techniques, signal processors, and studio session procedures.

DAT*H240   Multimedia Authoring III   3 cr.
Prerequisite: DAT*H205. This course explores advanced multimedia systems and the theoretical and practical issues in designing interactive systems. Topics include; compression techniques, synchronization, user interface accessibility, indexing and retrieval techniques, operating system support for digital audio, video, and animation file formats, as well as network and transport protocols for multimedia. Emphasis will be placed on current design and delivery issues, software implementation and discussion of future directions.

DAT*H290   Digital Arts Project   3 cr.
Prerequisite: DAT*H224 or 230 or 240. Completion of a significant project under the guidance of an advisor in an area of mutual interest such study terminating in a deliverable software/media product with technical documentation. The project must be in an area directly related to one of the three program options.

DRUG AND ALCOHOL RECOVERY PROGRAM (DARC)
Behavioral and Social Sciences Division

DAR*H101   Issues in Drug and Alcohol Abuse   3 cr.
Prerequisites: Passed or tested out of ENG* 063. This course will introduce students to the substance abuse treatment field and discuss DARC admission and certification requirements. Students will explore key topic areas such as: models of recovery; history of legislation and regulation; self-help and evidenced-based approaches to recovery, ethics and confidentiality. Public health issues related to substances will be investigated, including; trends in substance use, co-occurring disorders, advertising of tobacco and alcohol, costs to society, and continuum of care from prevention to aftercare.

DAR*H111   Addiction Counseling I   3 cr.
Prerequisite: Passed or tested out of ENG*063. Students will learn, practice and develop counseling skills such as: attending, reflecting, active listening, interviewing and mirroring as it relates to addictions counseling. Students will learn theories that are fundamental to addiction counseling and understand the relationship of theory to skills. Students will reflect on their roles as counselors and define the qualities, knowledge base, and skills essential to becoming a competent, ethical, culturally-aware counselor-in-training.

DAR*H112   Group Counseling Theory and Techniques   3 cr.
Prerequisite: Passed or tested out of ENG*063. Students will be introduced the concepts and theories of group counseling and group dynamics in the addiction field. Types of groups, group formation, and stages of group development, transitions and termination of groups will be discussed as well as the ethical aspects of group work. Through a combination of didactic and experiential learning, students will have the opportunity to examine their own performances as group members and facilitators.

DAR*H158   Biology of Addiction   3 cr.
Prerequisite: Passed or tested out of ENG*063. Students will be introduced to the basic pharmacology of drugs of abuse, and drug classification as well as the process of neurotransmission and brain functioning when drugs are introduced to the human body. Discussion of how each class of psychoactive substances alters neurotransmission and homeostasis will occur. The course examines the consequences of short- and long-term substance use, abuse, and addiction on all major bodily systems and the fetus.

DAR*H220   Co-Occurring Disorders Counseling   3 cr.
Prerequisite: Passed or tested out of ENG*063. The purpose of this course is to educate students about the principles, assessment instruments, strategies, settings and models for treating clients with co-occurring disorders in the addiction treatment setting. This course will provide education and training on models for treating co-occurring disorders, assessment practices, development of treatment plans, and counseling strategies that may be used in inpatient and outpatient settings.

DAR*H213   Addiction Counseling II   3 cr.
Prerequisite: Passed or tested out of ENG* 063, DAR* H111. This course builds upon the theoretical base presented in Addiction Counseling I and will encourage further development of encouraging, paraphrasing, sum-

marizing and reflection of feelings as they relate to conducting intake interviews, treatment planning, counseling and the discharge process. Students will also learn about complex issues which include GLBT populations, HIV/AIDS, domestic violence, eating disorders, relapse prevention, specialized self help groups, ethical behavior and multicultural competencies.

DAR*H251   Counseling Internship I   6 cr.
Prerequisites: DAR*H101, 111, 112, 158; ENG*H101 with a "C" or better and permission of the program coordinator. DAR*H251 and DAR*H252 must be completed in consecutive (Fall/Spring) semesters.
Students will spend 15 hours per week in a substance abuse treatment facility under the joint supervision of the DARC program Coordinator and a supervisor at the facility and attend a seminar once per week. Students will observe, practice and develop competency in the 12 core functions of addiction counseling. As students develop increased competence, they will progress from active observers to co-counselors and then to counselors. Students will continue academic study during a weekly seminar. Students will be expected to reflect on their field work, participate in clinical supervision and peer group interaction.

DAR*H252   Counseling Internship II   6 cr.
Prerequisite: Passing grade of "C" or better in DAR*H251 and permission of DARC program coordinator. DAR*H251 and DAR*H252 must be completed in consecutive (Fall /Spring) semesters. A continuation of DAR*H 251, students will continue their field placements for 15 hours per week in the same substance abuse treatment facility. Students will refine their counseling skills and assume increased responsibility for implementing the transdisciplinary foundations and competencies required of addiction counselors. During the semester, students will function as a primary addiction counselor for one or more clients. The classroom component (weekly seminar) of this internship will prepare students for the certification exam and case presentation as well as provide for ongoing clinical supervision, personal reflection and growth.

EARLY CHILDHOOD EDUCATION
Behavioral and Social Sciences Division

ECE*H101   Introduction to Early Childhood Education   3 cr.
A study of the historical, philosophical and social perspectives of early care and education. Emphasis will be on modern development and trends, along with an understanding of the organization and composition of early childhood education settings, which include curriculum materials, learning environments and the teacher's role. Four three-hour observations of various types of early childhood programs and field trips are required.

ECE*H103   Creative Experiences for Children   3 cr.
This course includes the exploration of the relationship of creative art to the total educational program of the young child. Experimentation with the use of various media techniques and methods will be included. The concept of play as it relates to creativity will also be explored. Field trips are required.

ECE*H106   Music and Movement for Children   3 cr.
Prerequisites: ECE*H101. This course is designed to have students acquire skills in order to plan and implement creative music and movement education experiences for young children. Areas of exploration will include singing, listening to music, rhythmic activities, chants, creating music, using instruments with children, multi-cultural music, creative dance and movement, musical games, music for children with special needs, and using music spontaneously in the classroom. The main goals of the course are to develop an understanding of the importance of music and movement education experiences in an early childhood environment, the role that music plays in the growth and development of young children and how these experiences can be creatively planned, implemented and integrated throughout the daily curriculum.

ECE*H109   Science and Math for Children   3 cr.
The focus of this course will be on acquiring an understanding of the materials and methods of working with young children in the areas of science, math and social studies and their integration into the curriculum. Emphasis will be placed on understanding these areas from a child development perspective. (fall)

ECE*H118 Dance Pedagogy for Early Childhood
*(also listed as DAN*H118)* 1 cr.
This course is designed to introduce students to the basic techniques and methodology for teaching dance to children, ages 2-5. Using the standards established by the State of Connecticut and the National Dance Education Organization, appropriate content for dance classes will be examined. We will view the dance class from a developmental perspective, identifying appropriate movement activities and strategies for teaching. There is no prerequisite for this class.

ECE*H141 Infant/Toddler Growth and Development 3 cr.
*Prerequisites: ECE*H101 a physical examination is required.* An introduction to the care and teaching of infants and toddlers, which emphasizes the interrelationship between social, emotional, cognitive, physical and language development. Age appropriate curriculum strategies will be based on developmental theories. Components of a high quality program will be explored. Students will be required to fulfill 8 weeks (4 hours per week) of field placement work with toddlers as well as complete three, 4-hour observations of infants child care setting. Placement is determined by the coordinator. (fall)

ECE*H176 Health, Safety and Nutrition 3 cr.
The relationship between health, safety and nutrition and child development will be explored. Emphasis will be on the strategies needed to implement a safe, healthy and nutritionally sound program. Integration of these areas into the total curriculum will be examined.

**ECE*H206 Administration and Supervision
of Early Childhood Programs** 3 cr.
*Prerequisites: ECE*H101 or permission of the Early Childhood Education Coordinator.* An examination of the multi-dimensional role of the early childhood program director/administrator. Administrative styles, management tools and interpersonal skills that contribute to effective leadership will be explored. Topics such as CT State licensing regulations, NAEYC accreditation, director certification, public policies and professionalism will be discussed. (spring)

ECE*H210 Observation, Participation and Seminar 3 cr.
This course is designed to help students to observe, interpret and assess children's behavior and developmental characteristics and to increase awareness of typical and atypical patterns of behavior, as well as to develop learning plans. Observation and participation placements are provided for the study of young children at the discretion of the coordinator. The students will observe and participate in an accredited center to gain experience in working with young children. In weekly seminars, students will focus on issues related to observing and understanding children's development. Students will spend a total of 60 hours, (4 hours per week) observing, documenting and interacting with young children in the classroom. (fall)

ECE*H215 The Exceptional Learner 3 cr.
*Prerequisites: ECE*H101, PSY 203 or permission of the Early Childhood Education Coordinator.* The study of the "exceptional child" with emphasis on the history, laws, concepts, practices and terminology used by professionals in the field. Accommodations and techniques used by teachers in an inclusive classroom will be covered. An observation of a preschool special education class is required.

**ECE*H222 Methods and Techniques in
Early Childhood Education** 3 cr.
*Prerequisites: ECE*H101, 103, 106, 176, and 231, ENG*H101, PSY*H111, SOC*H101, should be taken concurrently with ECE-H291.* The study of the knowledge and skills needed to plan, implement, and evaluate a developmentally and culturally appropriate curriculum. Experiences will focus on the design of the learning environment, the interaction between teacher, child and family, classroom management and the fostering of opportunities to enhance the development of the whole child. Guidance of children's behavior will be explored. Written permission is required before enrollment. (spring)

ECE*H231 Early Language and Literacy Development 3 cr.
*Prerequisites: ECE*H101.* An introduction to language and literacy development in the young child. Exploration of the early childhood language arts curriculum which includes speaking, listening, writing and reading skills will be examined. Emphasis on the influence of a child's cultural background and experiences on emerging literacy development will be explored. Creation of a literacy-rich environment that engages children in developmentally appropriate language arts experiences will be included. Field trips are required. (spring)

ECE*H290 Student Teaching I 3 cr.
*Prerequisites: ECE*H101, 103, 106, 176, and 231, ENG*H101, PSY*H111, SOC*H101. A physical examination by a doctor and a criminal background check are required before starting ECE*H290.* This course is designed to develop specific skills needed by the student in order to assume the responsibilities in a classroom. Through guided supervision in the classroom and seminars, the student will gain the needed experience by putting theory into practice. The coordinator will place students in the College's Child Development Center. Written permission is required before enrollment. Topics to be explored will include classroom management, daily schedules, curriculum and developmentally appropriate planning. The student is required to fulfill 120 hours of work experience during the semester. (8 hours per week minimum) (fall)

ECE*H291 Student Teaching II 3 cr.
*Prerequisites: ECE*H101, 103, 106, 176, 231, and 290, ENG*H101, PSY*H111, 204, SOC*H101.* This is a continuation of ECE*H290. During this phase of the work experience, the student will concentrate on working directly with young children. The overall objectives are for the student to be able to manage a classroom independently, plan, organize, execute and evaluate classroom activities on a weekly basis, and be able to critique effectively one's role in the classroom. The student will be under the supervision of an on-site supervisor and the College instructor. Individual placements are under the direction of the Coordinator which includes eight hours in the Child Development Center and four hours in another setting. Written permission is required before enrollment. The student is required to fulfill 192 hours of work experience for the semester. (12 hours per week minimum) (spring)

ECONOMICS
Business Division

ECN*H101 Principles of Macroeconomics 3 cr.
An introduction to the basic structure of the United States economic system is presented. Topics include: types of economic systems, characteristics of capitalism, supply and demand, inflation and unemployment, the federal reserve system, and economic policy.

ECN*H102 Principles of Microeconomics 3 cr.
*Prerequisite: ECN*H101.* An introduction to the problems of scarcity and resource allocation as it pertains to households and firms. The course centers on production and cost analysis in the four major types of industry models. Topics include supply and demand, elasticity, consumer choice, government in the microeconomy and price determination under various market conditions.

ECN*H130 Consumer Economics 3 cr.
Study concerns the proper management of personal income and expenditures. Topics include: a study of inflation and business cycles, commercial and savings accounts, budgets, charge accounts, installment buying use of credit, home ownership, insurance and taxes.

ECN*H250 Money and Banking 3 cr.
This course examines monetary theory and policy with special attention to the monetary system, commercial banking, the thrift industry, central banking, and capital markets.

ELECTRONIC ENGINEERING TECHNOLOGY
Engineering Technologies Division

EET*H126 LabVIEW 2 cr.
*Co-requisite: MAT*H172.* This course will introduce the student to data acquisition using the computer. Students will learn how to create "virtual instruments" using LabVIEW™, a powerful graphical programming language for data acquisition and manipulation. Emphasis is placed on standard programming structures, real-time data acquisition, mathematical manipulation and graphing. Four laboratory hours

EET*H102   Electrical Applications   3 cr.
*Corequisite: MAT*H172.* An introduction to the fundamental concepts of electricity and electronic technology. A study of DC and AC electrical circuits with the emphasis on instrumentation, measurements, devices, and application of theory to practical systems. Topics covered include electrical circuits, applied electrical technology, transformers, motors and generators, electronic fundamentals and devices. Two class and two laboratory hours weekly.

EET*H110   Electric Circuits I   4 cr.
*Corequisite: MAT*H172.* The fundamentals or direct current circuits are established. Emphasis is placed on the characteristic description of circuit behavior. Ohm's law and Kirchhoff's law are used to determine circuit characteristics. Circuit rules, methods and theorem are covered extensively. Resistance, capacitance and transient responses are introduced. Formal laboratory report writing is required. Four class hours and two laboratory hours weekly.

EET*H104   Electronic CAD and Fabrication   1 cr.
Prerequisite or Corequisite: Some experience with WINDOW operating system. Introduction to the basics of double sided Printed Circuit Board construction and soldering components to these boards. Completion of a small fabrication kit including PC Board, leading to better physical understanding of PCB's as a prerequisite to using OrCAD Layout software. The CAD then moves into the CAD laboratory to study the concepts of schematic capture (OrCAD CAPTURE) into a NETLIST and on to PCB layout. Three laboratory hours weekly.

EET*H114   Electric Circuits II   4 cr.
*Prerequisites: EET*H110. Corequisite: MAT*H185.* The application of circuit analysis techniques acquired in Electric Circuits I are extended to circuits excited by AC sources. Emphasis is placed on solving circuit problems using complex numbers and phase diagrams. Topics include: inductance, transients, filter theory, mutual inductance, transformer theory, and an introduction to polyphase circuits. Formal report writing is required. Three class and two laboratory hours weekly.

EET*H136   Electronics I   4 cr.
*Prerequisites: EET*H110. Corequisites: EET*H114, MAT*H185.* Semiconductor physical concepts and P-N junction theory is established and applied to basic devices such as diodes, bipolar junction transistors, and field effect transistors. Circuit applications of these and other special devices are studied, with an emphasis on operating principles and analysis techniques. Three class and two laboratory hours weekly.

EET*H232   Electronics II   4 cr.
*Prerequisite: EET*H136. Corequisites: MAT*H185.* Characteristics of small signal amplifiers using BJT's and FET's are examined, and followed up with a study of linear op-amp circuits. Comparators and Schmitt Triggers using op-amps are also explored. Basic characteristics of power amplifiers and oscillators are studied, and the operation of the thyristor family of devices is introduced. Three class and three laboratory hours weekly.

EET*H208   Applied Circuit Analysis   3 cr.
*Prerequisites: EET*H126, 114, MAT*H185.* The analysis of RLC circuits using classical calculus for inputs which are both sinusoidal and non-sinusoidal are examined. Resulting first and order differential equations are solved using classical methods and by use of Laplace transforms. Basic derivatives and integration are taught as they apply to RLC circuitry. Three class and three laboratory hours weekly. This course may be substituted for MAT*H232 for Electrical students only.

EET*H252   Digital Electronics   4 cr.
*Prerequisites: EET*H136. Corequisites: EET*H114.* The study of number systems, Boolean algebra, logic gates and combinational circuits. This study provides the basis for investigating the operation of sequential circuits including flip-flop applications. Design of arithmetic circuits adders and subtractors and BCD are studied. Decoders, encoders, multiplexers and demultiplexers are included as an application of the basic gates. Use of Electronic Work-Bench software to solve logic problems. Three class and three laboratory hours weekly.

EET*H253   Advanced Digital Electronics   3 cr.
*Prerequisite: EET*H252.* A continuation of digital circuit design. Includes counters (asynchronous, synchronous types), multi-bit shift registers, logic families A/D and D/A converters, and code converters. Static and dynamic RAM memory circuits used in computers are studied along with ROMs, masked PROMs and erasable PROMs. CPLD design is explored extensively. Schematic entry and state diagram are methods learned to program a Xilinx CPLD. VHDL is introduced. Three class and three laboratory hours weekly.

EET*H256   Microprocessors   4 cr.
*Prerequisite: EET*H252.* A study of the fundamentals of Microchip Corporation's PIC™ microcontroller architecture and high level programming language using Micro Engineering Lab's PIC BASIC PRO compiler. Programming concepts include looping, decisions, time delays, interrupts, and LCD display. Hardware is addressed via the M. E. Labs X1 experimenter board. The PBPro compiler is run within Microchip's MPLAB Integrated Development Environment™ allowing full simulation capability as well as use of the Microchip ICD2 In Circuit Debugger for observing hardware operation in a very controlled manner. Three class hours and three laboratory hours weekly.

EET*H294   Projects   2 cr.
*Prerequisites: EET*H104, 232, 252.* Provides the opportunity to construct a project of interest to the student with the approval of the instructor. The course involves research, preparation, and a written report for the project, as well as full implementation, testing, fabrication, troubleshooting, and final demonstration of the project. Schematics and PCB layouts will be prepared using OrCAD SDT and OrCAD PCB tools. Four laboratory hours weekly.

EET*H268   Control Systems   3 cr.
*Prerequisites: EET*H126, 114, 232, 252, MAT*H185.* An introductory course which investigates primarily electro-mechanical control systems. Discrete control systems using relay logic and programmable controllers (PLC's) are studied. Open and closed loop analog speed control systems are closely investigated. Motion, work EVSelope, axis of movement and programming lead up to a project with a working robot. Three class and three laboratory hours weekly.

EET*H242   Fiber Optics   3 cr.
*Prerequisites: EET*H136, 252, PHY*H122.* The course will cover the basics of fiber optics, how it is manufactured, its applications and fiber performance. The different types of construction of fiber optic cabling will be discussed and illustrated, with the advantages and disadvantages of each. Different types of connectors will be covered in both the classroom and the laboratory with the student making many of the actual connections. Measurement of the transmission characteristics of cables will be measured in the laboratory using a Time Domain Reflectometer. The use of single mode and multimode cabling relative to the type of transmission will be discussed. Three class and three lab hours weekly.

EET*H251   Electronic Instrumentation   3 cr.
*Prerequisite: EET*H126, 114. Corequisites: EET*H232, 252.* A study of the operating principles of electronic and electrical instruments. Both analog and digital instruments are covered. Sources of instrument errors and standards of measurement are included, along with the design of VOM circuits and basic electronic instruments. Also included is an introduction to LABVIEW (Basic Virtual Instrument Programming) and data acquisition. Three class and three laboratory hours weekly.

EMT-PARAMEDIC
Allied Health/Nursing/Physical Education

EMT*H100   Emergency Medical Technician-Basic (EMT-B)   6 cr.
This course includes classroom and clinical experiences and provides students the opportunity to develop the knowledge and skills required for EMT-B National Certification. Emphasis is placed on patient assessment, clinical signs and symptoms, pathophysiology and pre-hospital care of patients. Areas of instruction include CPR, airway essentials, assessment and care of trauma and medical patients including infants, children and the elderly, rescue operations, hazardous materials and pharmacological interventions. Clinical rotation in an emergency room is required.

ENGINEERING TECHNOLOGY
Engineering Technologies Division

TCN*H101   Introduction to Engineering Technology   3 cr.
Students meet and interact with Engineering Technology faculty through classroom activities and hands-on laboratory projects designed to show the interesting world of technology and engineering. Reading and discussions cover the history of technology and engineering as well as the different career options in the technology fields. Computer Labs cover word processing and PowerPoint presentations. Necessary skills for personal success are also covered such as: problem solving, teamwork, classroom skills, and ethics. 3 contact hours.

ENGLISH
Arts and Humanities Division

The English faculty is well aware that individuals enter college with different reading and writing skills. Because of this, courses have been designed to meet special needs and to help develop the skills necessary for success in college or a chosen career. Testing and consultation with counselors and instructors help in planning a program. The College's Arts and Humanities Division is available for further assistance when choosing coursework in English.

ENG*H043   Writing: Paragraph to Essay   3 cr.
Prerequisite: Appropriate score on placement tests or recommendation of Division Director and instructor. This course provides a strong basis in the mechanics of writing and promotes confidence in the expression of ideas. Emphasis is placed on practicing the writing process beginning with a focus on the paragraph and moving to the writing of the essay. Conventional use of citation, quotation, and paraphrase (using MLA style) is a necessary component of ENG*H043. This course is a prerequisite for other writing courses unless placement exams indicate a readiness otherwise. ENG*H043 may not be taken concurrently with, or after completing, ENG*H053, 063 or 101. This course requires a minimum of six (6) hours of outside work per week. This course does not fulfill any degree requirement.

ENG*H053   The Paragraph and Beyond   6 cr.
Prerequisite: Appropriate score on placement tests or recommendation of Division Director and instructor. This course will build a strong basis in the mechanics of writing and will enhance the student's confidence in expressing ideas by providing practice in sound writing mechanics. Emphasis is placed on practicing the writing process beginning with a focus on the paragraph and moving to the writing of the essay with a focus on rhetorical methods. Basic library and research techniques are introduced and practiced. In addition, students will read, critically assess and write as a response to readings. This course is a prerequisite for ENG*H101 and requires a minimum of twelve (12) hours of outside work per week.

