

CERTIFICATE 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)	
ACCT-H101	Financial Accounting	3
ACCT-H102	Managerial Accounting	3
ACCT-H103	Accounting Computer Applications	3
ACCT-H201	Intermediate Accounting I	3
ACCT-H202	Intermediate Accounting II	3

Elect three of the following: (9 credit hours)

ACCT-H203	Income Tax Accounting	
ACCT-H204	Cost Accounting	
BUS-H101	Business Organization	
BUS-H105	Business Law I	
BUS-H216	Human Resources	
BUS-H218	Business Communications	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.

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
PE-H112	Coaching Young Adults	3
*PE-H150	First Aid and Emergency Care	3
Total Credit Hours		6

Program Outcomes

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

1. Know basic coaching philosophy, styles, and sports/skills techniques.
2. Know management and liability in coaching.
3. Know team management.
4. Know first aid for prevention and initial treatment of injuries in sports and within their community (shock, fractures, poisoning, hypothermia, seizures, strokes, heart attacks).
5. Know activation procedure for the Emergency Medical System
6. Know 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 Certificate may be accepted as credit for PE-H150 under special circumstances and with permission of the instructor.

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
AT-H100	Integrated Automotive Systems	3
AT-H130	Brake Systems	3
AT-H150	Steering and Suspension Systems	3
Elective	Automotive Technology	2
MATH-H109	Applied Mathematics	3
Total Credit Hours		14

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: cylinderheads, 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
AT-H100	Integrated Automotive Systems	3
AT-H120	Power Plant Overhaul	3
AT-H200	Automotive Electrical Systems	3
AT-H210	Advanced Electronic Diagnosis	3
AT-H220	Automotive Emissions	3
AT-H291	Cooperative Work Experience II	3
PHYS-H101	Introduction to Physics	4
	Total Credit Hours	22

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
AT-H100	Integrated Automotive Systems	3
AT-H120	Power Plant Overhaul	3
AT-H130	Brake Systems	3
AT-H150	Steering and Suspension Systems	3
AT-H200	Automotive Electrical Systems	3
AT-H290	Cooperative Work Experience I	3
PHYS-H101	Introduction to Physics	4
	Total Credit Hours	22

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.

CERTIFICATE PROGRAMS

- Apply knowledge of theory and safety to accomplish certain tasks related to the occupation.
- Identify and use appropriate tools, testing and measurement equipment to accomplish certain tasks related to the occupation.
- Use current reference and training materials from accepted industry publications and standards to accomplish certain tasks related to the occupation.
- 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.
- Apply knowledge of suspension and steering systems (including wheel and tire), diagnosis, service, adjustments, alignment and repair.
- Apply knowledge of general disc and/or drum brake system, hydraulics, power assist, and ABS (antilock brakes), maintenance, adjustment, diagnosis, and repair.
- Apply knowledge of general electrical/electronic systems, including but not limited to, starting, charging, lighting, wiring, accessories, diagnosis and repair.

Business Office Technology: Clerical*

Business Division

The Business Office Technology: Clerical Certificate Program is designed to enhance the skills of a person who is currently employed or qualified for employment in a clerical position in a business office.

Course No.	Title	Credits
BOT-H204	Advanced Information Processing	3
BOT-H237	Office Administration	3
CS-H108	Microcomputer as a Productivity Tool	3
BUS-H101	Business Organization	3
WP-H201	Word Processing I	3
BOT-H290	Cooperative Work Experience	3
Total Credit Hours		18

*Students must demonstrate proficiency in order to meet prerequisite requirements in all courses. Prerequisites for cooperative work experience are BOT-H204, 237, CS-H108 and WP-H201.

Program Outcomes

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

- Understand the structure of a business organization and the functional relationships of its various units.
- Understand the flow of information in an office environment and the part played by a clerical employee in using and maintaining that information flow.
- Be able to use a computer effectively in an office environment.
- Be able to use word processing software to produce business documents.
- Be able to integrate the use of word processing software, electronic spreadsheet software, and Internet resources to create business documents.

Business Office Technology: Health Claims Processing

Business Division

With the current growth of the health insurance and managed care industries, there is considerable employment opportunity in the field of health claims processing. Firms are seeking entry level workers with education specific to this field. The Health Claims

Processing Certificate Program prepares individuals for employment in such firms as professional claims processors. Students become proficient in medical terminology as well as in various claims payment systems and gain a working knowledge of ICD9/CPT Coding.

Course No.	Title	Credits
First Semester		
BOT-H121*	Introduction to Office Computing	3
CS-H108	Microcomputer as Productivity Tool	3
MI-H102**	Medical Terminology & Procedures	3 or 4
ENG-H101	Composition	3
		12 - 13
Second Semester		
BUS-H218	Business Communications	3
MI-H1044	Foundation & Management of Medical Insurance	3
MI-H230	Claims Processing Applications	2
MI-H290	Cooperative Work Experience	3
		11
Total Credits Hours		23 - 24

* If a student presents evidence of satisfactory completion of two years of high school study or its equivalent, the student can choose to substitute an elective, or take a Course Credit Exam administered by the College (a student must achieve a passing grade on the exam to gain credit.