ENG*H063   Writing: Introduction to Essay   3 cr.
Does not apply to degree. Prerequisite: "C" or better in ENG*H043 or appropriate score on placement tests or recommendation of Division Director and instructor. This course will enhance the student's confidence in expressing ideas and provide practice with sound writing mechanics. Emphasis is placed on practicing the writing process with a focus on rhetorical methods; skills are taught within the context of essay writing. In addition, students will read, critically assess and write as a response to readings. Library and research techniques are practiced. This is a prerequisite for ENG*H101 unless placement exams indicate a readiness otherwise. ENG*H063 may not be taken concurrently with, or after completing, ENG*H101. This course requires a minimum of six (6) hours of outside work per week. This course does not fulfill any degree requirement.

ENG*H101   Composition   3 cr.
Prerequisite: "C" or better in ENG*H053, or 063 or successful completion of placement tests or recommendation of Division Director and instructor. May not be taken concurrently with ENG*H053, or ENG*H063 or ENG*H102. This course is designed to introduce students to the importance of writing and to develop their critical thinking, reading, and writing skills. The class will focus on the writing of expository essays, often in response to complex readings. This course will emphasize the necessity of revision as a means of producing college-level writing. Intensive library and research techniques are an integral part of this course.

ENG*H102   Literature and Composition   3 cr.
Prerequisite: "C" or better in ENG*H101 or recommendation of Division Director and instructor. Students develop skills in understanding and appreciating genres such as fiction, poetry, and drama. Additionally, students apply critical methodologies and investigate relationships between literature and society, thus confirming their skills of analysis and writing. Intensive library and research techniques are an integral part of this course. ENG*H102 is an academic core course.

ENG*H200   Advanced Composition   3 cr.
Prerequisite: "C" or better in ENG*H101 or recommendation of Division Director and instructor. Students will study audiences, research, and write material for those audiences. Students will be encouraged to freelance some writing during the semester.

ENG*H202   Technical Writing   3 cr.
Prerequisite: ENG*H101. This course involves the student in the study and practice of the basic skills and principles of technical writing for business and industry. The practice of writing is emphasized; graphic and design elements including designing visual formats are given secondary emphasis. The course focuses on the fundamental skills and formats of letter/memos, instructions, proposals, reports, and layperson writing (communicating difficult subjects to general audiences). Individual instructors may add other subjects.

ENG*H211   Short Story   3 cr.
Prerequisite: ENG*H102 or ENG*H200. This course is a study of the framework and the major movements, writers and works of short fiction. Emphasis is given to the various attempts to portray the response to the complexity of life and to examine the role of literature. It will, further, focus on the study of short prose fiction in order to develop the ability to read and write. The course informs understanding of how literary form suits both an author's and an age's aesthetic.

ENG*H214   Dramatic Literature   3 cr.
Prerequisite: ENG *H102 or ENG*H200. The study of dramatic literature, analysis and critical writings about the great plays from the canon of world drama. Works to be read include plays by Euripedes, Shakespeare, Molière, Isben, Chekhov, Williams, and Hansberry.

ENG*H215   Studies in Children's Literature   3 cr.
Prerequisites: ENG*H102 or ENG*H200. This course covers selection, evaluation and critical study of books and materials available for children. Included are folklore, poetry, fiction, and non-fiction, as well as discussion of outstanding writers and illustrators, past and present.

ENG*H221   American Literature I   3 cr.
Prerequisites: ENG*H102 or ENG*H200. Students read and discuss leading writers of America to the Civil War. Included are works of the Puritans, Jefferson, Franklin, Cooper, Emerson, Melville, and Whitman. Critical and historical analysis is included. The period covered by this course corresponds to the period covered by HIS*H201, U.S. History I.

ENG*H222   American Literature II   3 cr.
Prerequisites: ENG*H102 or ENG*H200. Students read and discuss leading writers of America from 1865 through World War II. Critical and historical analysis is included. The period covered by this course corresponds to HIS*H202, U.S. History II. Authors such as Twain, James, Crane, Frost, Dreiser, Fitzgerald, Hemingway, and Faulkner are included.

ENG*H231   British Literature I   3 cr.
Prerequisites: ENG*H102 or ENG*H200. Students read and discuss representative writers of British poetry and prose to the eighteenth century including the works of Chaucer, Shakespeare, Milton, Pope, Swift, and Johnson. *Course offering subject to enrollment.*

ENG*H232   British Literature II   3 cr.
Prerequisites: ENG*H102 or ENG*H200. Students make an intensive critical and historical study of British writers beginning with Blake and the Romantics and ending with twentieth century writers. Offered subject to enrollment.

ENG*H241   World Literature I   3 cr.
*Prerequisite: ENG*H102 or ENG*H200.* This course is a study of representative works of world literature to 1715. The course emphasizes the study and consideration of the literary, cultural, and human significance of selected great works of the Western and non-Western literary traditions.

ENG*H242   World Literature II   3 cr.
*Prerequisite: ENG*H102 or ENG*H200.* This course is a study of representative works of world literature from the seventeenth century to the present. The course emphasizes the study and consideration of the literary, cultural, and human significance of selected great works of the Western and non-Western literary traditions.

ENG*H251   African-American Literature   3 cr.
*Prerequisite: ENG*H102 or ENG*H200.* This survey of African-American literature will analyze and discuss the Black experience through literature. It will begin with the eighteenth century and continue to the present. Because this body of work is of great social import, and because there are several "Black Experiences," a generous selection of works will be included.

ENG*H252   African-American Drama   3 cr.
*Prerequisite: ENG*H102 or ENG*H200.* This course is a survey of African-American drama. It analyzes and discusses African-American and other diverse theatrical experiences through the study of dramatic presentation.

ENG*H269   Studies in Young Adult Literature   3 cr.
*Prerequisite: ENG*H102 or ENG*H200.* This course covers selection, evaluation, and critical study of fiction available for adolescents and young adults (ages 12-18). Students will learn about the young adult novel as a literary form with an emphasis on reading of representative fiction. The course will also include the history of the genre and interpretive approaches to texts, the exploration of common themes, as well as the opportunity to write young adult fiction.

ENG*H274   The Graphic Novel as Literature   3 cr.
*Prerequisite: ENG*H102.* Student explores the use of the combination of words and graphic images to create effective storytelling. Both contemporary and historic examples of graphic novels will be examined.

ENG*H278   Contemporary Literature   3 cr.
*Prerequisite: ENG*H102 or ENG*H200.* This course critically analyzes post-WWII literature, including short fiction, poetry, and drama. This course will include discussions of literatures from around the world as well as new developments in literary studies, such as post-Colonialism and postmodernism.

ENG*H281   Creative Writing   3 cr.
*Prerequisite: ENG*H101.* This course gives students practical experience in writing various forms of prose and verse. The emphasis will be on individual creative methods, creative reading and listening, editorial techniques, and the production of finished work, including possible preparation of manuscripts for publication.

ENG*H282   Creative Writing Poetry   3 cr.
*Prerequisite: ENG*H101.* Students experience the craft of poetry through actual writing, through criticism of fellow student-poets, and through the study of various poetic forms.

ENGLISH AS A SECOND LANGUAGE
Arts and Humanities Division

Note: *ESL students may use up to 6 credits of intermediate and advanced levels of ESL courses to fulfill the modern language and/or arts and humanities elective requirements. However, transfer of ESL credits from NVCC to other institutions or from other institutions to NVCC are governed by the policies of the receiving institution.* The ESL courses are designed for students whose native language is not English. The sequence endeavors to help students attain a level of proficiency in English that will permit them to succeed in the academic or career programs of the college. The ESL sequence has six levels. The core of the sequence is the 6-credit reading/writing courses which integrate discussion and grammar into the content. There are grammar courses from levels one through five; oral communication courses at levels one, three and five; and one pronunciation course at level one. Placement in ESL courses is determined by the ESL office and is based on the Levels of English Proficiency (LOEP) exam and a writing sample. To be promoted to the next level, students must demonstrate mastery of the respective language learning competencies, which is determined by a grade of "C" or better and completion of all coursework. Students in upper levels of ESL may concurrently take some academic courses, in accordance with course prerequisites. After successful completion of the ESL sequence, students progress to ENG*H101. However, some students may be required to first take ENG*H043, ENG*H053 or ENG*H063.

ESL*H013   Writing and Reading I   3 cr.
*Prerequisite: Successful completion of ESL*H5030 (Real Life English) or specified score on ESL placement exam.* In this low beginning level course, students begin to develop basic skills in reading and writing. Coursework focuses on basic grammar structures and sentence construction. Vocabulary is increased through reading and writing. This course requires a minimum of six hours of outside work per week. (fall, spring)

ESL*H015   Grammar I   3 cr.
*Prerequisite: Successful completion of ESL*H5030 Real Life English or specified score on ESL placement exam.* In this low beginning level course, students will be introduced to patterns and rules of basic grammar structures. Students will practice and apply these structures through exercises, reading, writing, and discussion. This course requires a minimum of six hours of outside work per week. (fall, spring)

ESL*H017   Oral Communications I   3 cr.
*Prerequisite: Successful completion of ESL*H5030 Real Life English or specified score on ESL placement exam.* In this low beginning level course, students will work toward improving their speaking and listening skills. Students will develop their oral communication skills, including pronunciation, through a variety of activities such as role playing, conversation, large and small group discussions, and oral reports. This course requires a minimum of six hours of outside work per week. (fall, spring)

ESL*H022   Reading and Writing II   6 cr.
*Prerequisites: Successful completion of ESL*H013 or specified score on ESL placement exam.* In this high beginning level course, students continue to develop reading and writing skills by reading extensively and writing effective sentences and structured paragraphs. Reading and writing also provide the basis for vocabulary and grammar development. This course requires a minimum of twelve hours of outside work per week. (fall, spring)

ESL*H025   Grammar II   3 cr.
*Prerequisite: Successful completion of ESL*H015 or ESL* H013, or specified score on ESL placement exam.* In this high beginning level course, students build on basic grammar structures and practice them with reading, writing, and speaking exercises. This course requires a minimum of six hours of outside work per week. (fall, spring)

ESL*H132   Reading and Writing III   6 cr.
*Prerequisite: Successful completion of ESL *H022 or specified score on ESL placement exam.* In this low intermediate course, students continue to develop reading and writing skills by reading extensively and writing effective sentences and structured paragraphs. Assigned readings (including whole works) inspire individual writing assignments as well as discussions in small and large groups. In addition to learning grammatical principles, students work on effective sentence structures, paragraph development and organizational skills in writing compositions. This course requires a minimum of twelve hours of outside work per week. (fall, spring)

ESL*H135   Grammar III   3 cr.
*Prerequisite: Successful completion of ESL*H025 or specified score on ESL placement exam.* In this low intermediate course, patterns and rules of grammar structures will be introduced, practiced, and applied in a meaningful context. Formal exercises, short writings, and communicative activities will be used to promote mastery of essential language structures. This course requires a minimum of six hours of outside work per week. (fall)

ESL*H137   Oral Communications III   3 cr.
Prerequisite: Successful completion of ESL *H022 or specified score on ESL placement exam. In this low intermediate course, communication skills and fluency will be developed using authentic language. Students will develop increased self-confidence and competency through a variety of activities that address oral communication, pronunciation, listening and reading comprehension, and vocabulary development. Activities will include role-playing, interviewing, class and small group discussions, oral reports, and written exercises. This course requires a minimum of six hours of outside work per week. (Fall,Spring)

ESL*H139   Pronunciation III   3 cr.
Prerequisites: Successful completion of ESL*H022 or specified score on ESL placement exam. This course will provide extensive, in-depth practice in English pronunciation with special focus on rhythm, stress, and intonation. Basic features of English phonology will be reviewed. Students will learn to evaluate their own speech in order to become more competent, self-assured speakers. Short readings and poetry will be used to facilitate the unique expressive and communicative features of spoken English. This course requires a minimum of six hours of outside work per week. (fall)

ESL*H142   Reading and Writing IV   6 cr.
Prerequisite: Successful completion of ESL*H132 or specified score on ESL placement exam. In this high intermediate course, students continue to strengthen reading and writing skills. Assigned readings (including whole works) as well as student writing form the basis for small group and class discussions. Students focus on writing and rewriting essays to develop ideas, organization, clarity and accuracy in their writing. This course requires a minimum of twelve hours of outside work per week. (fall, spring)

ESL*H145   Grammar IV   3 cr.
Prerequisite: Successful completion of ESL*H132 or 135 or specified score on ESL placement exam. In this high intermediate course, students will further develop proficiency in the use of grammar structures through group discussions, oral practice, written exercises, and short writings. Use of grammar structures in authentic contexts will be emphasized. This course requires a minimum of six hours of outside work per week. (spring)

ESL*H152   Reading and Writing V   6 cr.
Prerequisite: Successful completion of ESL*H142 or specified score on ESL placement exam. In this low advanced course, students continue to refine reading comprehension and writing proficiency. Assigned readings (including whole works) as well as student writing provide the text for small group and class discussions. Through writing and rewriting essays, students work on organizational skills, development of ideas, clarity and the mechanics of effective writing. This course requires a minimum of twelve hours of outside work per week. (fall, spring)

ESL*H155   Grammar V   3 cr.
Prerequisite: Successful completion of ESL*H142 or specified score on ESL placement exam. In this low advanced course, key grammar structures will be learned and practiced through group discussions, oral and written exercises, and short writings. Use of grammar structures in authentic contexts will be emphasized. This course requires a minimum of six hours of outside work per week. (fall)

ESL*H157   Oral Communications V   3 cr.
Prerequisite: Successful completion of ESL*H142 or specified score on ESL placement exam. In this low advanced course, fluency in oral communication and listening skills will be further developed. Communicative competency will be addressed in an authentic and meaningful setting. Taped lectures and conversations, oral presentations, interviewing, class and small group discussions, role playing and vocabulary development activities will enhance proficiency in English. This course requires a minimum of six hours of outside work per week. (fall, spring)

ESL*H162   Reading and Writing VI   6 cr.
Prerequisite: Successful completion of ESL*H152 or specified score on ESL placement exam. In this high advanced course, students continue to develop fluency, clarity, organizational skills and the mechanics of effective writing with a focus on the linguistic and rhetorical requirements of second language learners. Course content and writing assignments are based on reading selections, complete works, and student texts. Students write, revise, and edit drafts, participate in group work, and confer with teachers and peers. This course requires a minimum of twelve hours of outside work per week. (fall, spring)

ENVIRONMENTAL SCIENCE
Mathematics/Science Division

ENV*H110   Environmental Regulations   3 cr.
A broad view of federal, state and municipal environmental regulations as they apply to industry, commercial establishments, local governmental facilities and the individual citizen. Provides a practical approach to regulatory understanding to enable one to plan an effective and economically sound management system. Course topics include the Clean Air Act (CAA), Clean Water Act (CWA), Toxic Substance Control Act (TSCA), SARA Title III (Community Right-to-Know), Resource Conservation and Recovery Act (RCRA) CT Transfer of Establishment Act (TASA) and federal, state and local regulations covering such topics as hazardous material transportation, in-ground tank storage and specific hazardous materials such as asbestos and PCBs. ISO 14,000 requirements will be discussed.

ENV*H120   Introduction to Hazardous Materials   3cr.
Hazardous materials are associated with virtually all industrial activities. This course is designed for people who routinely come in contact with hazardous materials in the workplace. OSHA regulations, Material Safety Data Sheets (MSDS), toxicology, selection of protection equipment, ventilation and storage of hazardous materials will be covered. Fire, electrical, radiation and noise hazards will also be discussed. Students will use industrial supply catalogs, computers and the Internet to identify appropriate protective equipment for a range of hazardous materials.

ENV*H160   Environmental Measurement   3 cr.
Theory and discussion of techniques for making environmental measurements necessary for implementing environmental management systems. Field measurements and sampling procedures will be emphasized as opposed to laboratory analytical techniques. Air, surface water and groundwater measurement techniques will be covered. Students will have the opportunity to practice using a variety of field instruments. Evaluating potential sources of error when using these instruments and the use of statistics are important parts of this course.

ENV*H205   Foundations of Environmental Chemistry   3cr.
Prerequisite: CHE*H111 or 121. The objective of the course is to study the chemical reactions in natural systems. The fate and transport of contaminants introduced into the environment by humans will be examined. Ways of analyzing for contaminants in the atmosphere, hydrosphere, and lithosphere will be identified and students will obtain practical experience with some of these techniques. Written lab reports will be required. Two class and two laboratory hours weekly.

ENV*H230   Environmental Control Processes   3 cr.
Prerequisite: CHE*H111 or 121. Water pollution control procedures are studied including sedimentation, flocculation, ion exchange, membrane processes, filtration, disinfection, and biological approaches. Both municipal and industrial wastes are addressed. Air pollution control is also covered. The causes of smog, acid rain, ozone depletion, and the greenhouse effect are examined, followed by a look at air pollution control processes that reduce these problems.

ENV*H235   Waste Minimization & Treatment   3 cr.
A study of the methods and procedures used to minimize solid and hazardous wastes. These include substitution of less hazardous materials in the manufacturing process, modifying the manufacturing process, recycling and re-use. Treatment of wastes will be covered, including incineration, bioremediation, solidification, stabilization, and landfill disposal. Students will be responsible for preparing a written report on a specific waste problem or treatment process.

ENV*H240   Principles of Soil and Water Resources   3 cr.
The study of soil structure and various methods to reduce soil erosion. Discussion of soil chemical structure and its relationship to nutrient availability. Depletion of soil nutrients by leaching and excessive crop harvesting, and soil restoration will also be considered. The hydrologic cycle will be studied in detail, including surface water body and ground water characteristics. Soil chemical cycles for major plant nutrients and contaminants will also be investigated. A research paper is required. Three hours weekly.

ENV*H270   Environmental Project   2 cr.
Prerequisites: ENV*H110, 120, 160, 205, 230, 240. A course to provide students with experience in design, research, and completion of an environmentally related project. Knowledge and application of regulations, sampling methods, waste minimization, hazardous materials, wastewater treatment,

Course Descriptions

and pollution control techniques are required for successful completion of the project. An extensive research paper and oral presentation of the project are required. Four hours weekly.

ENV*H290   CWE - Environmental Science Co-op   3 cr.
*Prerequisites: Students must have a minimum of 9 ENV*H credits prior to the co-op semester, a minimum 2.0 GPA, senior status and approval of the Environmental Science Coordinator.* This elective Co-op entails a supervised work experience in a job related to the student's major. This senior-level course provides the student with the opportunity to reinforce the techniques learned in the classroom by applying them in a business/industrial setting. The course consists of: **1.** Two-hour Professional Development Workshop **2.** Minimum 225-hour Cooperative Work Experience **3.** Weekly Co-op Seminar with faculty facilitator

FINANCE
Refer to the Business Finance section.

FIRE TECHNOLOGY and ADMINISTRATION
Engineering Technologies Division

FTA*H112   Introduction to Fire Technology   3 cr.
This introductory course reviews the nature and extent of the fire problem in the U.S., the characteristics and behavior of fire, the state, regional, national and international organizations having responsibility for fire control and suppression, extinguishing agents, fire protection equipment and other basic aspects of fire protection technology. Three class hours weekly.

FTA*H116   Building Construction   3 cr.
*Corequisite: FTA*H112.* The study of major types of building construction and their related problems under fire conditions; fire resistance and flame spread ratings; fire walls and partitions; protection of openings; and fire test methods. Three class hours weekly.

FTA*H118   Fire Prevention and Inspection   3 cr.
*Corequisite: FTA*H112.* History and philosophy of fire prevention, organization for fire prevention and inspection, training inspectors, methods of inspection, reports and record keeping, fire prevention education, public relations in inspection work, coordination with government agencies, and code administration. Three class hours weekly.

**FTA*H130   Fire Technology and Administration
                Tech-Prep Internship**   3 cr.
This course is a directed study and service opportunity for those in a Tech-Prep program. It is designed to allow the participant to develop an awareness of the fire service and provide a service opportunity benefiting both the student and the community. To participate, a student, at a minimum, must be part of a Junior/Cadet/Apprenticeship/Probationary program sponsored by a fire, rescue, emergency medical service or fire marshal's office. To obtain college credit for this program, the student must participate in the Tech-Prep program as prescribed for his/her high school. Credit for this course will not be granted separately. The student will be assigned a mentor from his/her sponsor and the Fire Technology and Administration program of Naugatuck Valley Community College. The student will be required to complete a project designed by the Department and agreeable to the mentor from Naugatuck Valley Community College. In addition, the student will be required to complete at least two assignments one of which will be in support of the major project. Prior to the start of the program the student will be assisted in developing his/her program and what specifically will be required to obtain credit.

FTA*H210   Water Supply and Hydraulics   3 cr.
*Corequisite: PHY*H121.* Basic properties of incompressible fluids, static and velocity pressures, flow through orifices, Bernoulli's Theorem, Venturi principle, flow of water in pipes, Reynolds number, Hazen-Williams formula, head calculations, water distribution systems, and pumping problems will be discussed. Other concepts taught will be use of Pitot tubes and other flow meters, measurement of pressure losses in various pipe and hose line configurations, pumping problems, and measurement of flow in water distribution systems. Three class hours weekly.

FTA*H213   Codes and Standards   3 cr.
This course studies fire and building codes as a means for providing reasonable public safety; the code development and adoption process; code administration; major code producing organizations; national standards with particular concentration on the Life Safety Code of the NFPA and its referenced standards. Three class hours weekly.

FTA*H216   Municipal Fire Administration   3 cr.
*Prerequisite: FTA*H112.* Organization of municipal fire prevention and control services, analyzing needs, master planning, building the organization, distribution of a fire department's personnel requirements, hiring practices, training, records, work schedules, staff development, labor problems, physical equipment and facilities, and budget preparation will be discussed. Three class hours weekly.

FTA*H218   Sprinkler and Fixed Extinguishing Systems   3 cr.
*Prerequisite: FTA*H210.* This course studies wet and dry-pipe automatic sprinklers, both commercial and residential; pre-action and deluge systems; water spray and foam systems; standpipes; carbon dioxide, dry chemical, and halon extinguishing and explosion suppression systems; use of appropriate NFPA Standards. Three class hours weekly.

FTA*H219   Fire Investigation   3 cr.
*Prerequisite: FTA*H116. Corequisite: CHE*H111.* This course studies determination of points of origin and causes of fires, discriminating between fire of accidental and incendiary origin, managing operations at the fire scene, collecting and preserving evidence, recording information, and scientific aids to investigation. Three class hours weekly.

FTA*H272   Terrorism - First Responders   3 cr.
Many of the principles that apply to Haz Mat, EMS, and crime scene responses also apply at WMD responses. This course will provide additional information to help the First Responder understand informed, controlled, and safe responses to incidents involving weapons of mass destruction. 3 contact hours.

**FTA*H290   Fire Technology and Administration
                Cooperative Work Experience**   3 cr.
*Prerequisites: FTA*H112, six (6) additional FTA*H credits, "C" or better and approval of Fire Education and Training Coordinator.* The Fire Technology and Administration Co-op Work Experience is a supervised internship in an approved work Environment in the fire and life safety field directly related to the student's major. The course is a technical elective open to students who have satisfactorily completed all first and second semester coursework. This course involves a minimum of 15 contact hours weekly. The course consists of: **1.** Two-hour Professional Development Workshop **2.** Minimum 225-hour Cooperative Work Experience **3.** Weekly one-hour Co-op Seminar with faculty facilitator

FOODSERVICE MANAGEMENT
Refer to Hospitality Management.

FRENCH
Refer to Languages.

GENERAL STUDIES

GEOGRAPHY
Behavioral and Social Sciences Division

GEO*H102   Introduction to Human Geography   3 cr.
This course is a study of interrelationships between the physical Environment and human activity with special emphasis on geographic factors which underlie current political, social and economic problems.

GEO*H111   World Regional Geography   3 cr.

The interaction of the physical Environment with the social, cultural, political and economic conditions in various regions of the world, and the diverse patterns of human activity which emerge from the interplay of these forces are examined. The course is organized on natural regions such as: Anglo-America, Latin America, Europe, the Middle East, Africa and the Pacific World.

GEOLOGY
Mathematics/Science Division

GLG*H121   Introduction to Physical Geology   4 cr.

This course will be devoted to the study of the processes involved in the formation of the earth's crust. A study of earthquakes, volcanoes, mountain building, minerals, oceans, continental drift, and erosion by wind, water, and ice will be explored. Three hours lecture and three hours laboratory weekly. Some field trips may be included.

GERMAN
  Refer to Languages.

GRAPHIC DESIGN
  Refer to Art.

HISTORY
Behavioral and Social Sciences Division

HIS*H101   Western Civilization I   3 cr.

*Prerequisite: Eligibility for ENG*H101. Students may not receive credit for HIS*H104 or 121 in addition to HIS*H101.* This course is an issue-oriented course of Western Civilization from the Ancient World to 1715 from a contemporary perspective. Topics selected on the basis of significance and relevance will include oriental despotism, the origins of political democracy, concepts and codes of justice, the first federal empire, feudalism and the emergence of secular nation – states and the Renaissance and Reformation – as seen through the eyes of statesmen, philosophers, religious leaders, writers, artists, scientists, etc. of their day.

HIS*H102   Western Civilization II   3 cr.

*Prerequisite: Eligibility for ENG*H101. Students may not receive credit for HIS*H104 or 122 in addition to HIS*H102.* This course is an issue-oriented study of Western Civilization from 1715 to the present from a contemporary perspective. Topics, selected on the basis of significance and relevance, will include change through revolution and evolution, industrialization and class conflict, individualism and collectivism, nationalism and imperialism, war and peace, totalitarianism, and the ecumenical spirit – as seen through the eyes of statesmen, philosophers, religious leaders, writers, artists, scientists, etc. of their day.

HIS*H104   Milestones in Western Civilization   3 cr.

*Students may not receive credit for HIS*H101, 102, 105, or HIS*H122 in addition to HIS*H104.* A one-semester course in Western Civilization. The course is issue-oriented and focuses on such topics as order and justice under law, the distribution of wealth and power, class structures and social mobility, church and state, the impact of inventions and technology, industrialization and urbanization, nationalism and imperialism, reform and/or revolution, the state and the individual, and war and peace.

HIS*H105   History of Africa to 1900   3 cr.

This course is a survey of African civilization through a critical study of the cultural, political, and socioeconomic trends in the African continent from the earliest to contemporary times. Among the topics to be examined are the development of agriculture, the rise of the great empires, the movement of men and ideas – Islam and Christianity and new gods, the continent in ferment, the triple forces of – European exploration, exploitation, and colonization, the triple heritage of lifestyles, regaining of independence, the problems of nation building, Africa and the world, and the remnants of colonialism in Africa and South Africa.

HIS*H121   World Civilization I   3 cr.

*Students may not receive credit for HIS*H101 or 104 in addition to HIS*H121.* A study and appreciation of African, European, and American civilizations, and their interaction with each other up to 1600.

HIS*H122   World Civilization II   3 cr.

*Students may not receive credit for HIS*H102 or 104 in addition to HIS*H122.* A study and appreciation of African, European, and American civilizations, and the increasing interdependence from 1600 to the present.

HIS*H123   Contemporary Issues in World Civilization   3 cr.

In-depth studies of some of the major problems that confront the world today are presented. Course content is likely to vary from one semester to another in order to keep up with the changing complexion of the world's problems.

HIS*H124   Women of the World   3 cr.

This course is a study of women as driving forces in history and women driven by historical forces. Portraits of outstanding historical and contemporary female personalities – pagan priestesses and goddesses, women poets, scientists, educators, healers and reformers are presented.

HIS*H201   U.S. History I   3 cr.

*Prerequisite: Eligibility for ENG*H101.* This course is essentially a chronological treatment of the social, economic, political and cultural development of the American people to 1865. Certain topics such as colonial life, the Revolution, the political thought of Hamilton and Jefferson, reform, slavery, abolition, and the Civil War are studied in depth.

HIS*H202   U.S. History II   3 cr.

*Prerequisite: Eligibility for ENG*H101.* The course is essentially chronological in its treatment of the period from 1865 to the present. Certain topics in the social, economic, political, and cultural development of the American nation, such as the Age of Industrialization, International Relations and World War I, the Depression and New Deal, World War II and postwar period including the Cold War, the Eisenhower Era, the Sixties and Vietnam are studied in depth.

HIS*H210   History of Colonial America   3 cr.

This course addresses the social, economic, political and cultural development of the people of the British North American Colonies to 1783. Topics covered in this course will include the Americas prior to European colonization, early European exploration and settlement in the Americas, relations between Great Britain and the American colonies, the background and causes for the American Revolution, the development and operation of the American national government, and development of an American society/culture.

HIS*H213   The United States Since World War II   3 cr.

This course addresses the social, economic, political and cultural development of the United States between 1920 and the present. Topics covered in this course will include the culture and economy of the 1920s, the Great Depression and the New Deal, World War II, the Cold War, the Korean War, American society in the 1950s, the Civil Rights Movement, the Women's Rights Movement, the war in Vietnam, the Counterculture of the 1960s and '70s, the Reagan and Bush eras, the end of the Cold War, and the Clinton era.

HIS*H215   History of Women in the US   3 cr.

This course will examine the position of women in the United States from the late nineteenth century to the present. Topics of study will include the origins and issues of the women's movement in the nineteenth century, women's suffrage, the women's movement in the 1960's and 1970's, women and the law, women and patterns of work, women and business, women and religion, women and athletics, women and homemaking, women and assertiveness, women and sexuality, women and aging, women and divorce, and women and affirmative action.

HIS*H218   African-American History   3 cr.

This course will utilize historical, sociological, and cultural perspectives in the analysis of the current status of African-Americans in the United States. The quest for equality, problems and prospects, and the role of African-Americans in the development of American and world cultures will be explored.

HIS*H224   The American Indian   3 cr.

This course provides an overview of American Indian History from the pre-colonial era through the present, with a primary focus on those tribes living in the region of the present-day United States. The course examines cultures, tribal structures, Environments and economies, and world views

of various Indian tribes. Topics involved include Anglo-Indian relations, the role of Indians in the fur trade, life on the reservation, the changing objective of, and Indian resistance to, federal "Indian Policy" by various tribal nations in their effort to preserve their culture, tribal knowledge, language and belief systems and how the struggle for economic and cultural survival has carried on into the 21st century.

HIS*H251   Great Lives   3 cr.
The lives and impact of several major figures will be studied. The people will be from the fields of art, music, literature, the military, social philosophy, religion, politics, science, and business, and will include subjects such as Mao Tse-tung, Frederick Douglass, Elizabeth I, Charles Darwin, Martin Luther King, Jesus, Helen Keller, Napoleon Bonaparte, Leonardo DaVinci, Dwight D. Eisenhower, Albert Einstein, Pablo Picasso, Edgar Alan Poe, Thomas Edison, Eleanor Roosevelt, Jennie Jerome Churchill, David Livingstone, Winston Churchill, Abraham Lincoln, Edith Wharton, Marie Curie, Vincent Van Gogh, Victor Hugo and Georgia O'Keefe.

HIS*H299   Independent Study in History   3 cr.

HORTICULTURE
Mathematics/Science Division

HRT*H101   Landscape Mechanics   4 cr.
This course provides applied experiences in assorted construction techniques necessary in the development of landscapes and the selection and maintenance of small engines. Included are a survey of construction materials, deck design and construction, patio and walkway installation, stone wall construction, fencing, retaining wall design and construction. Earthwork calculations, measuring and materials estimating are included. Actual field exercises will be provided.

HRT*H102   Woody Plants   3 cr.
This is a basic introduction to common desirable, deciduous and evergreen trees, shrubs and vines for the natural and cultivated landscape. The course emphasizes identification as well as learning the attributes, growth habits and cultural needs of the plants. Nomenclature and fundamental tree biology are discussed.

HRT*H103   Herbaceous Plants   3 cr.
This course provides instruction in the identification and selection of annual and perennial herbaceous plants for various habitats. Students will develop an understanding of the plants' ornamental value in garden and landscape design, based on flowers, foliage, form and adaptability to the environment.

HRT*H105   Fruit and Vegetable Production   3 cr.
Primarily a course for residential vegetable and fruit cultivation, the course provides basic knowledge and methods that can be applied on the commercial level as well. Included are topics on site selection and soil preparation, planting, pruning, fertilization and general cultivation of vegetables, small bush and large tree fruits.

HRT*H115   Turf Management   3 cr.
The establishment and maintenance of turf grass are studied in the course. Lawn, golf course, and athletic field care are emphasized. Students will also learn to identify the turf grasses, identify and control weeds, insects, pests and diseases.

HRT*H124   Floral Design I   3 cr.
The basic principles of design as applied to the art of floral arranging are examined and flower shop management operation..

HRT*H125   Floral Design II   3 cr.
This is a continuation of HRT*H124. Emphasis will be placed on commercial floral design.

HRT*H202   Landscape Design I   3 cr.
*Pre-requisite: HRT*H102.* This course provides students with the basic knowledge and skills to create a successful landscape plan. Starting with the proper placement and design of driveways and walkways, it guides the student through the stages of developing an entire residential property. Appropriate plant selection is based on site characteristics and design principles and elements.

HRT*H203   Landscape Design II   3 cr.
*Prerequisite: HRT*H202 or permission of instructor.* This course is designed as a continuation of HRT*H202. This course will aid students in developing skills in perceptual design, job bidding, as well as give an introduction to computer aided drafting, as related to horticulture landscaping.

HRT*H204   Landscape Design III   3 cr.
*Prerequisite HRT*H203.* This course is designed as a continuation of HRT*H203. It prepares students for portfolio assessment and capstone projects using hand sketching skills and Pro- Landscape, CAD design software. Within this CAD program students will learn 2 dimensional landscape design, overhead design, (Planner Drawing), and development of pricing quotes. This course is designed for students interested in preparation for certification as Professional Landscape Designers.

HRT*H206   Landscaping Small Properties   3 cr.
This course complements and enhances HRT*H202, Landscape Design. It covers the evolution of garden design, an analysis of color relationships in design, and how to plan different kinds of gardens.

HRT*H207   Landscape Maintenance   3 cr.
This course is designed to assist the professional and amateur landscape gardener to maintain their gardens through an understanding of plant growth, pruning, nutrition, propagation, etc. The course also includes landscape estimating.

HRT*H215   Pest Control in Ornamentals and Turf   3 cr.
This course teaches students how to control pests in trees, shrubs, gardens and greenhouses. Detailed studies of the life histories of the pests are a background to learning some of the techniques of integrated pest management. However, the responsible and safe use of pesticides is emphasized throughout the course. This is a useful preparation for the certification of commercial pesticide applicators and arborists.

HRT*H219   Arboriculture   3 cr.
This course is designed to prepare landscapers for the State Arborist Exam. Topics include the biology, identification, selection, planting, management, preservation of trees and diagnosis of tree problems. It is recommended that if students lack extensive work experience they should have taken HRT*H102 (Woody Plants) and HRT*H215 (Pest Control) before taking the State Arborist Exam.

HRT*H222   Greenhouse Management I   4 cr.
This course focuses on the selection, production and management of greenhouse and bedding plants, interior plantscape management and design, management of annuals and perennials. Plant physiology is related to the Environmental effects on plant growth.

HRT*H223   Greenhouse Management II   4 cr.
*Prerequisite: HRT*H222 or permission of instructor.* This course is a continued in-depth study of the commercial greenhouse industry. It is a complement to HRT*H222. Included in the course is an in-depth look at the production of greenhouse crops, disease, and insect control. Interior plant maintenance, soils testing, and development of production programs with the use of computer aided programs will be used to better understand plant growth.

HRT*H224   Plant Propagation & Hybridization   4 cr.
 This course is an in-depth study of the world of plant reproduction and genetics. This course is a complement to other courses offered in the Horticulture degree and certificate program. This course will give students the theoretical and practical skills needed to reproduce plants asexually, and through micropropagation. Included will be the use of the college propagation facilities to facilitate learning.

HRT*H240   Nursery Management   3 cr.
*Pre-requisites: HRT*H102 Woody Plants and HRT*H103 Herbaceous Plants or permission of program coordinator.* This course provides a basic understanding of how to start and manage a commercial plant nursery. Site and Crop selection, irrigation and nutrition management will be addressed. Students will study the principles and practices of nursery crop production as well as fundamental business organization and marketing. Course activities include field trips to nursery sites.

HRT*H290   CWE/Horticulture Co-Op   3 cr.
Prerequisite 12 credits in Horticulture, "C" or better, and permission of Horticulture Coordinator, or Division Director. This course involves a work

experience, special project, independent study or course substitution which will vary according to the student's needs and interests. A written report and weekly journal will be required and evaluated at the end of the course. Conferences among students, work study supervisory agency, and faculty facilitator will be held during the semester. A two hour orientation/planning workshop at the beginning of the Co-Op is required.

HOSPITALITY MANAGEMENT:
FOODSERVICE MANAGEMENT
HOTEL MANAGEMENT
Business Division

HSP*H100   Introduction to the Hospitality Industry   3 cr.
An orientation to the business of hospitality and its various systems including restaurants, hotels, and institutions. The course surveys the hospitality industry's history, current business and career trends, operations management and organization, and forces shaping the future of the industry and its place in the economy.

HSP*H101   Principles of Food Preparation   3 cr.
A laboratory course which teaches the theory and develops skills in basic cooking methods and culinary techniques in the production of soups, salads, vegetables, stocks, and sauces. Meats, poultry, and seafood are prepared employing standard techniques with special attention to commercial and quality production. Tool and equipment use, weights, measures, and recipe conversion are discussed and practiced.

HSP*H102   Food Production and Purchasing   3 cr.
Prerequisite: HSP-H101.* A continuation and application of the culinary techniques and knowledge acquired in HSP*H101 through the planning and preparation and group service of advanced menus. Discussion of meat, poultry, and fish identification, fabrication, and purchasing specifications, as well as food costing and menu pricing.

HSP*H103   Principles of Baking I   3 cr.
This course takes an expansive view of baking and pastry. Students will learn the basic principles of baking through lecture, demonstrations, assignments, and hands-on participation. Technique will be emphasized. Kitchen math, weights and measurements, quality and cost control, and sanitation will be incorporated into each lesson. Students will explore basic baking ingredients and their important characteristics in relation to baked goods. Recipes, both sweet and savory, will include various doughs and their accompanying fillings; pies and tarts; cakes, icings, and fillings; cookies and petit fours; pâte à choux; creams, custards, and mousse; and chocolate desserts.

HSP*H108   Sanitation and Safety   3 cr.
An in-depth coverage of commercial foodservice sanitation **resulting in SERVSAFE® Qualified Food Operator certification as required by Connecticut law.** Included are proper food handling procedures in receiving, storage, preparation, purchasing and service, as well as staff training and quality control SERVSAFE® Alcohol Certification also provided.

HSP*H109   Food Safety Certification (8 weeks)   1 cr.
*Not open for credit for students who have successfully completed HSP*H108.* Designed for the non-degreee students employed in the foodservice industry. Aspects of applied commercial foodservice sanitation **resulting in nationally recognized SERVSAFE® Qualified Food Operator certification as required by Connecticut law.** Prevention of food-borne illness, sanitary procedures in the protection and service of food to the public, laws and regulations, sanitary design and employee training will be discussed. Eight weeks.

HSP*H125   Wine and Viticulture I   3 cr.
Botanical study of the grape (vitis) and principles of enology (wine making) are studied and practiced. Students also explore viticultural (grape growing) techniques used throughout the world, and gain experience in the on-campus experimental vineyard. Wine tasting sessions included. *Per Connecticut State Law, persons under the age of 21 are not allowed to consume alcoholic beverages.*

HSP*H126   Wine and Viticulture II   3 cr.
An in-depth coverage of the science and art of growing grapes, including all aspect of the physical vine life cycle and cultural considerations throughout human history. Other topics include biology, anatomy, climatic influences, and varietal and hybrid growing characteristics. Hands-on instruction is provided at the campus vineyard where vineyard management is performed. Further instruction and practice in winemaking is offered. *Per Connecticut State Law, persons under the age of 21 are not allowed to consume alcoholic beverages.*

HSP*H127   Food and Wine Dynamics   3 cr.
An examination of the principles behind classic and traditional wine and food pairing. Students will learn to recognize the character and key components in wine: acidity, alcohol, sweetness, varietal character, tannin, body, texture and age. Students will participate in focused tastings: Herbs & Wines; Fats & Acids; the Seven Foods that Challenge Wine; Spicy Foods & Wine; and Desserts & Dessert Wines. *Per Connecticut State Law, persons under the age of 21 are not allowed to consume alcoholic beverages.*

HSP*H135   Service Management   3 cr.
An exploration of "front of the house" hospitality operations, including styles and standards of dining room, lounge, and concierge services as well as dining room organization, customer relations, merchandising and sales promotion. Special emphasis is placed on manager/supervisor functions such as training, motivation, cashiering, revenue control and wine stewardship. Students will serve guests as the schedule dictates. Schedule adjustments may be requested to accommodate guest service.

HSP*H202   Catering and Event Management   3 cr.
*Prerequisites: HSP*H101, 102.* A lecture/laboratory practicum emphasizing the management and planning of catering, banquet and conference service with in-depth discussion of the meetings market and technology. Advanced culinary preparations will be practiced, stressing group service.

HSP*H211   Food and Beverage Cost Control   3 cr.
*Prerequisites: CSC*H101, CSA*H105, HSP*H100, 101, MAT*H095 or equivalent, or consent of Program Coordinator.* An in-depth study of the control function of the hospitality manager and its various applications in the purchasing, receiving, storing, issuing, production and sale of food and beverage. Operational planning and analysis, labor and labor cost control, and cost/volume/profit relationships are explored. This course may result in nationally recognized certification upon successful performance on certification examination.

HSP*H215   Principles of Baking II   3 cr.
This course expands on the basic techniques and principles of Baking 1, though it is not a prerequisite. Students will learn the more advanced baking procedures and their applications through lecture, demonstrations, assignments, and hands-on execution of recipes. Participation and proper technique and method are emphasized. Kitchen math, particularly baker's percentages, weights and measurements, quality control, and sanitation will be incorporated into each lesson. Baking as science will also be explored including the chemistry of the ingredients, techniques, and methods and their interactions. Students will learn to understand the structure of recipes. Recipes, will included classic and modern preparations of advanced pastries such as petit fours, choux paste, laminated doughs, and chocolate work. Sugar techniques will be included. Students will learn finishing and plating and dessert artistry.

HSP*H 216   Artisan Bread   3 cr.
This course will serve as an introduction to hand crafted bread, using ferment & fresh yeast methods, with emphasis on understanding the chemical reactions among ingredients. Creativity and presentation of finished product will be highlighted. Students will be taught through lecture, demonstrations, assignments and active participation. Kitchen math, weights and measurements will be discussed throughout the course.

HSP*H231   Hospitality Law   3 cr.
*Prerequisites: HSP*H100 .* A treatment of the basic laws relating to merchants in general, including a study of the Uniform Commercial Code, contracts and negotiable instruments, liability, and property rights. Special laws of the hotel and foodservice industry are explored as well as case studies of the legal and moral responsibilities of the restauranteur/hotelier to his employees and guests.

HSP*H237   Hospitality Marketing   3 cr.
*Prerequisites: HSP*H100.* An analysis of the services market with regard to hotel and restaurant marketing and methods of advertising, promotion, public relations, pricing, and discussion of strategic planning and positioning.

HSP*H241   Principles of Travel and Tourism   3 cr.
A survey of today's travel industry and its primary segments, including recreation and leisure systems, the transportation and accommodation industries, destination development and characteristics of the travel market. The role and function of the travel agency and career opportunities will be explored.

HSP*H242   Hotel Management   3 cr.
A study of hotel and motel front office systems and procedures, including organization, business flow, reservations and rooming, guest accounting, and security. Management functions and operating statistics are discussed and practiced.

HOTEL MANAGEMENT
Refer to Hospitality Management.

HUMAN SERVICES
Behavioral and Social Sciences Division

HSE*H101   Introduction to Human Services   3 cr.
This course offers an introduction to the Human Services field, including the history of the various service professions, an overview of the primary populations that receive services, information about a variety of mental health and social service agencies, and a discussion of successful treatment methods. This is the foundation course of the three core program courses. (fall/spring)

HSE*H115   Child Advocacy in Human Services   3cr.
The course presents concepts, policies and practice in the broad field of child and family services and advocacy. Among the topics to be examined are the needs of children and families, the major policies and programs of social services designed for children and families, and the policy issues that emerge for planning for children and families. The intent of the course is to provide the student with a substantive base of knowledge about policies and practice in family and child services. Students will be helped to develop an overall orientation to family - as a unit of attention, as well as to the emerging service concerns of family support, family preservation, the need for continuity of family relationships, and to the various culturally competent approaches. (spring)

HSE*H133   Disabilities and Mental Health   3 cr.
This is a required course for all Human Services students wishing to pursue the Disabilities Specialist/Mental Health Option. This is an introductory course in disabilities and mental health. Its primary purpose is to familiarize students with both developmental and mental disabilities from childhood to adulthood. It examines the impact of physical and mental disabilities, major legislation, ethics, advocacy, medical and psychological concerns, rehabilitation, employment, social planning, and living and working in society for children and adults with disabilities and mental illness. The physical and psychosocial aspects of developmental disability and mental health also are studied through a focus on education, family life, community and values. (fall/spring)

HSE*H170   Introduction to Gerontology   3 cr.
The course examines the biological, social and psychological aspects of aging and the problems that are experienced by the aged in America. It explores the local, state and federal programs and services available to the elderly and the caregiver. Topics covered include Alzheimer's Disease, Medicare, Social Security, living wills, and Hospice vs. home care issues. (fall)

HSE*H171   Death and Dying   3 cr.
An exploration of the stages of death and dying. Special emphasis will be placed on understanding grief and loss. The course will focus on the following: the dying person, sudden death and the effect on the family, cultural and economic issues, the broad moral aspects of death, and other related problems. (spring)

HSE*H202   Introduction to Counseling and Interviewing   3 cr.
*Prerequisite: HSE*H101 with a grade of "C" or better.* This is a systematic study of the basic principles, methods, and current techniques employed in assessment, planning, interviewing, counseling, contracting, and interventions. The course develops student self-awareness of personal values and professional ethics. Students are expected to learn through theory, examination of their own values, and classroom application of interactional skills. (fall/spring)

HSE*H281   Human Services Field Work I   3 cr.
*Prerequisites: HSE*H101, 202,with a grade of "C" or better. Successful completion of 6 credit hours in Behavioral Sciences, ENG*H101, or permission of the Human Services Coordinator or Division Director.* Work experience in a human service agency is a major component of this required course. The student will have the opportunity to apply the values, concepts and skills acquired in the introductory and other HS courses. This activity will be conducted under the supervision of the faculty coordinator and the professionals in the agencies in which the students are placed. (fall/spring) The course consists of: **1.** 160-hour Field Work Experience   **2.** Weekly Field Work Seminar that links field practice to issues related to working within a wide variety of community agencies.

HUMANITIES
Arts and Humanities Division

HUM*H114   Study in Fine Arts Appreciation   3 cr.
The discovery and appreciation of the historical and contemporary arts of the area under study. This may include architecture, painting, theater or music. Student will observe, investigate and report under the supervision of a faculty member.

HUM*H295   Seminar in the Humanities   3 cr.
This course will focus on a specific area of humanistic study, to be identified at the time of offering. Such topics may include a particular literary genre (such as science fiction), linguistic development (such as transformational grammar), a writer (such as Ernest Hemingway), a literary period (such as metaphysical poetry), specific art forms (such as dance), or the like. This is intended for upper-level students who work with the instructor in an identified area of interest or expertise. It may be repeated once for credit. Prerequisites are to be determined at the time of scheduling.

INTERDISCIPLINARY STUDIES
IDS–H101   First Year Experience   1.5 cr.
The First Year Experience introduces students to diverse academic content, emphasizing the acquisition of learning strategies in preparation for rigorous college study. The content is designed to help students make a smooth transition to college. This course focuses on developing creative and critical thinking skills, developing information literacy and technology skills, improving written and oral communication, setting personal and academic goals, developing structured and consistent study habits, practicing effective time management, and becoming contributing members of the NVCC community. In addition, students will develop a comprehensive academic and career development plan leading to graduation. The course is required of all matriculating first-time, full-time students. There are no prerequisites.

ITALIAN
Refer to Languages.

LANDSCAPING
Refer to Horticulture.

LANGUAGES
Arts and Humanities Division

CHI*H101   Elementary Chinese I   3 cr.
The emphasis of this course is on building the Pinyin system of basic Chinese vocabulary and sentence patterns. Students who complete the course will have mastered the Pinyin system, are able to communicate with native Chinese speakers of Chinese on simple daily subjects, and have basic reading and writing knowledge.

CHI*H102   Elementary Chinese II   3 cr.
This course builds proficiency in use of the Pinyin system of Chinese vocabulary and sentence patterns and instruction is focused on building conversational skills. Knowledge of the structural forms of the language and their appropriate use in different cultural contexts is emphasized.

FRE*H101   Elementary French I   3 cr.
This course focuses on the basic acquisition of the four skill areas (speaking, listening, reading, writing) for survival communication. There is constant exposure to the cultural diversity of the French world using audio and video tapes. Knowledge of the language and culture is further enhanced by the technological component which requires students to use the Internet for various class activities. ***Note: FRE*H101 is not open to students who have successfully completed three years of French courses in high school or who are native speakers except by consent of the Division Director.***

FRE*H102   Elementary French II   3 cr.
Prerequisite: FRE*H101 or permission of instructor. FRE*H102 is a continuation of the skills taught in FRE*H101. Emphasis is placed on a more fluid style of communication at all skill levels.

ITA*H101   Elementary Italian I   3 cr.
This course focuses on the basic acquisition of the four skill areas (speaking, listening, reading, writing) for survival communication. There is constant exposure to the cultural diversity of the Italian world using audio and video tapes. Knowledge of the language and culture is further enhanced by the technological component which requires students to use the Internet for various class activities.   ***Note: ITA*H101 is not open to students who have successfully completed three years of Italian courses in high school or who are native speakers except by consent of the Division Director.***

ITA*H102   Elementary Italian II   3 cr.
Prerequisite: ITA*H101 or permission of the Division Director. ITA*H102 is a continuation of the skills taught in ITA*H101. Emphasis is placed on a more fluid style of communication at all skill levels.

POR*H101   Elementary Portuguese I   3 cr.
This course focuses on the basic acquisition of the four skill areas (speaking, listening, reading, writing) for survival communication. There is constant exposure to the cultural diversity of the Portuguese world using audio and video tapes. Knowledge of the language and culture is further enhanced by the technological component which requires students to use the Internet for various class activities.   ***Note: POR*H101 is not open to students who have successfully completed three years of Portuguese courses in high school or who are native speakers except by consent of the Division Director.***

POR*H102   Elementary Portuguese II   3 cr.
Prerequisite: POR*H101 or permission of the Division Director. POR*H102 is a continuation of the skills taught in POR*H101. Emphasis is placed on a more fluid style of communication at all skill levels.

SGN*H101   Sign Language I   3 cr.
This course covers the fundamentals of the basic structure of ASL grammar, introduces basic information about the deaf community and the deaf culture. Students will learn basic sign language and the finger-spelled alphabet. The course also presents information about the use of sign language by the deaf, as well as specialized uses with the deaf/blind, mentally retarded, autistic, and mentally ill.

SGN*H102   Sign Language II   3 cr.
Prerequisite: SGN*H101 (formerly ASL-H101). Sign Language is a visual/manual language developed for communication by and with the deaf. This course continues the presentation of Sign Language as the best and most accepted method of communication with hearing-impaired people. Students learn more advanced sign language and uses of the finger-spelled alphabet. The course will present the uses of nuance, metaphor, connotative distinctions and syntactic structure.

SPA*H101   Elementary Spanish I   3 cr.
This course focuses on the basic acquisition of the four skill areas (speaking, listening, reading, writing) for survival communication. There is constant exposure to the cultural diversity of the Hispanic world using audio and video tapes. Knowledge of the language and culture is further enhanced by the technological component which requires students to use the Internet for various class activities.   ***Note: SPA*H101 is not open to students who have successfully completed three years of Spanish courses in high school or who are native speakers except by consent of the Division Director.***

SPA*H102   Elementary Spanish II   3 cr.
Prerequisite: SPA*H101 or permission of the Division Director. SPA*H102 is a continuation of the skills taught in SPA*H101. Emphasis is placed on a more fluid style of communication at all skill levels.

SPA*H201   Intermediate Spanish I   3 cr.
Prerequisite: SPA*H102 or permission of the Division Director. This course is an intermediate Spanish course on the college level. Non-native and native speakers may enroll for credit in this course. The natural approach will be used in developing the four communication skills (listening, speaking, reading and writing). Students will study structure and grammar, read, converse, discuss and write in Spanish. A broad survey of Hispanic culture and custom will be presented.

SPA*H202   Intermediate Spanish II   3 cr.
Prerequisite: SPA*H201. This course is a continuation of the skills taught in SPA*H201. The natural approach will be used. Grammar and structural studies will continue, but emphasis will be placed on reading, writing, speaking and listening with content based on civilization and cultural topics. Practice on oral tapes is required.

LEGAL ASSISTANT/PARALEGAL
Business Division

LGL*H101   Introduction to Paralegalism   3 cr.
This course is an introduction to various aspects of the law, including but not limited to torts, contracts, criminal law and procedure and constitutional law. The course also surveys the structure and procedure of a number of court systems in the United States, and includes discussions of some topics of concern to the paralegal, including legal ethics, the rights of the elderly, the poor, the young and other disadvantaged minorities.

LGL*H102   Legal Research and Writing   3 cr.
Selected topics to develop skills in the use of legal encyclopedias, digests, reports, statutes, restatements, law reviews, and other research materials used by the legal profession are presented as an introduction to the uses of the law library. It is necessary that students do much of their legal research assignments in one of the many state or university law libraries located at various places throughout Connecticut. Students who are unable to devote several hours of research per week in one of the law libraries are advised not to enroll in LGL*H102.

LGL*H104   Real Estate Practice   3 cr.
This course is an introduction to the law of real property, and includes the preparation and recording of deeds, easements, leases and other public documents, in addition to a large variety of other documents, forms and procedures that a paralegal will encounter in real estate practice.

LGL*H202   Advanced Legal Research and Writing   3 cr.
Prerequisites: LGL*H102. This course further solidifies the student's ability to master the functions of the law library and provides a theoretical and practical forum in the use of traditional legal research and writing.

LGL*H204   Criminal Procedure   3 cr.
This course enables the student to utilize the classroom as a learning law laboratory since it will explore the Bill of Rights and the Fourteenth Amendment in detail as well as the entire United States Constitution. Constitutional law cases will be studied in the context of criminal procedure issues evolving from the precedents set by the United States Supreme Court.

LGL*H206   Bankruptcy Law   3 cr.
This course will provide students with a thorough review of the United States Bankruptcy Code. The course is tailored to explore the general functions of the Bankruptcy Court. The applicable rules and proceedings for various types of bankruptcy cases will be thoroughly discussed.

LGL*H208   Litigation   3 cr.
As an introduction to civil and criminal procedures, this course includes a survey of the functions of the federal and state court systems. The preparation of documents relative to the trial and appellate process is examined.

**LGL*H209	Probate Practice and Estate Administration**	3 cr.
This course is an introduction to the law of wills, trusts and estates, and includes the law of intestate succession as well as a survey of the probate system. This course will help to prepare the paralegal to become familiar with the various forms and documents associated with probate and estate practice.

**LGL*H210	Family Law**	3 cr.
This course will provide a strong background in the area of family law, with special emphasis on family law practice, including litigation. Other family law topics such as adoption, custody, community property, and child support are thoroughly investigated.

**LGL*H230	Advanced Legal Issues Seminar**	3 cr.
This course will be taught as a seminar and through a series of lectures. A guest speaker is also likely to participate. The problem-solving method will be used to examine critical issues in the wake of current legal events and new trends in the law.

**LGL*H270	Legal Assistant Cooperative Work Experience**	3 cr.
Through this elective co-op paralegal concepts are applied through work experience with law firms, banks, government, private agencies, and other institutions. Course consists of: **1.** A two-hour Professional Development Workshop **2.** Minimum 145-hour (volunteer) *or* 225-hour (paid) Cooperative Work Experience **3.** A weekly one-hour Co-op Seminar

MANAGEMENT
Refer to the Business section.

MANUFACTURING ENGINEERING TECHNOLOGY
Engineering Technologies Division

**MFG*H104	Manufacturing Processes**	4 cr.
Students study the theoretical concepts involved in the process of manufacturing parts as well as the development of the knowledge and skills required in the manufacturing process. Laboratory study emphasizes Milling, Drilling, Turning, Grinding & other manufacturing processes. Laboratories will involve setup and procedures for various manufacturing processes. Three class and two laboratory hours weekly.

**MFG*H106	Computer-Aided Manufacturing I**	3 cr.
*Prerequisites: MFG*H104*. Basic CNC setup and operations with an introduction to automation programming, and tooling for CNC applications will be discussed. Basic functions using industry standard PLC controls will also be covered. Laboratory will include practice in setup and operation of CNC lathes and milling machines. Two class hours and two laboratory hours weekly.

**MFG*H113	Production Planning and Control**	3 cr.
Introduction to the fundamentals of production planning, forecasting, analysis, and control. Included are such topics as forecasting and master production schedules, procurement, routing, scheduling and dispatching, recording and reporting. Three class hours weekly.

**MFG*H114	Plant Layout & Materials Handling**	3 cr.
*Prerequisite: MFG*H104*. Study of factory planning and materials handling with emphasis on efficient arrangements of work areas to achieve lower manufacturing costs. Includes the study of sample layouts, layout fundamentals, the fundamentals of materials handling, storage, and inventory, and materials handling equipment. Three class hours weekly.

**MFG*H120	Metrology**	3 cr.
A study of the application and use of measuring instruments and interpretation of gathered data. Through classroom instruction and exercises, students will study the use of micrometers, verniers, dial indicators, force gauges, air gauges, attribute measurement gauging, visual inspection, Environmental testing, tool and gauge control, and the use of electronic measuring equipment. Three class hours weekly.

**MFG*H122	Quality Assurance Organization and Management**	3 cr.
Develops the concepts of a Total Quality System (TQS), including policies, objectives and organization. Examine such topics as: cost of quality, planning, improvement techniques, reliability, supplier relations and evaluations, inspection, measurement and process control techniques, and customer relations. Three class hours weekly.

**MFG*H144	Hydraulics & Pneumatics**	3 cr.
*Prerequisites: PHY*H121, MAT*H172*. This course will cover hydraulic and pneumatic systems as a means of transmitting and controlling power. This course discusses fluid power fundamentals, component identification and operation, fluid power graphic symbols, circuits, application and diagnostics. Three class hours per week.

**MFG*171	Introduction to Lean Manufacturing**	3 cr.
The purpose of this course is to provide the student with the fundamental knowledge of current continuous process improvement methodologies in use today within competitive manufacturing environments. This introductory course will expose the student to the basic concepts of Lean Manufacturing theory and the various tools and techniques involved with a lean implementation. This course will be presented following the lean-six sigma process methodology of DMAIC (Define, Measure, Analyze, Improve, and Control) to ensure that at the completion of the course, the student will be competent to participate effectively as a team member in lean implementation projects.

**MFG* H172	Introduction to Lean Supply Chain Management**	3 cr.
This course is an introduction to the basic principles and methodologies of Supply Chain Management. The course reviews the lean principles needed to understand and maintain the supply chain. Key concepts are covered such as Value Stream Mapping, customer/supplier roles, supplier types, metrics, quality systems, quality audits, communication, and information flow. Class activities, group assignments, and case studies are emphasized for real-world learning experiences.

**MFG*H200	Manufacturing Management**	3 cr.
This course introduces the student to the structure and organization of manufacturing management in an industrial society. The role of various management functions including strategic planning, industrial cost accounting, inventory management, and quality control will be studied. Three class hours weekly.

**MFG*H201	Computer-Aided Manufacturing II**	3 cr.
*Prerequisites: CAD*H150, MFG*H106*. This course discusses CNC programming, analog programmable logic control programming, and interfacing controllers, and machine tools. Laboratory practice in writing CNC programs, robotics programming and interfacing, and analog programmable logic controller programming will be studied. Two class and two laboratory hours weekly.

**MFG*H210	Materials of Engineering**	4 cr.
*Prerequisites: MFG*H104, CHE*H111*. Study of the structure and properties of engineering materials. Materials selection, processing and heat treatment are studied. The changes in structure and properties during forming, machining, and heat treating operations are discussed. Selected experiments to demonstrate the effects of processing, including heat treatment on the properties of engineering materials. Standard materials tests are also performed. Three class and two laboratory hours weekly.

**MFG*H217	Tool Design**	5 cr.
*Prerequisites: CAD*H150, MFG*H104, 210, MAT*H185*. The course is designed to teach the theoretical principles, commercial standards and techniques for the design of metal cutting tools, jigs, fixtures, gages and dies. Application of the theory and principles learned in the classroom to design problems. The design problems will include metal cutting tools, jigs, fixtures, gages and dies. Three class and four laboratory hours weekly.

**MFG*H220	Reliability**	3 cr.
*Prerequisites: MFG*H230, MAT*H172*. Develops the fundamentals of the reliability system in an orderly fashion so that the student can understand reliability problems and their technical solutions. Subject matter includes: system effectiveness, statistical and mathematical applications, reliability, systems maintainability, human factors, specifications, acceptance testing, organization and costs. Three class hours weekly.

MFG*H225   Industrial Safety   3 cr.
This course studies industrial accident prevention and industrial hygiene covering such topics as management's responsibilities and functions in accident prevention; OSHA regulations; machine guarding techniques and personal protective equipment; fire prevention and control; electrical and hand tool hazards; employee training and communications; injury data, hazards, and accident analysis; and hygiene problems caused by industrial Environments. Three class hours weekly.

MFG*H230   Statistical Process Control   3 cr.
*Prerequisites: MAT*H172.* Presents a modern approach to quality adapted from the science of statistics. The scope of study ranges from basic statistical concepts, through the history of statistical quality control and the contributions of pioneers like Deming, Juran and Taguchi. Traditional methods of control charts for both variables and attributes and acceptance sampling are presented, as well as the more modern methods. Simple, effective graphical problem-solving tools, histograms, run charts, stem and leaf displays, Pareto charts, cause and effect diagrams and capability ratios (CP & CPK) are covered. The computer is utilized as an aid in calculation and control chart preparation. Two class and two laboratory hours weekly.

MFG*H239   Geometric Dimensioning and Tolerancing   3 cr.
A study of the industrial accepted ANSI Specification Y14.5-1973 and ANSI Y14.5M-1982. The ANSI Y14.5 specification creates a unified language through which engineering requirements are specified with respect to actual function and relationship of parts features. Subject matter includes the application of form, profile, orientation, runout, and location types of geometric characteristics, including the application of the feature control frame and tolerance and datum modifiers. Three class hours weekly.

MFG*H234   Physical Testing   3 cr.
An introduction to the techniques of the physical testing of materials and components. The course includes a survey of engineering materials, including metals, polymers, and ceramics, metallographic procedures, mechanical procedures, mechanical testing, X-ray diffraction, and spectrography. Two class and two laboratory hours weekly.

MFG*H236   Nondestructive Testing I   3 cr.
Develops an understanding of the application and practice of modern nondestructive test techniques. Students are instructed in radiography, ultrasonic, magnetic particle, liquid penetrant and eddy current methods of nondestructive testing. Three class hours weekly.

MFG*H240   Design of Experiments   3 cr.
*Prerequisites: MFG*H230, 233, MAT*H172.* Studies the use of designed experiments aimed at product/process improvement as evidenced by lower cost, high quality and improved productivity. This course will teach the student to design, perform and analyze experiments. Included subjects are randomized design, factorial design, blocked experiments, Latin Square Designs and Taguchi methods. Two class and two laboratory hours weekly.

MFG-H248   Computer-Integrated Manufacturing (CIM)   3 cr.
*Prerequisites: MFG*H201.* This course discusses computer generated CNC programming and computer based additive manufacturing techniques. In addition students will gain an understanding of how to use Mastercam to generate programs for both milling and turning applications. Laboratory includes hands on application of course theory. Two class and two laboratory hours weekly.

MFG* H271   Advanced Lean Manufacturing   3 cr.
*Prerequisite: MFG*H171.* The purpose of this course is to provide the student with the knowledge to implement lean improvements within the production environment using a systematic approach. This course will follow an improvement project (from the student's current employer or case study) through the five stages of the DMAIC problem solving methodology. At the completion of the course, the student will be competent to effectively lead a lean implementation project within a company.

MFG* H272   Implementing Lean Supply Chain Management   3 cr.
*Prerequisites: MFG*H172.* This course covers the benefits and elements needed for implementing supply chain management. Team building and communication skills are shown as crucial factors in supply chain management. Topics emphasized in the course are measuring the velocity of the supply chain, developing partnerships, logistics, software tools, hardware, and continuous improvement. Class activities, group assignments and case studies are emphasized for real-world learning experiences.

MFG*H275   Mechanics of Materials   3 cr.
*Prerequisites: MEC*H108, MAT*H185.* The study and explanation of the relationships existing between externally applied forces and resulting stresses in deformations. From our study of Mechanics of Materials, we will be able to determine if a body is capable of fulfilling its intended purpose. Limited computer applications of beam theory and a computer demonstration of FEA. Three class hours weekly.

MFG *H280   Capstone   3 cr.
The Capstone Project is a design and manufacturing experience in which students work in teams on technical projects which require application of engineering of concepts, as well as analysis and experimentation are required. The student(s)/ (team) are required to write progress reports and give design review presentations during the semester in order to develop communication skills and teamwork, if applicable. At the end of the semester, an oral presentation, final written report, and demonstration of the project feasibility are required.

MARKETING
Refer to the Business section.

MATHEMATICS
Mathematics/Science Division

MAT*H073   Pre-Algebra—Number Sense   4 cr.
Prerequisite: Placement in this course is determined by a college placement exam. Material is chosen to provide the student with current mathematical concepts and topics needed to continue work in algebra, the mathematics of business, science and basic technology. Topics covered include computation with whole numbers, fractions, decimals, ratios, proportions, percents, and measures. Geometry topics are integrated throughout. Signed number computation, algebraic expressions, and equation solving appear regularly, thus familiarizing the student with algebraic concepts. Emphasis is on understanding of mathematical concepts and problem solving techniques. Instruction in calculator use is emphasized along with related applications. This will not fulfill a mathematics requirement in any degree program.

MAT*H075   Pre-Algebra–Number Sense, Geometry   3 cr.
Prerequisite: Placement in this course is determined by a college placement exam. Material is chosen to provide the student with current mathematical concepts and topics needed to continue work in algebra, the mathematics of business, science and basic technology. Topics covered include computation with whole numbers, fractions, decimals, ratios, proportions, percents, and measures. Geometry topics are integrated throughout. Signed number computation, algebraic expressions, and equation solving appear regularly, thus familiarizing the student with algebraic concepts. Emphasis is on understanding of mathematical concepts and problem solving techniques. Instruction in calculator use is emphasized along with related applications. This will not fulfill a mathematics requirement in any degree program.

MAT*H092   Statway I   4 cr.
(developmental – no credit toward degree or transfer)
*Prerequisite: Grade of B or better in MAT*H073 or MAT*H075 (Pre-algebra) or qualifying score on Placement exam. Co-requisite of ENG *H063 or qualifying score on placement exam, or permission of Chair of Mathematics Department.* Statway I is the first of two courses offering an alternative pathway for students in non-STEM (Science, Technology, Engineering, Mathematics) majors. These courses will combine elements of algebra and statistics into one curriculum. Students will take these courses instead of MAT *H095 (Elementary Algebra), MAT *H137 (Intermediate Algebra), and MAT *H167 (Principles of Statistics). The goal is to significantly improve the retention rate in developmental mathematics.

MAT*H095   Elementary Algebra Foundations   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H073 or MAT*H075 (Pre-Algebra) or an appropriate score on a college placement exam.* The course begins with a brief review of basic computational skills and operations with signed numbers. Algebraic order of operations and evaluation and simplification of algebraic expressions are followed by techniques for solving first degree equations and inequalities in one unknown. Also included in this course are algebraic methods for solving applications involving one and two unknowns. Basic rules of exponents are presented and scientific notation is discussed. This is followed by the basic polynomial operations and graphing linear equations in two unknowns, finding slopes of lines, x- and y- intercepts, and writing the equations of lines. This will not fulfill a mathematics requirement in any degree program.

MAT*H121   Applications for Business and Other Careers   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H095 (Elementary Algebra) or an appropriate score on a college placement exam.* Enrollment in MAT*H121 is restricted to students in Automotive Technician, Office Administrative Careers, Early Childhood Education, Hospitality Management, Landscaping and Horticulture programs. Topics covered include arithmetic and algrebraic operations, statistics, graphs, and tables. This course emphasizes specific mathematical applications for each discipline.

MAT*H122   Statway II   4 cr.
*Prerequisite: C or better in MAT *H079 (Statway I).* Statway II is the second course in the two semester Statway course sequence. The Statway course sequence is recommended for students enrolled in degree programs that require no mathematics beyond freshman-level statistics. Both courses in the course sequence (Statway I and Statway II) must be taken to receive credit for college level statistics. Students will use mathematical and statistical tools to explore real life data in a participatory learning environment. Statway II topics include modeling data with functions, quadratic functions, discrete and continuous probability distributions, Central Limit Theorem, sampling distributions, confidence intervals, one-sample and two-sample hypothesis tests, Chi-Square Tests, and ANOVA. This course requires the use of statistical technology.

MAT*H135   Topics in Contemporary Mathematics   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H095 (Elementary Algebra) or an appropriate score on a college placement exam.* The number systems (Whole Number, Integer, Rational, Real) are developed with their properties with respect to the operations of addition, subtraction, multiplication, and division. Additional topics include theory of sets, symbolic logic, various number bases, and number theory.

MAT*H137   Intermediate Algebra   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H095 (Elementary Algebra) or an appropriate score on a college placement exam.* The main themes of Intermediate Algebra are functions, represented by tables, graphs, and rules, and problem solving. The study of polynomial functions is extended via applications involving linear functions, linear systems, and quadratic functions. Students also study exponential functions, rational functions, radical functions, and absolute value functions. A graphing calculator is strongly recommended. This may be used as a general elective; **this will not fulfill a mathematics requirement in any degree program.**

MAT*H143   Math for Elementary Ed:
Algebra, Number Systems   3 cr**.**
*Prerequisite: Grade of "C" or better in MAT*H137 or an appropriate score on a college placement exam.* This course is designed for students planning to become certified in early childhood, elementary or middle school level education. Problem solving strategies will be developed and integrated throughout, in accordance with the NCTM *Principles and Standards for School Mathematics*. Topics include conceptual and relational understanding of the real numbers, including the subsets of whole numbers, integers, rational and irrational numbers, with an emphasis on place value and the associated operations. Topics from numeration systems, number theory, and set theory will be developed as needed, with regular use of manipulatives and technology.

MAT*H144   Math for Elementary Ed: Geometry, Data   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H137 or an appropriate score on a college placement exam.* This course is designed for students planning to become certified in early childhood, elementary or middle school level education. Problem solving strategies will be developed and integrated throughout, in accordance with the NCTM *Principles and Standards for School Mathematics*. Topics include probability, statistics, and geometry concepts presented through a problem-solving approach, and incorporating an extensive use of manipulatives and geometric software. Mathematical discourse is encouraged through cooperative learning and written communication.

MAT*H146   Math for the Liberal Arts   3 cr.
*Prerequisite: Grade of "C" or better in MAT *H137 (Intermediate Algebra) or an appropriate score on a college placement exam.* This is a survey course designed to acquaint the liberal arts student with a broad spectrum of mathematical ideas not emphasized in traditional algebra courses. As a terminal mathematics course, it conveys the nature and diversity of

mathematics, its methods, applications, and roles in society. Topics are selected from problem solving and critical thinking skills, graph theory, voting and apportionment, introduction to probability, linear programming, patterns and symmetry, linear and exponential applications; others may include fractal geometry, financial management, fair division schemes, game theory, or codes.

MAT*H148   Geometry   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H137 (Intermediate Algebra) or an appropriate score on a college placement exam.* A foundation course in Euclidean geometry using an axiomatic as well as an inquiry approach. Topics include inductive and deductive reasoning, logic, polygons, parallelism, congruence, similarity, coordinate geometry, direct, indirect and coordinate proof, and three-dimensional space. A brief introduction to non-Euclidean geometry will be presented if time permits. As appropriate, computer software is used to encourage exploration and promote the formulation of hypotheses.

MAT*H167   Principles of Statistics   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H137 (Intermediate Algebra) or an appropriate score on a college placement exam.* This technology-based course begins with an introduction to data analysis including techniques in the presentation of data and in the determination of statistical measures for central tendency and variation. The topics of linear correlation and regression are explored in the analysis of bivariate data. The basics of probability are presented prior to a thorough examination of discrete and continuous probability distributions. Emphasis is placed on the binomial and normal distributions. Estimation and hypothesis testing for population means is introduced. As time permits, statistical inference techniques for proportion, variance and the difference of means will be presented.

MAT*H170   Math Education in Practice   1 cr.
*Prerequisite: Grade of "B" or better in MAT*H172 with two letters of recommendation from instructors at NVCC and permission of the Division Director, Math Department Chair, or Math Lab Supervisor.* This course provides students the opportunity to develop their communication skills in mathematics. Students will assist and tutor peers in mathematics using appropriate technology for a minimum of three hours per week for 15 weeks in the Pronovost Math Lab at Naugatuck Valley Community College under the supervision of an instructor. The course may be taken up to three times for a maximum of 3 credit hours.

MAT*H172   College Algebra   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H137 (Intermediate Algebra) or an appropriate score on a college placement exam.* This course offers the student the development of numeric, algebraic, and graphic problem solving techniques beyond the intermediate level. Techniques are developed to solve equations and inequalities involving polynomials, radicals and rational expressions. Polynomial, inverse, rational, exponential, and logarithmic functions are studied and their applications are explored both algebraically and graphically.

MAT*H185   Trigonometric Functions   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H172 (College Algebra) or an appropriate score on a college placement exam.* This course offers the student a development of trigonometry through a functional approach. The trigonometric functions are considered as circular functions with applications of these to the solution of triangulation problems. Topics include trigonometric identities, inverse trigonometric functions, oblique triangle trigonometry and the graphs of the trigonometric functions. Vectors will be introduced and the polar coordinate system will also be considered.

MAT*H232   Applied Calculus   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H172 (College Algebra) or an appropriate score on a college placement exam.* The purpose of this course is to acquaint students not majoring in mathematics or science with a body of mathematical knowledge that may well demand investigation in view of their various academic goals. Topics covered include function theory, inequalities, tangent problems, continuity, limits, derivatives, and integrals.

MAT*H254   Calculus I   4 cr.
*Prerequisite: Grade of "C" or better in MAT*H185 (Trigonometric Functions) or an appropriate score on a college placement exam.* A four semester

hour course intended to provide the necessary preparation for advanced mathematics and science courses as requirements for all mathematics/science majors. The course begins with a review of the properties of absolute value and inequalities and other algebraic topics. Functions, limits, and continuity are thoroughly covered along with the derivatives. Formulas for calculating derivatives are presented, along with geometrical and physical applications. The antiderivative is introduced along with the definition of the differential and some applications. The course concludes with an introduction to the definite integral and its geometric meaning.

MAT*H256   Calculus II   4 cr.
*Prerequisite: Grade of "C" or better in MAT*H254 (Calculus I)* A second course in calculus for mathematics or science majors. Topics include the definite integral and applications of the definite integral to areas, volumes, and length of arc of a plane curve. Also considered are logarithmic and exponential functions, trigonometric functions, inverse trigonometric functions and various techniques of integration. Limits involving indeterminate forms and improper integrals are also discussed. The course concludes with an introduction to infinite series.

MAT*H268   Calculus III: Multivariable   4 cr.
*Prerequisite: Grade of "C" or better in MAT*H256 (Calculus II).* A course in multivariable calculus for mathematics or science majors. Topics include conic sections, plane curves, parametric equations and polar coordinates, vectors and solid analytic geometry, vector-valued functions, functions of several variables, partial differentiation, and multiple integration.

MAT*H285   Differential Equations   3 cr.
*Prerequisite: Grade of "C" or better in MAT*H268 (Calculus III: Multivariable)* Study of ordinary differential equations. Equations studied include the following: first-order linear, separable equations; exact equations; homogeneous linear equations of first or higher order with constant coefficients; auxiliary equations with complex roots; and non-homogeneous equations. Solutions of initial value problems with associated applications are studied. Techniques used include linear differential operators, the method of undetermined coefficients, variation of parameters, and Laplace transforms.

MECHANICAL ENGINEERING TECHNOLOGY
Engineering Technologies Division

MEC*H108   Statics   5 cr.
*Prerequisites: TCN*H101, MAT*H172, PHY*H121. Corequisite: MAT*H185.* Analysis of the forces which act upon rigid bodies at rest is the subject of this course. Balances of forces and moments on an object provide the basis for equilibrium calculations involving points, rigid bodies, frames and machines with a variety of supports (including frictional). The use of free-body diagrams and neat, professional level presentation of work is stressed. Five class hours weekly.

MEC*H251   Materials Strength   4 cr.
*Prerequisite: MEC*H108. Corequisite: MAT*H185.* Covers the principles involved in the analysis of stresses which occur within machine and structural elements subjected to various types of loads. Analysis of these stresses are made as applied to thin-walled cylinders and spheres, riveted and welded joints, beams, columns, couplings and shafts. Mechanical properties of common materials are determined using equipment such as the Universal Testing Machine, Torsion Testing Machine, and Impact Testing Machine. Experiments involving stress and strain analysis are included. Microcomputers are used in the analysis of experimental data and preparation of laboratory reports. Three class and two laboratory hours weekly.

MEC*H271   Fluid Mechanics   4 cr.
*Prerequisite: MEC*H108, Corequisite: MAT*H185.* An introductory survey of the principles and methods involved in the analysis of fluid systems. Included are common fluid properties, hydrostatics, the kinematics of fluid flow and energy relationships. The use of standard empirical information to reflect the departure of actual hardware performance from the theoretical is reflected in many of the applications considered. This course also provides laboratory experience with the common instruments used in experiments involving properties of fluids. To verify the general analytical methods studied in class, wind tunnel testing, hydraulics, pneumatics and pressure loss measurements may be included. Three class and two laboratory hours weekly.

MEC*H240   Fundamentals of Thermodynamics   4 cr.
*Prerequisite: CHE*H111.* This course covers the fundamental concepts of heat transfer. Major topics included are conduction, convection and radiation. The emphasis is on the practical applications of each type of heat transfer through example problems. The design and analysis of different types of heat exchangers are also explained in detail. Laboratory experiments involve heat transfer apparatus which supplement the theoretical class work. Three class and two laboratory hours weekly.

MEC*H284   Machine Design   5 cr.
*Prerequisites: CAD*H150, MEC*H251, MFG*H210.* Deals with the concept of mechanical design from concept to specifications. Covers the procedures, data, and techniques necessary to design/select mechanical components such as gears, springs, bearings, belt and chain drives, clutches, brakes, fasteners, shafts and screws. The use of microcomputers in the design process is emphasized. A design project is also included. Three class and four laboratory hours weekly.

MEC*H238   Dynamics   4 cr.
*Prerequisites: MEC*H108, MAT*H232.* This course covers the fundamental techniques used for analyzing the motion of particles and rigid bodies and the forces which cause that motion. Translation and rotation as fundamental components of rectilinear, curvilinear and constrained plane motion are explained. Relative and absolute velocities and accelerations are treated with both graphical and computational techniques. Laboratory practice is used to verify and reinforce the theoretical concepts. Three class and two laboratory hours weekly.

METEOROLOGY
Mathematics/Science Division

MET*H101   Meteorology   3 cr.
An introductory course on weather and climate. Through lecture, Internet access and other media, this course will cover atmospheric motion, severe weather, global and local climate, and forecasting.

MULTIMEDIA TECHNOLOGY
Arts and Humanities Division
Multimedia Technology courses are now listed under a new designation. Please refer to the Digital Arts Technology section for a list of these courses.

MUSIC
Arts and Humanities Division
The Division of Arts and Humanities encourages students to register for music courses in order to develop appreciation of, and skills in, the musical arts. Some of the courses are required in career programs; others are designed for students' interests and personal development. Consultation with counselors will help determine specific needs.

MUS*H101   Music History & Appreciation I   3 cr.
The course surveys historically significant music from the medieval period to the 20th century, emphasizing stylistic characteristics found in great music, art, and architecture.

MUS*H103   History of American Music   3 cr.
The history and music of American colonial times to the present are explored. Historical and cultural developments are examined as well as folk music, maritime music, church music, pop music, jazz music, and concert music.

MUS*H104   World Music   3 cr.
In World Music students study a variety of ethnic music from around the world. While our primary focus will be limited to certain selected regions and traditions, the overall scope will be broad in that these regions represent many different continents: North America, South America, Africa, Asia, and Europe. Because we will be studying music within the context of the societies that create it, our approach to the course material is interdisciplinary as we will be incorporating aspects of the arts, humanities and social sciences.

Course Descriptions

MUS*H111   Fundamentals of Music I   3 cr.
This course begins the study of notation and forms that musicians use to arrange, compose and perform music. Topics include musical instruments, clefs, key signatures, time signatures, scales, musical styles and forms.

MUS*H115   Music Theory I   3 cr.
Music Theory I is a study of melodic writing leading to four-part diatonic harmony. Topics include four-part writing, non-chord tones, cadences, and seventh chords. Music analysis, reading, and aural skills are reinforced together with the Theoretical material presented.

MUS*H116   Music Theory II   3 cr.
Prerequisite: Grade of "C" or better in MUS*H115 or Permission of Instructor. This is a continuation of MUS*H115 with a study of secondary functions, modulation, form and counterpoint. Music analysis, reading, and aural skills are developed together with the theoretical material presented.

MUS*H126   20th Century/ Modern Music   3 cr.
An historical survey of concert, symphonic and theater music of the 20th century. Styles such as Impressionism, Expressionism, Serialism, Neo-Classicism, Avant-garde, Musique Concrete, Minimalism, Jazz, and Rock will be explored.

MUS*H131   Music of the Theater   3 cr.
This course provides a study of opera, ballet, the Broadway musical, and other types of music for the theater.

MUS*H137   History and Appreciation of Jazz   3 cr.
This course covers musical terminology, familiarization with musical instruments, keys, basic chords and scales, form and structure of musical composition, and improvisation. The selections and examples are taken from jazz, rather than classical music. The course includes the history and appreciation of jazz, a study of major jazz artists, and an analysis of the cultural and social significance of jazz.

MUS-H154   Class Instruction in Beginning Piano   1 cr.
This course is a study in basic keyboard techniques and sight reading. It requires one class period a week with daily practice. The course may be repeated for credit.

MUS*H155   Class Guitar   1 cr.
This course provides a study of basic folk guitar chords and picking techniques. Emphasis is on singing with the guitar. This course may be repeated for credit.

MUS*H156   Guitar Ensemble   1 cr.
This is an opportunity for guitarists and bassists to experience reading and improvising in the context of a section, rather than the traditional rock or jazz band format. The goal is to raise sight reading levels while learning the art of ensemble playing. Special attention is paid to dynamics, phrasing, intonation, ensemble playing, and general musicianship. This course may be repeated for credit.

MUS*H157   Jazz Ensemble   1 cr.
Students and community members will perform in a small instrumental group jazz and contemporary charts from the Big Band Era to Fusion Rock. Instruments featured are percussion, bass, key board, guitar, saxophone, trumpet, and trombone. The course is open to all students with the consent of the instructor, and may be repeated for credit.

MUS*H161   Chorale I   2 cr.
Performance of choral repertoire from all stylistic periods is studied. Performances occur at the College and in the community. The course is open to all students as well as members of the community, with the consent of the instructor and may be repeated for credit.

MUS*H173   Class Voice   1 cr.
Principles of voice placement and development, breathing, diction and production are practiced. Solo and duet repertoire are explored. This is designed as a beginner class for students with little or no experience. The course may be repeated for credit.

MUS*H176   Gospel Singers
Students perform as a small ensemble of gospel singers. Performances occur at the college and in the community. The course is open to all students as well as members of the community.

MUS*H177   Jazz Singers   1 cr.
Students perform as a small ensemble. Performances occur at the College and within the community. The course is open to all students with the consent of the instructor, and may be repeated for credit.

MUS*H179   Opera Performance Ensemble   2 cr.
Prerequisites: MUS*H111 Fundamentals of Music with a grade of "C" or better, or permission of instructor. The Opera Performance Ensemble provides the opportunity for students to participate in small scale productions of opera scenes and operettas from the standard repertoire. The Director and Accompanist actively coach the students as well as direct and accompany the public performances which serve as the final project of the course. This course teaches and strengthens performance skills including singing and speaking voice production, acting, stagecraft, historical performance practice, knowledge of repertoire, and dramatic production.

MUS*H183   Applied Private Music Lessons I   1 cr.

MUS*H184   Applied Private Music Lessons II   2 cr.
These courses provide for private vocal or instrumental lessons. Fees for lessons are in addition to regular tuition and arranged between student and the teacher, who must be approved by the Music Director. Applied lessons are intended for students with some musical experience or background.

MUS*H208   Introduction to Music Therapy   3cr.
Prerequisites: MUS*H111 Fundamentals of Music with a grade of "C" or better, or permission of instructor. Introduction to Music Therapy provides a historical, theoretical, and clinical basis for defining and understanding music therapy and/or continuing its study. It is designed as a survey course to give historical background to the development of the profession, as well as basic understanding of techniques and populations now served by music therapists. Basic music proficiencies are helpful but not required for enrollment in this course.

MUS*H213   Music Theory III   3 cr.
Prerequisites: MUS *H116 with a grade of "C" or better, or permission of instructor. Music Theory III provides training and supervised practice of analyzing, performing, and composing music. Music Theory III is a continuation of Music Theory II and should be taken concurrently with Ear Training III.   Secondary chords, altered 6th chords, chromatic harmony, and modulation are mastered. Song writing is pursued as a means of understanding harmonic rhythm, progressions, accompaniment patterns, and small form structure. Keyboard proficiency is included.

MUS*H214   Music Theory IV   3 cr.
Prerequisites: MUS *H213 with a grade of "C" or better, or permission of instructor. Music Theory IV provides training and supervised practice of analyzing, performing, and composing music. Music Theory IV is a continuation of Music Theory III and should be taken concurrently with Ear Training IV.   Enharmonic modulation is introduced along with extended and chromatic harmony. Larger formal patterns are discussed (sonata form, rondo, and variation). 20th-century harmony is introduced, including non-functional harmony, dodecaphony, and set theory. Keyboard proficiency is included.

MUS*H215   Ear Training I   1 cr.
The goal of Ear Training I is to acquire the skills necessary to make intelligent and competent musicians. This course will focus on three major areas; sight singing, rhythmic reading, and dictation. This course is considered to be an aural lab component of Theory I and is an important course for those wishing to improve their pitch accuracy for the Chorus audition or Voice Lessons.

MUS*H216   Ear Training II   1 cr.
Prerequisite: MUS*H215 or permission of instructor. The goal of Ear Training II is to continue the work done in Ear Training I providing students with advanced training in pitch and rhythm, perception and sightreading. It is considered to be an aural lab component of Theory II courses and is an important course for those wishing to improve their pitch accuracy for Chorus or Voice lessons.

**MUS*H218   Electronic Music
                Composition/Audio Technology I**   3 cr.
Prerequisite CSA*H105 and permission of instructor. This course is an introduction to the art and techniques of electronic music and audio production. The history, elements, and tools of electronic music and audio will

be defined and explored. Topics will include; acoustics theory, analog and digital audio principles, recording engineering techniques, sound sampling, electronic synthesis, MIDI, and audio for multimedia and the World Wide Web.

**MUS*H219   Electronic Music
                Composition/Audio Technology II**   3 cr.
Prerequisite: DAT*H218 or MUS*H218. An in-depth study of the techniques and methodologies used in studio and live recording. In addition to classroom assignments and exercises, students will be expected to complete a minimum of fifteen hours of practicum field work resulting in the recording, editing and mastering of a live or studio project. Topics will include two-track and multi-track recording, studio acoustics and design, analog and digital mixing consoles, microphone placement techniques, signal processors, and studio session procedures.

MUS*H237   Principles of Sound Recording   3 cr.
Corequisite: DAT*H218 or MUS*H218. This course presents an in-depth study of the techniques and methodologies used in studio and live recording. In addition to classroom assignments and exercises, students will be expected to complete field work resulting in the recording, editing, and mastering of a live or studio project. Topics will include two-track and multi-track recording, studio acoustics and design, analog and digital mixing consoles, microphone placement techniques, signal processors, and studio session procedures.

MUS*H254   Concert Band   2 cr.
This is a modern, symphonic concert band featuring woodwind, brass, and percussion instruments. The band performs for college functions (such as commencement) and for the benefit of the college. The band may perform at other off-campus venues and for non-campus organizations. The instructor selects repertoire each semester based on the available instruments and skill level of players, as well as picking repertoire suitable for college activities. The repertoire represents the work of both serious "classical" composers as well as contemporary popular composers. The course is open to all students with the consent of the instructor and may be repeated for credit.

MUS*H256   Orchestra   2 cr.
Performance of orchestral repertoire from all stylistic periods is studied. This ensemble will perform at the College and in the community. The course is open to all students with the consent of the instructor and may be repeated for credit.

MUS*H257   Chamber Orchestra   1 cr.
Students perform as small ensemble chamber orchestra. Performances occur at the College and in the community. The course is open to all students with the consent of the instructor, and may be repeated for credit.

MUS*H263   Ear Training III   1 cr.
Prerequisites: MUS*H216 with a grade of "C" or better, or permission of instructor. Ear Training III provides classroom training and supervised practice of connecting musical sounds to musical notation and harmonic systems. Ear Training III is a continuation of Ear Training II and should be taken concurrently with Music Theory III. Intervals, scales, and chords in all inversions are sung and identified. Melodies for singing and dictation gradually incorporate chromatic alterations and modulation. Keyboard harmony is reinforced.

MUS*H264   Ear Training IV   1 cr.
Prerequisites: MUS*H263 with a grade of "C" or better, or permission of instructor. Ear Training IV provides classroom training and supervised practice of connecting musical sounds to musical notation and harmonic systems. Ear Training IV is a continuation of Ear Training III and should be taken concurrently with Music Theory IV. Sight singing, melodic dictation, keyboard harmony, and harmonic dictation incorporating chromaticism (secondary functions, mode mixture, N6, and augmented sixth chords), modulation to both closely and distantly related keys, and advanced rhythmic practices (syncopation, shifting meters, and hemiola).

MUS*H274   Conductor's Lab Ensemble   2 cr.
Prerequisites: MUS*H115 Music Theory I or permission of the instructor. The course must be taken concurrently with MUS*H183 or MUS*H184 Applied Music – Conducting. Learners are members of the College Choir. In addition to singing their particular voice part they also act as assistant conductors and are listed as such in concert programs. During the course of the semester assistant conductors utilize the baton and rehearsal techniques taught in the tutorials with the full choral group, either in the setting of a small group, voice section, or the entire chorus.

NURSING
Allied Health/Nursing/Physical Education Division

HLT*H093   Success Strategies for Nursing
This course is designed to introduce students to the nursing profession and to the Associate Degree nursing program at NVCC. The course presents a variety of approaches to assist students toward successful entry, progression and completion of the program. Students will be provided with learning activities which focus on developing critical thinking, reading and comprehension skills, knowledge of medical terminology and basic math competence as well as study, test-taking and communication skills.

HLT*H103   Investigations in Health Careers   3 cr.
This course is designed to assist students in meeting the expectations of a health care curriculum and career. The students will become familiar with the rigors of higher education and the specific skills needed to maximize their opportunity for academic and clinical success. The course will include a comprehensive overview of the duties and responsibilities associated with clinical competency. Interdisciplinary learning strategies, correlating clinical and didactic education, life management skills, work ethics, and critical thinking skills necessary for all health providers will be emphasized.

NSG*H240   Peri-Operative Nursing   6 cr.
Prerequisite: Current Connecticut Registered Nurse Licensure. A model curriculum consisting of the standards, recommended practices and guidelines developed by the Association of Perioperative Registered Nurses, serves as a basis for this course which prepares registered nurses to provide nursing care in the perioperative setting by incorporating the nursing process into all phases of pre, intra and postoperative patient care. Classroom and skill laboratory provide opportunity for learning knowledge and competency skills needed to begin an entry-level perioperative nursing position. Offered in cooperation with the Continuing Education, Community and Economic Development Unit of the College.

NUR*H101   Introduction To Nursing Practice   8 cr.
Prerequisite: Admission to the College and the Nursing Program. The student will focus on concepts basic to nursing practice. Emphasis is placed on application of the nursing process, communication skills, and nursing practice procedure acquisition. Clinical and laboratory experiences offer opportunities to integrate theoretical principles and demonstrate caring and competence in beginning professional role development.

NUR*H102   Family Health Nursing   8 cr.
Prerequisites: NUR*H101, PSY*H111, BIO*H235. Co-requisite: NUR*H103. The student will focus on issues affecting the family, including childbearing, childrearing, geriatric care and intermediate health care needs of limited duration. The medical surgical health problems include care for the client in the peri-operative period and the client experiencing orthopedic and simple genitourinary conditions. The course addresses several psychiatric disorders: anxiety and cognitive disorders, common child and adolescent psychiatric disorders. The student will have clinical rotations that provide experience caring for the childbearing family as well as caring for medical-surgical clients across the lifespan.

NUR*H103   Pharmacology for Families Across the Lifespan 1 cr.
Prerequisite: NUR*H101. Co-requisite: NUR*H102. The student will focus on the safe use, pharmacological principles, indications and nursing implications related to drug therapy when caring for individuals and families. Emphasis will be on medications used with perinatal, neonatal, pediatric, geriatric and peri-operative clients. The course will stress the general characteristics of selected medications and will include indications, pharmacokinetics, side effects, adverse effects, contraindications, administration, nursing implications across the lifespan, client education and relationship to prior learning.

NUR*H201   Nursing Care of Individuals and Families 1   9 cr.
Prerequisites: NUR*H102, NUR*H103, PSY*H201, SOC*H101. Co-requisite: NUR*H202. The student will focus on holistic care of individuals and families across the lifespan with a variety of health care needs. The needs of clients experiencing endocrine, respiratory, gastrointestinal, cardiovascular conditions and selected mental health disorders are examined. Bioterrorism as a health care issue will be addressed. Clinical laboratory experience provides the student an opportunity to administer care to a diverse population of clients in a variety of acute care and community health care settings. The

student will utilize critical thinking, caring, professionalism and communication skills in the care of the client. Emphasis is placed on provision of safe and competent care and development of the professional role as a member of a multidisciplinary health care team. Over the semester, the student is increasingly challenged in the clinical area with more complex client assignments.

NUR*H202   Pharmacology for Individuals and Families with Intermediate Health Care Needs   1 cr.
Prerequisite: NUR*H102, NUR*H103. Co-requisite: NUR*H201. The student will focus on pharmacologic principles related to the care of individuals and families across the lifespan with intermediate health care needs. Emphasis will be placed on medications used for clients who have endocrine, gastrointestinal, respiratory, cardiovascular, autoimmune, and psychiatric conditions and clients who are survivors of bioterrorism.

NUR*H203   Nursing Care of Individuals and Families II   8 cr.
Prerequisite: NUR*H201, NUR*H202, ENG*H102. Co-requisite: NUR*H204, NUR*H205. The student will focus on the holistic care of individuals, families, and groups with complex health care needs. The student will incorporate critical thinking, caring behaviors, professionalism, and communication skills when providing nursing care in a variety of acute, long-term and/or community settings. Students will have an opportunity to manage a multi client assignment with an emphasis on safe and competent practice. An observational experience with a visiting nurse agency, a dialysis unit and/or a cancer center will be provided.

NUR*H204   Pharmacology for Individuals, Families and Groups with Complex Health Care Needs   1 cr.
Prerequisite: NUR*H201, NUR*H202. Co-requisite: NUR*H203. The student will focus on safe use, pharmacologic principles, indications and nursing implications related to drug therapy in the care of individuals, families, and groups with complex health care needs. Emphasis will be placed on medications used for clients who have acute and chronic renal failure, oncology and neurological conditions, and multi-system dysfunction and who choose an alternative therapy.

NUR*H205   Nursing Management and Trends   2 cr.
Prerequisite: NUR*H201, NUR*H202. Co-requisite: NUR*H203, NUR*H204. The student will explore the basic principles of management, leadership and collaborative relationships as they relate to providing safe and competent care. The focus is on the utilization of critical thinking skills to make decisions on priority setting, delegation, legal parameters of nursing practice and ethical issues. Students will expand the concept of caring to the profession of nursing through collegial and interdisciplinary communication. This course facilitates the transition for students into the profession and their role in contemporary nursing practice.

OFFICE ADMINISTRATION
Refer to Business Office Technology

PHILOSOPHY
Arts and Humanities Division

PHL*H101   Introduction to Philosophy   3 cr.
Prerequisite: ENG*H101. Various philosophical views and philosophical figures will be studied. Students will begin to think in a philosophical way about reality, truth and values. They will use logical reasoning to apply the various philosophies to current times and to their own lives.

PHL*H111   Ethics   3 cr.
Prerequisite: ENG*H101. This course studies the approaches to ethics, ethical language, and interpretations of "Who am I?" and "What am I to do?" Morality as it relates to freedom, religion, medicine, business, mass media, technology, Environment and personal commitment are among the topics covered. Using logical reasoning, students demonstrate an understanding of ethical behavior in both oral and written form.

PHL*H112   Medical Ethics   3 cr.
Prerequisite: ENG*H101. This course is an introduction to moral issues and options in medicine, with particular attention to those most directly affecting the public and general medical personnel. Topics include the meaning of "life," birth control, artificial insemination, genetic engineering, abortion, human experimentation, behavior control, organ transplantation, truth and the physician, care of the dying, and public health care.

PHL*H116   Business and Professional Ethics   3 cr.
Prerequisite: ENG*H101. This course focuses on moral issues that can arise in business and the professions. The discussion of a number of ethical concepts (including Kantian Formalism, Utilitarianism, Virtue Ethics, Justice) provides a framework for rational philosophical analysis. Topics covered include whistle blowing, privacy, workplace safety, discrimination, affirmative action, product safety. The methodology used in this course is case based. Timely and relevant cases form the basis for discussion, debate and writing.

PHL*H151   World Religions   3 cr.
Prerequisite: ENG*H101. This course studies various living Eastern and Western religions and their beliefs about the meaning of life, God, reality, truth, morality and worship.

PHL*H150   Philosophy of Religion   3 cr.
Prerequisite: ENG*H101. The nature of religion, the reality and existence of God, religious knowledge and values, the soul, life after death, the problem of evil, mysticism, miracles, and the relationship of religion to science and history are explored.

PHL*H180   Philosophy of Art   3 cr.
Prerequisite: ENG*H101. Introduction to central issues and major works in the philosophy of art. The class will also study the nature of art interpretation, imagination and creativity, style and artistic truth. Theories of art experience in painting, sculpture, photography, architecture, music and dance will be considered in historical context.

PHYSICAL EDUCATION
Allied Health/Nursing/Physical Education Division

The Physical Education and Health Fitness courses at Naugatuck Valley Community College are designed to meet the life-time needs of the individual as teacher and person. Courses develop the basic skills and methodologies required for good physical and mental health. Courses have been recognized for transfer credit by four-year institutions. Activity course descriptions appear at the end of this section.

HPE*H101   Weight Control and Exercise   2 cr.
Designed to help students realize the importance of healthy diet and exercise behaviors in permanent weight control. Behavior modification techniques are used to help students achieve a healthy lifestyle that will result in either a gradual reduction in body weight, and/or the maintenance of a healthy body weight.

HPE*H103   Concepts in Fitness   2 cr.
Physical fitness and exercise is designed to provide the background information concerning exercise prescription development and follow through. Participants will be trained in exercise testing theory and ethics, and practical exercise prescription. Students will participate in lecture and laboratories to develop their own exercise prescription.

HPE*H114   Aerobics   2 cr.
Modern methodologies skills and systems of exercising through dance are introduced and practiced. The physical condition of the body, the levels of cardiovascular fitness and individual physical differences are stressed.

HPE*H117   Weight Training   2 cr.
Emphasis of this course is on the development of a high degree of individual skills and methods necessary to understand the body mechanics involved in activity exercise. Programs discussed will include training for leisure sports, rehabilitation, muscular tone, endurance, cardiovascular endurance, flexibility, and weight loss.

HPE*H118   Power Walking   2 cr.
This course is designed to introduce students to the values and purposes of power walking through brief lecture and practical experience. The course will also introduce aerobics as an alternative program.

HPE*H140   Pilates/Wellness
             (also listed as DAN*H140)   1 cr.
This course focuses on the quality of movement, posture and breathing by increasing strength, flexibility, and balance. The holistic perspective includes physical awareness, cognitive reflection, and insights from feelings and focuses on mind-body centering. Pilates/Wellness is designed for the dancer, athlete, health professional or persons interested in overall well-being. This class meets the first ten weeks of the semester. Comfortable clothing is necessary.

HPE*H147   Self-Defense I   1 cr.
This course is designed to promote the methods and skills to understand and perform the art of karate for self-defense and discipline. It includes the study of history, philosophy and culture of the martial art of karate.

HPE*H148   Self-Defense II   1 cr.
Prerequisite: HPE*H147. This course is advanced study in the art and methods of self-defense including elements of physical fitness. Students who enroll in this course will be given a promotion test for belt certification.

HPE*H161   Beginning Tennis   1 cr.
This is an introductory course in the skills and methodologies of tennis to include strokes, grips, stance, service footwork and playing positions. The scoring and etiquette of the game are presented.

HPE*H163   Racquetball   2 cr.
This course teaches the basic strokes, grips, stance, service footwork, playing positions and methodologies of racquetball. The game and its etiquette are introduced.

HPE*H164   Bowling   1 cr.
This course deals with the development of bowling skills and the methodologies in teaching of those skills. A knowledge of the equipment, its care and bowling etiquette are included.

HPE*H166   Beginning Golf   1 cr.
This course introduces the students to the fundamental knowledge and teaching methodologies of the various clubs, swings, shots, rules of the game and conduct, and etiquette of golf course play.

HPE*H190   Volleyball   1 cr.
Training in the methods of beginning and advanced volleyball, ball handling, serving, attack and blocking, offensive and defensive play is provided. Game strategy and officiating principles will be included.

HPE*H191   Basketball   1 cr.
Introduction in fundamental skills of shooting, passing, ball handling, footwork, basic strategy of offensive and defensive play and interpretation of rules.

HPE*H203   Softball   1 cr.
This course helps the student develop individual skills and methods for playing the game, as well as for participating in intramural events. Techniques, rules, and strategy of softball are covered. Emphasis is on slow-pitch softball.

HPE*H220   Coaching Adolescents   3 cr.
This course consists of three modules: sports management, biomechanics studies, and principles of coaching. It is intended for those who do not hold a teaching degree and need to meet the State of Connecticut requirements for a coaching permit.

HPE*H230   First Aid   3 cr.
This course prepares the student, through development of skill and knowledge, to give proper care to the injured and seriously ill. This practical course stresses prevention of accidents and early medical care in sudden illness. Better personal health habits, family health habits, and an interest in community-wide health problems are developed. Red Cross First Aid Certification is included in the completion of coursework and meets the State of Connecticut requirements leading to a coaching permit.

HPE*H234   Care and Treatment of Athletic Injuries   3 cr.
Prerequisite: BIO*H211. This course intends to prepare students to be able to prevent and treat athletic injuries with opportunities for practical application of the knowledge.

HPE*H255   Physical Fitness Through Physical Education   2 cr.
This course will allow the student to explore several types of life-time and recreational sports. Students will rotate activities every three weeks throughout the semester. The physical education activities will be selected by the instructor.

HPE*H257   Physical Fitness Through Physical Education II   2 cr.
This course will allow the student to develop a program that will provide an opportunity to experience several types of life-time and recreational sports. Students are involved in independent study completing a specified number of hours in eleven sports. Selections are made from the list of physical education activities and selected with the advice of the instructor.

HPE*H261   Yoga   1 cr.
This course is designed to introduce students to the methods and skills necessary to understand and perform Yoga. Relaxation techniques and flexibility training are stressed.

HPE*H264   Yoga   2 cr.
This course is designed to introduce students to the methods and skills necessary to understand and perform Yoga. Relaxation techniques and flexibility training are stressed.

HPE*H290/291 Athletic Training Cooperative Work Experience   6 cr.
Prerequisite: HPE*H234, "C" or better. This course consists of an eight-week work experience in an athletic department of a school, college or facility where organized athletic programs and activities are offered. The student will be required to demonstrate her/his ability to organize and conduct an athletic training program. Course is a component of CCSU Athletic Training Curriculum.

PHYSICAL THERAPIST ASSISTANT
Allied Health/Nursing/Physical Education Division

PTA*H120   Introduction to Physical Therapy   3 cr.
Prerequisite: Admission to the PTA Program. Learning opportunities in this course assist the student to recognize the roles of physical therapy within various practice settings. Students differentiate functions of physical therapists and physical therapist assistants as members of the health care team through study of documentation principles, ethics, laws and organizations important to the provision of services. Learning also includes development of knowledge and abilities within the domains of conduct, communication and sensitivity to individual and cultural differences.

PTA*H125   PT for Function   4 cr.
Prerequisite: Admission to the PTA Program. This course provides the student with introductory concepts and techniques for effective patient teaching and physical therapy intervention for function and mobility. Emphasis is placed on competence in problem-solving and the physical therapist assistant's role in modification of physical therapy interventions.

PTA*H220   Introduction to the PT Clinic   1 cr.
Prerequisites: PTA*H120 and PTA*H125 with a grade of "C" or higher. This course provides an orientation to the physical therapy clinic and to the provision of physical therapy interventions. Students develop communication, intervention, and problem-solving techniques within the physical therapy clinic.

PTA*H230   Physical Agents in PT   4 cr.
Prerequisites: PTA*H120 and PTA*H125 with a grade of "C" or higher, PTA*H220 with a grade of "P". This course develops the student's competence with problem-solving and application of physical therapy interventions using physical agents, including therapeutic applications of heat, cold, water, electricity, light and mechanical forces or devices.

Course Descriptions

PTA*H235 Kinesiology for Rehabilitation 4 cr.
Prerequisites: PTA*H120 and PTA*H125 with a grade of "C" or higher, PTA*H220 with a grade of "P". This course fosters learning of the anatomical and biomechanical principles of human movement through the study of the musculoskeletal and nervous systems. Competencies attained include accurate data collection by goniometry, manual muscle testing, posture and gait analysis including the effects of biomechanical forces on the human body.

PTA*H250 Therapeutic Exercise 5 cr.
Prerequisites: PTA*H230 and PTA*H235 with a grade of "C" or higher. Learning includes the theory and techniques to safely and effectively implement therapeutic exercise interventions based on a plan of care established by a physical therapist. Students also develop competence to measure a patient's response to interventions and respond accordingly and to provide effective instruction to patients and caregivers.

PTA*H253 Pathophysiology for Rehabilitation 3 cr.
Prerequisites: PTA*H230 and PTA*H235 with a grade of "C" or higher. This course develops comprehension about abnormalities and the physical, physiological and psychological changes that occur throughout the human lifespan. The student learns the effects of pathology on the rehabilitation of patients with orthopedic, neurological, and general medical conditions.

PTA*H258 PTA in the Healthcare Arena 2 cr.
Prerequisites: PTA*H230 and 235 with a grade of "C" or higher. This course develops the student's ability to apply physical therapy interventions and data collection techniques within the clinic Environment and advances the student's abilities with communication, conduct and problem-solving within the structure of the health care system.

PTA*H260 Physical Therapy Seminar 2 cr.
Prerequisites: PTA-H250, 253 and 258 with a grade of "C" or higher. In this course students demonstrate the ability to apply principles of problem solving to selected professional issues, industry trends, and special populations that may be encountered as a physical therapist assistant. Learning opportunities assist in the transition from student to clinician and identification of interest areas for lifelong learning.

PTA*H262 PTA Internship II 5 cr.
Prerequisites: PTA*H250, 253 and 258 with a grade of "C" or higher. Within this clinic-based course students learn to integrate and apply physical therapy concepts and to effectively perform physical therapy interventions as a physical therapist assistant. Students develop their abilities for daily organization and management of a patient caseload and effectively contribute to the health care team.

PTA*H265 PTA Internship III 5 cr.
Prerequisites: PTA*H250, 253 and 258 with a grade of "C" or higher. Within this clinic-based course students learn to problem-solve and competently function in the clinic Environment as a physical therapist assistant. Students develop competence with time management, clinical prioritization and the entry-level abilities of the physical therapist assistant prior to course completion.

PHYSICS
Mathematics/Science Division

PHY*H110 Introduction to Physics 4 cr.
Prerequisite: MAT*H095 or equivalent. MAT*H137 is recommended. The course is designed for the student seeking basic introduction to the principles of physics, and offers firsthand experience on learning in a laboratory. Specific topics covered include: a review of essential arithmetic operations and systems of measurements, linear motion, conservation of energy and linear momentum, Newton's three laws of motion, gas laws, heat, light, electricity, magnetism and atomic theory, as time permits. Three hours of lecture and three hours of laboratory weekly.

PHY*H121 General Physics I 4 cr.
Prerequisite: MAT*H137 or equivalent. Co-requisite: MAT*H172. This course is designed for students in technical fields and pre-medicine programs. The course begins with a review of algebra, basic trigonometry and vectors. Topics covered include kinematics, projectile motion, Newton's Laws, energy, momentum, rotational dynamics, heat and thermodynamics, as time allows. Three hours of lecture and three hours of laboratory weekly.

PHY*H122 General Physics II 4 cr.
Prerequisite: PHY*H121. This course is a continuation of PHY*H121. An overview of thermodynamics is given. Topics include waves, harmonic motion and Coulomb's Law. The laws describing electric and magnetic fields are studied and how these laws apply to DC and AC circuits, and the properties of light are presented. The properties of light discussed include reflection, refraction, interference and diffraction. Three hours of lecture and three hours of lab a week.

PLASTICS AND RUBBER ENGINEERING TECHNOLOGY
Engineering Technologies Division

PLA*H101 Introduction to Polymers 3 cr.
Provides the student with a basic background in the various types of polymer used in manufacturing, the characteristics and properties of each type of polymer, and the process and procedures utilized in the fabrication of polymer parts and products. Extrusion, injection, compression, transfer, and blow molding are discussed in addition to casting and thermoforming. Three class hours weekly.

PLA*H105 Injection Molding 3 cr.
Prerequisite: PLA*H101. A detailed course in the specifics of injection molding as a polymer manufacturing process. Topics include types of molding machines, machine functions, viscoelastic behavior of plastics, theory and practice of injection molding, mold design in relation to flow characteristics, designing for polymers, and correcting molding defects. Two class and two laboratory hours weekly.

PLA*H110 Polymer Product Design 3 cr.
Prerequisite: PLA*H101. Covers the design of polymer products while considering the physical properties of polymer and techniques for achieving pleasing aesthetics, dimensional capabilities, and performance results. In addition, the course covers tolerance capabilities, ASTM tests, product design rules for the various polymer manufacturing methods, structural performance, and joining and decorating polymer products. Three class hours weekly.

PLA*H112 Mold Design 3 cr.
Prerequisite: PLA*H105. A course in the principles and practices employed in designing the molds used by the widely diversified polymer molding industry. Some topics include types of molds, steel selection and heat treating, ejection systems, venting and cooling, shrinkage, draft, fits and tolerances, cam actions, undercuts and threads, deflection, design flaws, and quoting mold cost and delivery. Three class hours weekly.

PLA*H120 Polymer Process Engineering 3 cr.
Prerequisites: PLA*H101, 105. Comprehensive coverage of process engineering discipline associated with the engineering and manufacturing of plastic components and assemblies. Emphasis is placed on cause-and-effect relationships among material composition, product end-use requirements, and associated processing concerns. Discussion of the interpretation of material specification sheets, material selection, machine capability analysis, molding for end-use, and case studies. Two class and two laboratory hours weekly.

PLA*H125 Polymer Manufacturing Management 3 cr.
Prerequisite: PLA*H101. This course addresses the day-to-day and long-range management activities for a polymer company or molding department within a diversified manufacturer. Topics include plant layout, material control, personnel, efficiency, productivity, reporting, quality control, utilities costs, estimating, inventory and labor overhead consideration. Three class hours weekly.

PLA*H130 Rubber Process Engineering 3 cr.
Prerequisites: PLA*H101,105. Comprehensive coverage of process engineering discipline associated with the engineering and manufacturing of rubber components and assemblies. Emphasis is placed on cause-and-effect relationships among material composition, product end-use requirements, and associated processing concerns. Discussion of the interpretation of material specification sheets, material selection, machine capability analysis, molding for end-use, and case studies. Two class and two laboratory hours weekly

PLA*H290 Plastics Engineering Technology Co-op 3 cr.
Prerequisites: PLA*H101, 105, 110 and 112. Corequisites:PLA*H120or130. Concurrent enrollment as a Plastics & Rubber Engineering Technology major, minimum 3.0 GPA and pre-approval of the Department Chair. The Plastic/Rubber Co-op is a supervised work experience in a job setting, related to the

students major-option. This fourth semester course is a specialization in the plastics/rubber field consisting of: **1.** A two-hour Professional Development Workshop **2.** A minimum 225-hour Cooperative Work Experience **3.** A weekly Co-op Seminar with a faculty facilitator. *Note: Suitable work experience or an appropriate course can be substituted for the Co-op with the approval of the Department Chair.*

POLITICAL SCIENCE
Behavioral and Social Sciences Division

POL*H102   Introduction to Comparative Politics   3 cr.
Prerequisite: 3 credit hours in any history or political science course. A survey of the structure and functioning of the governments is presented. Such contemporary nation states as Russia, Great Britain, France, and Germany are analyzed. A brief history of each government is included.

POL*H103   Introduction to International Relations   3 cr.
Prerequisite: 3 credit hours in any history or political science course. This course is an introduction to the present nation state system with an analysis of the political, social and economic pressures that produce international tensions and crises. Consideration of the traditional balance of power approach to world peace will be contrasted to the regional and global organizations that have appeared since World War II.

POL*H105   Public Administration   3 cr.
The field of public administration with emphasis on careers is surveyed. Study topics will include major theoretical concepts in public administration and case studies from both the national and sub-national levels of government.

POL*H111   American Government   3 cr.
Students are acquainted with the organization, structure, and functions of the American national government and of the American political parties. Attention is paid to the Constitution, the congress, the courts and the presidency and administration.

POL*H112   State and Local Government   3 cr.
The structure and functions of the various state and local governments in the United States are studied. Special emphasis is placed on the state government in Connecticut and on the various types of local government in the state.

POL*H291-292   Practicum in Government I & II   6 cr.
Prerequisite: At least 15 credit hours of college work and a 2.6 average, plus a "B" grade in either ENG*H101 or BBG*H210. Practical experience as a staff assistant to a member or committee of the Connecticut General Assembly or to a municipal government executive or agency is provided. At least 200 hours of practical work plus a biweekly seminar meeting of all student interns of NVCC are required. A 10-15 page term paper report will also be required at the end of the semester.

PORTUGUESE
   Refer to Languages.

PSYCHOLOGY
Behavioral and Social Sciences Division

PSY*H111   General Psychology I   3 cr.
Corequisite: ENG*H063 or ESL*H162. A general study of psychology in which the important basic principles of scientific methodology, theories of psychology, biological foundations of behavior, human development, states of consciousness, learning, memory, intelligence, and social psychology are presented.

PSY*H112   General Psychology II   3 cr.
Prerequisite: PSY*H111. This course is a continuation of PSY*H111 with emphasis on the study of evolutionary psychology, sensation, perception, motivation, emotion, human sexuality, theories of personality, psychological disorders, and psychological treatment.

PSY*H201   Lifespan Development   3 cr.
Prerequisite: PSY*H111. A study of the changes in the individual from infancy through late adulthood will be examined. Methodology and the physical, cognitive, and social development of the individual will be studied.

PSY*H203   Child Psychology   3 cr.
Prerequisite: PSY *H111. This course examines the changes that occur in the individual from birth to the beginning of adolescence. Physical, cognitive, and social changes will be studied in the context of socio-cultural and other environmental influences that shape individual development.

PSY*H204   Child & Adolescent Development   3 cr.
Prerequisite: PSY*H111. A study of the changes in the individual from infancy through adolescence will be examined. Methodology and the physical, cognitive, and social development of the individual will be studied.

PSY*H206   Adolescence & Adulthood Development   3 cr.
Prerequisite: PSY*H111. This is a continuation of PSY*H204 with the emphasis on the period from adolescence through aging. Effective and intellectual functions from both the physiological and environmental view are examined.

PSY*H208   Psychology of Adult Development &Aging   3 cr.
Prerequisite: PSY*H111. This course addresses the period from mid-life through advanced maturity, and presents both theories and research data on personal relations, life tasks, personality development, intellectual development, and biological factors that affect psychology in adulthood.

PSY*H217   Psychology of Criminal Behavior   3 cr.
Prerequisite: PSY*H111. This course presents a study of the psychological aspects and correlates of criminal behavior. Models are presented for predicting, understanding and responding to criminal behavior.

PSY*H240   Social Psychology   3 cr.
Prerequisite: PSY*H111. Dynamics of individual motivation in social situations, the theoretical bases for social behavior, applications of principles of behavior to attitude change, prejudice, public opinion, and individual reactions in mass behavior are examined.

PSY*H243   Theories of Personality   3 cr.
Prerequisite: PSY*H111. This course presents a study of the underlying causes of individual behavior and experience. A wide range of theories is considered, including those from the psychoanalytic perspective, the trait perspective, the learning perspective and the humanistic perspective.

PSY*H245   Abnormal Psychology   3 cr.
Prerequisite: PSY*H111. The varieties of abnormal behavior found in man are studied. Such disorders as depression, anxiety disorders, psychotic conditions, alcoholism, drug addiction, the personality disorders, and sexual deviations are considered.

PSY*H246   Psychology of Religion   3 cr.
Prerequisite: PSY*H111. This course discusses the theoretical and historical background of religious behavior from the psychological perspectives of James, Freud, Allport, Jung and others. Students learn about the psychological methods of research employed in the study of religious behavior and the implications of this research on religious behavior, practices, health and well being. Students gain a basic knowledge and appreciation other's religious beliefs and practices throughout the context of this course.

PSY*H247   Industrial & Organizational Psychology   3 cr.
Prerequisite: PSY*H111. This course surveys the scientific methodology of work behavior as applied to selection, training, evaluation, and organizational factors such as leadership, communication, social environment, group dynamics and norms, stress, motivation, job design and satisfaction, supervision, conflict resolution and technological change.

PSY*H250   Psychological Aspects of Human Sexuality   3 cr.
Prerequisite: PSY*H111. This course will emphasize the intrapersonal, interpersonal, and psychological aspects of human sexual behavior. Subject matter will include, but will not be limited to, sex roles, sexuality across the life span, sexual attitudes, sexual arousal and dysfunction, sexual orientation, love and intimacy, the historical and cultural aspects of sexuality, legal issues, evolutionary psychology, and research methods.

Course Descriptions

PSY*H258   Behavior Modification   3 cr.
*Prerequisite: PSY*H111*. A study of learning theories in which operant and classical conditioning are presented. The focus is on the use of the concepts and principles of applied behavior analysis in teaching functional skills and decreasing maladaptive behaviors in such situations as the home, school, group homes, and mental health settings. Research methods, history, and ethical issues of behavior modification are also reviewed.

PSY*259   Laboratory in Behavior Modification   3 cr.
*Co-requisite: PSY*H258 or permission of the instructor.* A study of learning in which the principles of operant conditioning are presented using live animals. The focus is on the experimental analysis of behavior in the lab and the extension of these concepts and principles of applied behavior analysis in everyday life. Positive reinforcement, extinction, differential reinforcement, shaping, behavioral chaining, discrimination, stimulus control, establishing operations are discussed and demonstrated during lab sessions. Research methods, history, and ethical issues of using animals in psychology are also reviewed.

PSY*H260   Psychology of the Exceptional Child   3 cr.
*Prerequisites: PSY*H111*. The psychology of children with disabilities including mental retardation, learning disabled, physically challenged, autism, communication, health disabilities and emotional/behavioral disorders is presented.

PSY*H261   Introduction to the Autism Spectrum   3 cr.
*Prerequisites: PSY*H111 or permission of the instructor.* A study of autism spectrum disorders in which students learn the principles and techniques currently employed to help children with autism spectrum disorders acquire functional language, appropriate social behavior, and general academic and living skills. The course will emphasize assessment, empirically supported best practices, Applied Behavior Analysis (ABA), functional behavior assessments, social skills development, communication, parent involvement, and understanding the individual.

PSY*H262   Applied Behavior Analysis   3 cr.
*Prerequisites: PSY*H111 or permission of the instructor.* This course covers the purpose, rationale and methods used in conducting and interpreting functional analyses of challenging; advanced coverage of measurement methods used in behavioral intervention, and the application of specific behavioral teaching procedures, including prompting, reinforcement, shaping, chaining, error correction and generalization methods, and the development of behavior plans.

**PSY*H295   Teaching Assistant in Behavior
                Modification Lab**   3 cr.
Prerequisite: Permission of the instructor. This course will give students the opportunity to work with a faculty member and receive feedback and supervision while developing critical teaching and organizational skills. Students will prepare lab materials, provide direction to other students during laboratory sessions, and assist with the care of the rats used in the behavior modification lab.

QUALITY ASSURANCE
Engineering Technologies Division

QUA*H115   Team Building   3 cr.
Students will learn how to function on teams, which are now widely utilized, as a response to challenges. Several simulation exercises are available and will be used to reinforce classroom concepts. Basic negotiation techniques will be covered to understand responses to conflict and managing group problems. Three class hours weekly.

QUA*H250   Total Quality   3 cr.
A study of the concepts and implementation of Total Quality as a necessary survival tool. Topics include the evolution of quality, management by objective/management by exception, setting quality goals, six sigma capability, PPM, cycle time, total employee involvement/empowerment/training, quality costs and TQ tools. Three class hours weekly.

QUA*H260   Principles of Supervision   3 cr.
Provides for the development of supervisory ability and judgement through a presentation of the principles and techniques of effective supervision. Topics range from communication, motivating, training, personnel selection, disciplining, counseling, and controlling performance. Both case and incident study methods are utilized which encourages student participation. Three class hours weekly.

QUA*H223   Statistical Process Improvement   3 cr.
*Prerequisites: MFG*H230, MAT*H172*. A study of the application of intermediate statistical quality control methods. Included in the statistical techniques presented are continued study of probability including an introduction to Bayes' Theorem, statistical problem-solving through statistical tests of significance, correlation and regression methods, and an introduction to the analysis of variance. Three class hours weekly.

RADIOLOGIC TECHNOLOGY
Allied Health/Nursing/Physical Education Division

RAD*H112   Orientation to Radiology   3 cr.
Prerequisite: Admission into the program. This course provides an orientation to radiology, basic radiation protection, ethics, medical terminology, communication, and patient care.

RAD*H113   Rad. Physics / Radiographic Quality I   3 cr.
*Prerequisite RAD*H112 & H197*. The course content includes the production of x-rays, the x-ray circuit, radiographic equipment, and the interaction of x-rays with matter. Once learned, the student will utilize the preceding content, applying it to how the x-ray produces the image. The subject material includes introductory principles of radiographic quality, radiographic film, intensifying screens, film processing, setting technical factors, and performing technical conversions.

**RAD*H114   Contrast Media Procedures &
                Radiographic Quality II**   3 cr.
*Prerequisite RAD*H113 & H198*. The course content is divided between two main topics. The first half of the summer session will cover radiologic procedures involving the use of contrast media. Also discussed will be the hazards, complications, and risk factors of contrast media. The second half of the session is a continuation of Radiographic Quality I. Topics include image formation, technical conversions and critiquing the radiograph.

**RAD*H200   Radiologic Physics &
                Diagnostic Imaging Modalities**   3 cr.
*Prerequisite: RAD*H114 & H199* This course provides the student with advanced study of fluoroscopy, physics, computed radiography, digital radiography, digital fluoroscopy, and quality assurance/quality control techniques used to evaluate radiographic imaging equipment

RAD*H215   Radiographic Pathology   3 cr.
*Prerequisite: RAD*H200, H222, & H297* This course provides an overview of pathological conditions that are demonstrated with diagnostic imaging. Lecture material will include the cause and treatment of the disease. Pediatric radiology is also presented.

RAD*H217   Seminar in Radiology   3 cr.
*Prerequisite: RAD*H215 & H298*. A case study approach provides a comprehensive investigation of patient care, emphasizing radiologic procedures.

RAD*H222   Radiobiology & Protection   3 cr.
*Prerequisite: RAD*H114 & H199* Topics include Radiobiology, health physics, radiation safety, safety requirements for equipment, and protection.

RADIOLOGIC TECHNOLOGY CLINICAL COURSES
Practicum (clinical practice) in the Radiologic Technology Program involve a series of learning experiences and developed skills in hospitals, offices and imaging centers. *Students are periodically assigned to all sections within the department. (These experiences are offered in RAD*H197 through RAD*H299 in sequence.)*

RAD*H197 Clinical Practice I (fall) 2 cr.
Clinical Post conference focuses on orientation to radiology, positioning of chest, abdomen, and extremities.

RAD*H198 Clinical Practice II (spring) 2 cr.
Clinical Post conference focuses on positioning of the pelvic girdle, hip, vertebral column & trauma radiography.

RAD*H199 Clinical Practice III (summer) 2 cr.

RAD*H297 Clinical Practice IV (fall) 3 cr.
Clinical Post conference focuses on positioning of skull and cross sectional anatomy.

RAD*H298 Clinical Practice V (spring) 3 cr.
Clinical Post conference focuses on cross sectional anatomy, CT & MRI physics.

RAD*H299 Clinical Practice VI (summer) 2 cr.

RESPIRATORY CARE
Allied Health/Nursing/Physical Education Division

RSP*H112 Fundamentals of Respiratory Care 4 cr.
Prerequisite: Admission to the Program. A lecture-laboratory course that provides an introduction to basic principles of clinical respiratory care integrating physical principles of respiratory care throughout the course. Topics covered include: principles of infection control, medical gas therapy, aerosol and humidity therapy and basic patient assessment. Three hours of lecture and two hours of laboratory exercises weekly. Co-requisite RSP*H121.

RSP*H121 Cardiopulmonary Anatomy and Physiology 3 cr.
Prerequisite: Admission to the Program. This course includes an in-depth study of the anatomy and physiology of the pulmonary and cardiac system. Topics will include but are not limited to: the circulatory system, applied physiology and physical principles of the respiratory system and gas exchange. Emphasis will be placed on structure and function. Co-requisite RSP*H112.

RSP*H131 Applied Pharmacology 3 cr.
*Prerequisites: RSP*H112, RSP*H121 with grades of "C" or better.* This course includes the study of the composition, indications for and effects of medication administered to patients treated in the field of respiratory care. Emphasis is placed on drugs prescribed for the cardiopulmonary, renal and neurological system. Co-requisite RSP*H141.

RSP*H141 Principles of Respiratory Care 4 cr.
*Prerequisites: RSP*H112, RSP*H121 with grades of "C" or better.* This course introduces the student to basic principles of clinical respiratory care. Topics include but are not limited to: medical gas therapy, patient assessment, OSHA and infection control standards, oxygen therapy, aerosol therapy, bronchial hygiene therapy, hyperinflation therapy, ethics and professionalism, medical documentation. An integrated laboratory experience is included. Co-requisites RSP*H180 and RSP*H131.

**RSP*H151 Cardiopulmonary Pathophysiology
and Diagnostics** 3 cr.
*Prerequisites: RSP*H131, RSP*H141 with grades of "C" or better.* This course focuses on the etiology, pathophysiology, clinical manifestations and treatment of various cardiopulmonary diseases and diseases that directly affect the cardiopulmonary system. Case application will be included. Co-requisite RSP*H181.

RSP*H180 Clinical Practicum 1 cr.
Prerequisite: Admission to the program. This course provides supervised clinical experience in providing basic respiratory care to patients. Clinical experiences will focus on the areas of chart review, documentation and reporting, bedside assessment, breathing exercises, infection control techniques, medical gas therapy, and aerosol drug delivery. Co-requisites RSP*H141 and RSP*H141 and RSP*H131.

RSP*H181 Clinical Practicum II 2 cr.
*Prerequisites: RSP*H180, RSP*H141, RSP*H131 with grades of "C" or better.* This course provides supervised clinical experience in providing respiratory therapy to medical floor patients. Clinical experiences will focus on bronchial hygiene therapy, hyperinflation therapy, bi-level ventilation, airway management, and arterial blood gas sampling. Students will also rotate to ancillary clinical sites focusing on respiratory therapy provided at extended care and rehabilitation facilities. Co-requisite RSP*H151.

RSP*H201 Future Trends 2 cr.
*Prerequisites: RSP*H262, RSP*H270, RSP*H281 with grades of "C" or better.* This seminar course focuses on the various current issues affecting respiratory care. Topics include but are not limited to: smoking cessation, pulmonary rehabilitation, communication styles for various age ranges, research methods and statistics. Co-requisites RSP*H282 and RSP*H291.

RSP*H262 Advanced Principles of Respiratory Care 4 cr.
*Prerequisites: RSP*H151, RSP*H181 with grades of "C" or better.* The course focuses on conventional and alternative forms of mechanical ventilation. Indications, application, discontinuation and physical effects of mechanical ventilation will be covered. In addition, non-invasive, home and pediatric mechanical ventilation strategies will be covered. This course includes an integrated laboratory that includes demonstrated competency with equipment prior to clinical application. Co-requisites RSP*H270 and H281.

RSP*H270 Hemodynamic and Critical Care Monitoring 3 cr.
*Prerequisites: RSP*H151, RSP*H181 with grades of "C" or better.* This course focuses on hemodynamic monitoring and assessment on the adult critical care unit. Topics include: EKG rhythm interpretation, central venous pressure monitoring, pulmonary artery pressure monitoring, ACLS overview and intracranial pressure monitoring. Co-requisites RSP*H262 and RSP*H281.

RSP*H271 Pulmonary and Cardiovascular Diagnostics 2 cr.
*Prerequisite: RSP*H151 with grade of "C" or better.* This course provides the student instruction on assessment of pulmonary function studies and other diagnostic procedures used within a pulmonary/cardiovascular laboratory setting. Topics include: stress testing, metabolic testing, rehabilitation techniques, sleep studies and research techniques.

RSP*H281 Advanced Clinical Practicum 2 cr.
*Prerequisites: BIO*H212, RSP*H151, RSP*H181 with grades of "C" or better.* This course provides supervised clinical experience in providing respiratory therapy to intensive care patients. Clinical experiences will focus on mechanical ventilation of the adult patient. Co-requisites RSP*H262 and RSP*H270 .

RSP*H282 Advanced Clinical Practicum II 2 cr.
*Prerequisites: RSP*H262, RSP*H270, RSP*H281 with grades of "C" or better.* This course provides supervised clinical experiences in the adult, neonatal, and pediatric intensive care units. Clinical experiences will focus on hemodynamic monitoring and assessment, respiratory care in the emergency setting, and continuous mechanical ventilation of the adult, neonate, and pediatric patient. Students will also complete an Advanced Cardiac Life Support (ACLS) course during this clinical practicum. Co-requisites RSP*H201 and RSP*H292.

RSP*H291 Perinatal and Pediatric Respiratory Care 2 cr.
*Prerequisites: RSP*H270, RSP*H262, RSP*H281 with grades of "C" or better.* This course provides the student with a comprehensive study of pediatric and neonatal respiratory care. Topics include but are not limited to: diagnostic and therapeutic procedures, cardiopulmonary pathophysiology, ventilator management, critical care techniques, PALS and NRP techniques and embryology. Co-requisite RSP*H282.

SIGN LANGUAGE
Refer to Languages.

*Course
Descriptions*

SOCIOLOGY
Behavioral and Social Sciences Division

SOC*H101 Principles of Sociology 3 cr.
*Prerequisite: Eligibility for ENG*H101.* A general introduction to the science of sociology, including the "sociological imagination," theory and methods. Students are taught what is unique about the way in which sociologists view and analyze human behavior. The role of the social structure and how it affects our lives will be emphasized. There will also be an emphasis on how sociologists develop and test their hypotheses, as well as on various aspects of social life such as culture, groups and institutions, deviance and social control, inequality, ethnicity, and family.

SOC*H105 Family Dysfunction 3 cr..
*Prerequisite: SOC*H101.* This course is a comprehensive look at family dysfunction, including but not limited to family violence. We will explore the historical context, theoretical explanations, social character, causes, consequences of and possible solutions to family dysfunction, including intimate partner violence, substance abuse, and child abuse. We also will consider methodological and ethical issues in family dysfunction research and treatment.

SOC*H201 Contemporary Social Issues 3 cr.
*Prerequisite: SOC*H101.* This course presents an analysis of current sociological issues with emphasis on social stratification, inequality and sociocultural dynamics. Topics include ageism, sexism, population growth and decline, racism, modernization, and technology.

SOC*H210 Sociology of the Family 3 cr.
*Prerequisite: SOC*H101 or equivalent.* Students will examine marriage and family relationships from a sociological perspective, concentrating on first meetings through marriage, having and rearing a family, divorce, and remarriage. Topics considered include: gender roles, love relationships, sexual fulfillment, communication, dual-income marriages, and step-families.

SOC*H211 Sociology of Gender 3 cr.
*Prerequisite: SOC*H101.* This course is an introduction to understanding gender as a social phenomenon. Topics will include gender roles; the political, socioeconomic and legal implications of gender; rape and sexual harassment; and the future of gender roles. The overall goal in this course is to deepen awareness and understanding of gender as a social phenomenon, to increase ability to think in a sociological way, to acquire a clear sense of the varieties of feminist thought and analysis as well as the male perspective, and to understand how gender acts as an organizing principle in our society.

SOC*H221 Social Inequality 3 cr.
*Prerequisite: SOC*H101.* This course addresses the causes and consequences of inequality based on race, gender, ethnicity, age, religion, and disability through an examination of the social structure, culture, history, and social institutions of American society.

SOC*H230 The City 3 cr.
*Prerequisite: SOC*H101.* This course examines the process and consequences of urbanization. Utilizing the ecological, functional, and conflict perspectives, attention is given to such issues as alienation, poverty, housing, crime, education, and health.

SOC*H240 Criminology 3 cr.
*Prerequisite: SOC*H101 or by permission of instructor.* Students will examine problems of law and order from a sociological perspective. The formation of laws, the causes of crime, and societal responses to crime will be considered. Topics to be considered include law-making as a social process, social and psychological explanations of criminal behavior, courts, punishment, imprisonment, and rehabilitation. (fall)

SOC*H242 Sociology of Deviance 3 cr.
*Prerequisite: SOC*H101.* This course is a comprehensive look at deviance. The course will explore the historical context, theoretical explanations, social character, causes, consequences of and possible solutions to deviance, including crime, family violence, mental disorder, substance abuse, and sexuality. This course also will consider methodological and ethical issues in deviance research and treatment.

SOC*H241 Juvenile Delinquency 3 cr.
*Prerequisite: SOC*H101 or permission of the instructor.* Students will examine the nature of juvenile delinquency. Consideration will be given to major theories attempting to explain delinquent behavior. The history, philosophy, and current practices of the juvenile justice system in America will be presented.

SOC*H299 Independent Study 3 cr.
(fall/spring)

SPANISH
Refer to Languages.

THEATER ARTS
Arts and Humanities Division

The Division of Arts and Humanities encourages students to register for theater courses in order to develop appreciation of, and skills in, the theater arts. Some of the courses are required in career programs; others are designed for students' interests and personal development. Theater students are required to engage in both performance and technical theater course work. Consultation with counselors will help determine specific needs.

THR*H101 Introduction to Theater 3 cr.
A survey of the historical development of Western dramatic literature from the Greeks to the present. This course also explores the essential hands-on components of the theater, including playwriting, acting, design, and crew, utilizing both creative and analytical projects.

THR*H110 Acting I 3 cr.
A practical approach to the art of acting, with special attention to the development of the actor's instrument, including voice, body, the senses, creativity, and interpretation. The course combines individual and group exercises and assignments.

THR*H120 Stagecraft 3 cr.
This course will examine the basic components of stagecraft and production techniques, with a focus on set construction and painting, lighting, properties, costumes, and production management. The course involves classroom study but includes hands-on application on stage productions. Three laboratory hours required.

THR*H190 Theater Practicum I 3 cr.
This course involves students in play production. Such areas as set construction, lighting, costuming, box office, running crew and stage managing will be explored through the process of rehearsing and mounting a play for performance. Three lab hours required.

THR*H210 Acting II 3 cr.
*Prerequisite: THR*H110.* A continuation of the practical approach to the art of acting as outlined in Acting Techniques I. Emphasis on scene study and character development. Three additional rehearsal hours required.

THR*H225 Directing 3 cr.
*Prerequisite: THR*H101 and THR*H110.* Basic methods and techniques in directing a play, with special emphasis on script analysis, methods of rehearsing, and working with actors. Assignment directing short scenes. Three rehearsal/laboratory hours required.

THR*H226   Musical Theater Production   3 cr.
Prerequisite: by audition for performers.   The practical application and collaboration of several performance areas and/or technical skills as they relate directly to a musical theater production. Areas include: acting, singing, dancing; set construction, lighting crew, sound crew, costume crew and stage management.

THR*H231   Drama   3 cr.
*Prerequisite: ENG *H102*. The study of dramatic literature, analysis and critical writings about the great plays from the canon of world drama. Works to be read include plays by Euripedes, Shakespeare, Molière, Isben, Chekov, Williams, and Hansberry.

THR*H290   Theater Practicum II   3 cr.
*Prerequisite: THR*H190 or permission of instructor*. This course provides a continuation of the activities as described in THR*H190, with an emphasis on either selected styles and methods, or playwriting and performance. Three lab hours required.

THR*H295   Theater Practicum III   3 cr.
*Prerequisite: THR*H290*. This course provides a further continuation of the activities as described in THR*H290, with an emphasis on either selected styles and methods, or playwriting and performance as determined by the instructor. Three lab hours required.

WASTEWATER
Mathematics/Science Division

WWT*H110   Wastewater I   3 cr.
*Prerequisite: MAT*H137 or the successful completion of a college placement test*. This course will introduce students to the safe and effective operation and maintenance of wastewater treatment plants. Basic operational aspects will be covered including grit removal, sedimentation, flotation, trickling filters, biological contactors, activated sludge, waste treatment ponds, and disinfection and chlorination. Upon successful completion, students will be prepared for the State of Connecticut Wastewater Operator Class I examination.

WWT*H112   Wastewater II   3 cr.
*Prerequisite: MAT*H137 or the successful completion of a college placement test. Corequisite: WWT*H110.* Applications of the theoretical principles of wastewater treatment processes will be investigated and reinforced using specific examples from wastewater treatment laboratories. Students will participate in site visits to municipal wastewater treatment facilities and prepare a comprehensive study of a wastewater treatment plant.

WWT*H114   Wastewater III   3 cr.
*Prerequisites: MAT*H172, WWT*H110, 112. Corequisite: WWT*H116.* The safe and effective operation and maintenance of wastewater treatment facilities will be further investigated, with an emphasis on larger, conventional treatment plants. Topics include activated sludge, sludge digestion and handling, effluent disposal, plant maintenance safety and housekeeping, and laboratory procedures. Computer use and application in the laboratory for data acquisition will also be introduced and used for studying report writing. Upon completion, students will be prepared for the State of Connecticut Wastewater Operator Class II examination.

WWT*H116   Wastewater IV   3 cr.
*Prerequisites: MAT*H172, WWT*H110, 112. Corequisite: WWT*H114*. Students will participate in an internship at an operating wastewater treatment facility. A comprehensive report of the project will be required for successful completion of the course.

WWT*H210   Advanced Wastewater I   3 cr.
*Prerequisites: WWT*H110, 112, 114, 116 or State of Connecticut Wastewater Certification, Level I and II*. This course will address advanced wastewater topics including odor control using chemical and biological treatments, scrubbers, and activated carbon adsorption. The treatment of activated sludge in municipal and industrial waste will also be investigated as well as the processes used for the management of residual solids. The use of chemicals and filtration systems for the removal of solids from effluents will be addressed.

WWT*H212   Advanced Wastewater II   3 cr.
*Prerequisite: WWT*H210*. A continuation of WWT*H210, this course will cover phosphorus removal using biological systems, lime precipitation, and alum flocculation. The use of biological systems, ammonia stripping, chlorination and water hyacinth cultures for nitrogen removal will be investigated. Additional topics will include enhanced biological-nutrient control, wastewater reclamation and wastewater instrumentation.

WORDPROCESSING
Refer to the Business Office Technology.

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A complete listing of our adjunct faculty is available through the Human Resources Department.

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    Services
Flores, Felipe,
    Professor, Mathematics

G

Gillespie, Stuart P.,
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Ginty, Dona J.,
    Associate Professor, Speech
Guerette, Diane,
    Counselor
Gurn, Paul H.,
    Professor, Biological Sciences

H

Hagymasi, Thomas F.,
    Professor, Sociology
Henderson, Robert,
    Graphic Specialist
Herzfeld, Eva,
    Professor, History & Geography
Hoodbhoy, Ozden,
    Professor, Science
Houle, Thomas A.,
    Professor, Psychology

I

Iacobellis, Dante G.,
    Associate Professor, Business
Impresa, Robert C.,
    Professor, Chemical Engineering
    Technology

K

Kaminski, Robert R.,
    Coordinator, Counseling Center
Kearney, Edward P.,
    Professor, Electrical Engineering
    Technology
Kmetzo, Thomas J.,
    Professor, Humanities
Koski, Lawrence, F.,
    Professor, Criminal Justice/Public Safety

Kreske, Walter J.,
    Associate Professor, Computer-Aided
    Drafting/Design Engineering Technology
Krupa, Walter E.,
    Director, Business Division

L

Lebel, Laura Z.,
    Professor, Nursing
Levinson, Rosalie C.,
    Director, Learning Resources Center
Libron-Green, Dorothy,
    Professor, Mathematics
    Associate Professor, Physical Education
Litro, Robert F.,
    Professor, Business
Loiseau, Roger A.,
    Professor, Mathematics
Lynott, Robert M.,
    Professor, Mathematics

M

MacEachern, Mary M.,
    Assistant Director, Personnel &
    Contract Administration
Mahler, Norman,
    Professor, Electrical Engineering
    Technology
Malone, Nancy A.,
    Professor of English
Mandell, Joseph I.,
    Dean, College Services
Manfredonia, Joan,
    Associate Professor, Physical Education
Maxwell, II, James,
    Director, Public Information/Admissions
Manoharan, Arumugam,
    Professor, Mechanical Engineering
    Technology Program Coordinator
McCarthy, Daniel F.,
    Professor, Automated Manufacturing
    Engineering Technology
McCarthy, Eleanor G.,
    Professor, Nursing
McGuigan, Ellsworth G.,
    Professor, Electrical Engineering
    Technology
McKnack, A. Robert,
    Director, Admissions
Michalowski, Elizabeth E.,
    Professor, Art
Minardo, Dianne P.,
    Director of Academic Assessment &
    Professional Development
Moltz, Alan J.,
    Professor, Electronic Engineering
    Technology
Myers, Louise,
    Professor/Coordinator of ASD/LD

N

Narducci, Donald C.,
    Professor, Electrical Engineering
    Technology
Newton, Sandra S.,
    Professor of English
Nolan, Edward A.,
    Media Specialist
Nolan, Richard T.,
    Professor, Philosophy & Sociology

EMERITUS FACULTY AND STAFF

O

Okwu, Austine S.O.
    Director, Behavioral and Social Sciences
    Division
Oliveira, Daniel J.,
    Director, Campus Support Services
Osborn, George E.,
    Assistant Professor of Mathematics

P

Pagano, Justin J.,
    Professor, Mathematics
Palmieri, Ann P.,
    Professor, Business/Cooperative
    Education Program, Faculty Coordinator/
    Tech Prep
Paolillo, Michael
    Associate Professor of Science
Pierson-Hubeny, Dorothy A.,
    Dean, Students
Pond, Gloria Dibble,
    Professor, English
Pond, J. Lawrence,
    Professor, Science
Pruchnicki, Anthony S.,
    Professor, Mathematics

R

Raacke, William,
    Professor, Automated Manufacturing
    Engineering Technology
Ricci, Frederick,
    Professor, Communication Arts
Rich, Dennis,
    Professor, Biological Science
Richardson, Donald V.,
    Assistant Professor,
    Electrical Engineering Technology
Ricucci, Paul A.,
    Professor, English

Rieger, Samuel L.,
    Professor, Chemistry
Russell, Charles H.,
    Professor, Sociology & Social Science
Russo, Karen Gaulke,
    Professor, Hospitality Management

S

Sabia, Deborah
    Coordinator, Administrative Information
    Technology
Salerno, John
    Director of Athletics
Sanders, Richard, L.,
    President
Sasso, Ruth M.,
    Professor & Coordinator,
    Early Childhood Education
Schnitzler, Ronald M.,
    Professor of Science
Schulze, Bonita P.,
    Director, Nursing & Allied Health
    Continuing Education
Seeley, Jane Jevutis,
    Public Services Librarian
Seretny, Albert A. ,
    Dean, Instruction
Sharp, Elizabeth,
    Director, Arts & Humanities Division
Shea, John L.,
    Registrar
Simon, Bonnie H.,
    Academic Division
    Director/Mathematics/Science
Simpson, Estelle W.,
    Professor, English
Skurat, Donna,
    Professor, Nursing

Smotroff, Larry J.,
    Dean of Community and
    Economic Development
Soucy, Adelard O.,
    Professor, English
Sullivan, Mary E.,
    Professor, Nursing

T

Talbot, Sandra,
    Professor, Computer
Tatangelo, George A., C.D.P.,
    Professor, Computer Science
    Information Systems Technology

V

Vitarelli, Anthony P.,
    Professor, Biological Sciences

W

Wassong, Joseph F.,
    Professor, History & Social Sciences'
Weber, Richard,
    Assistant Professor, Automated
    Manufacturing/Dept Chair
Wick, John,
    Counselor
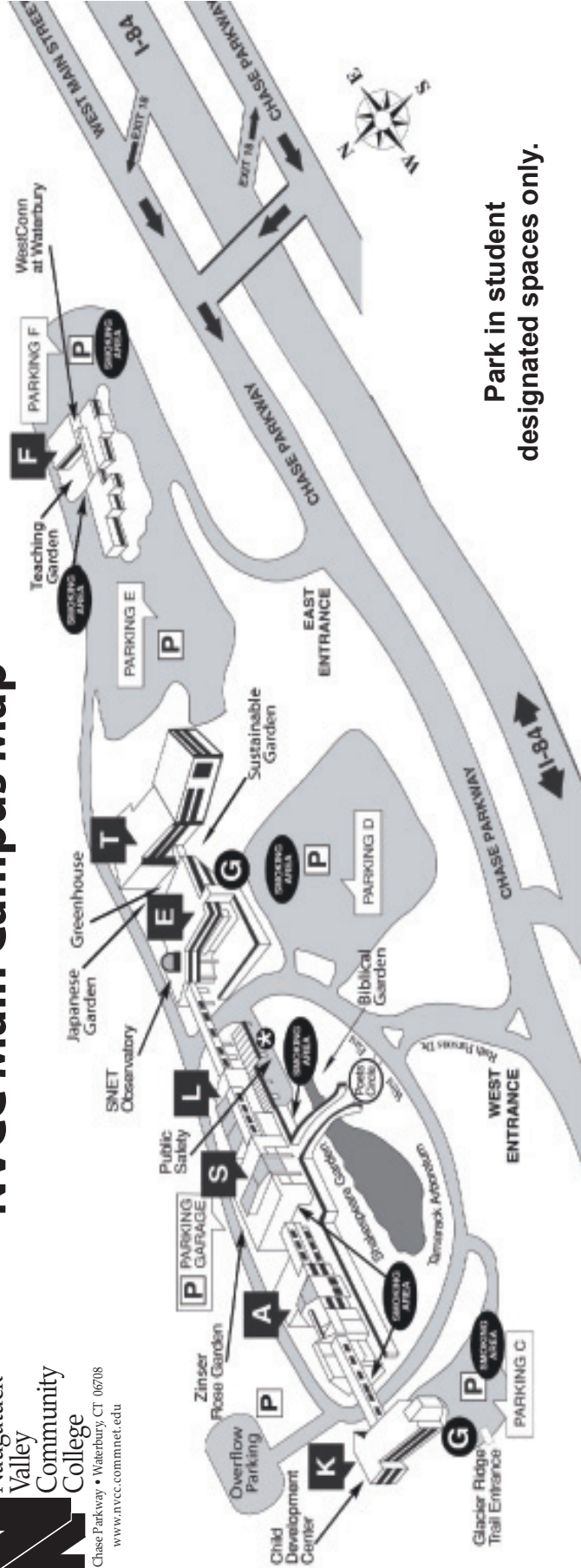Williams, Barbara,
    Director of Counseling

Y

Yannielli, Leonard,
    Professor, Biological Sciences

Z

Zagroba, James E.,
    Counselor
Zinych, Ulana,
    Professor, Nursing

NVCC Main Campus Map

Naugatuck Valley Community College

750 Chase Parkway • Waterbury, CT 06708
www.nvcc.commnet.edu

Park in student designated spaces only.

Legend

K • Kinney Hall *(Admissions, Registration, Placement Testing Center, Financial Aid)*
A • Fine Arts Center/Theaters/Leever Atrium
S • Cistulli Student Center/Cafeteria
L • Traurig Learning Resources Center/Library
E • Ekstrom Hall
T • Technology Hall
F • Founders Hall
P • Parking Lots and Garages
Underground Parking Garages are located under buildings A, S, L & E and can be entered at designated areas. Watch For Signs.
G • Smoking Gazebos

Core Services: Public Safety C122, Maintenance, Receiving

Directions to NVCC
750 Chase Parkway, Waterbury

Route 8
Take the Danbury exit onto Rt. I-84 West, then first exit off I-84 (exit 18). Bear left to light and turn left. Drive to second light for East Entrance and third light for West Entrance.

Route I-84 West
Take exit 18, bear left to light and turn left. Drive to second light for East Entrance and third light for West Entrance.

Route I-84 East
Take exit 18. At light, turn right and at next light turn right. Drive over bridge and at light, turn left onto Chase Parkway. Drive to first light for East Entrance and second light for West Entrance. The first entrance (East Entrance) on the right will take you to Founders Hall, Ekstrom Hall and Technology Hall. The second entrance on the right (West Entrance) will take you to garage parking, Kinney Hall, Fine Arts Center, Student Center, Library and Ekstrom Hall.

Directions to the College Bookstore
The College Bookstore is located in the Cistulli Student Center. Once you are on campus, take the Student Center elevator (located near the cafeteria) from level 5 down to level 3. The Bookstore is located across from the elevator doors. From the parking garage, take the center most elevator up to level 3.

Danbury High School
43 Clapboard Rd., Danbury

I-84 West: Take Exit 5 to end of the ramp. Go straight through to the traffic light. Take a left onto Rt. 39 and head up the hill. Danbury High School is on your right.

I-84 East: Take Exit 5 to end of the ramp. Go left at the traffic light and head up the hill. Danbury High School is on your right.

Directions to Danbury Center
2 and 12 Crosby Street, Danbury

I-84 West to Exit 5. Turn right at the light onto Main St. Drive to 5th light. Turn left onto White St. Take 1st left onto Lee Hartell Dr. which becomes Crosby St. Number 2 and 12 Crosby St. are on the right. (Total distance from Exit 5 is 1.1 miles). Parking in rear of building.

I-84 East to Exit 5. At the stop sign, proceed straight to the light. Turn right onto Main St. Drive to 4th light. Turn left onto White St. Turn at 1st left onto Lee Hartell Dr, which becomes Crosby Street. Number 2 and 12 Crosby St. are on the right. Parking in rear of building.