** Students may substitute the following courses:
OFA-D135 from Capital Community College
MA105 from Northwestern Community College
BOT133 from Tunxis Community College

Prerequisites are required for some courses. Prospective students should consult the college course catalog and speak with an advisor at the college.

Program Outcomes

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

- Demonstrate written and oral communications skills appropriate for a medical insurance office environment.
- Demonstrate a high level of keyboarding proficiency.
- Understand medical terminology and be able to use it to process medical insurance claims.
- Process medical claims in a timely and accurate manner.
- Use microcomputer technology in medical claims processing.
- Effectively use the claims processing system of the firm at which the cooperative work experience is performed.
- Work and communicate effectively with a managed care/insurance company's medical insurance customers, health care providers, and internal staff.

Business Office Technology: Medical Insurance Specialist

Business Division

A Medical Insurance Specialist is a fairly new title provided for those individuals who are skilled in the area of medical insurance and financial reimbursement of health care claims. The individuals would be employable in hospitals, physicians' offices, emergency medical centers and HMO's. Rapid and fair settlement of claims is essential to those individuals who present the claims and those who deliver the health services. The variety of health packages provided by employers makes the knowledge of pro-

cessing insurance forms by health delivery systems essential to its operation. The Medical Insurance Specialist is intended to fulfill this critical need. Individuals who are presently working in similar settings may upgrade skills by taking selected courses in the program.

Course No.	Title	Credits
ENG-H101	Composition	3
COMM-H101	Communications	3
BOT-H121	Introduction to Office Computing	3
BOT-H122	Information Processing	3
MI-H102	Medical Terminology and Procedures	4
MI-H1011	Technical Applications of Medical Insurance Management Systems ICD-9 Coding	3
MI-H1022	Technical Applications of Medical Insurance Management Systems CPT-Coding	3
MI-H1023	Technical Applications of Medical Insurance Management Systems Lab	2
MI-H1044	Foundation and Management of Medical Insurance	3
MI-H290	Cooperative Work Experience	3
Total Credit Hours		30

Program Outcomes

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

1. Demonstrate written and oral communication skills appropriate for a medical or medical insurance office environment.
2. Demonstrate a high level of keyboarding proficiency.
3. Understand medical terminology and be able to use it appropriately in entering and/or processing medical insurance claims.
4. Demonstrate proficiency in the use of ICD-9 and CPT coding in entering and/or processing medical insurance claims.
5. Understand and explain the types of health insurance contracts available.
6. Analyze and process medical insurance forms.
7. Understand the importance of confidentiality in dealing with medical insurance issues.

Business Office Technology: Secretarial*

Business Division

The Business Office Technology: Secretarial Certificate Program is designed to enhance the skills of a person who is currently employed or qualified for employment in a secretarial position in a business office.

Course No.	Title	Credits
CORE AREA: (Required)		
WP-H201	Word Processing I	3
WP-H202	Word Processing II	3
BOT-H237	Office Procedures & Administration	3
BOT-H204	Advanced Information Processing	3
CS-H108	Microcomputer as a Productivity Tool	3
BUS-H218	Business Communications	3
BOT-H290	Cooperative Work Experience	3

Elect two of the following, totaling six (6) credit hours:

BUS-H101	Business Organization	
BUS-H105	Business Law I	
BUS-H206	Human Resources	
ACCT-H101	Financial Accounting	6
Total Credit Hours		27

* Students must demonstrate proficiency in order to meet prerequisite requirements in all courses. If basic skills in keyboarding are not at the level required, prerequisites must be taken before entering the certificate program. (Example: BOT-H121 - Introduction to Office Computing; BOT-H122 - Information Processing.)

Program Outcomes

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

1. Understand the structure of a business organization and the functional relationships of its various units.
2. Understand the flow of information in an office environment and the part played by a secretarial employee in using and maintaining that information flow.
3. Use a computer effectively in an office environment.
4. Use word processing software to produce business documents.
5. Integrate the use of word processing software, electronic spreadsheet software, and Internet resources to create business documents.
6. Communicate effectively in a business environment, employing appropriate media for the information to be communicated.

Business Office Technology: Word Processing*

Business Division

The Business Office Technology: Word Processing Certificate Program is designed to enhance the skills of a person who is currently employed or qualified for employment in a secretarial position in a business office.

Course No.	Title	Credits
CORE AREA: (Required)		
WP-H201	Word Processing I	3
WP-H202	Word Processing II	3
BOT-H204	Advanced Information Processing	3
BOT-H237	Office Procedures and Administration	3
CS-H108	Microcomputer as a Productivity Tool	3
BOT-H290	Cooperative Work Experience	3

Elect two of the following, totaling six (6) credit hours:

BUS-H101	Business Organization	
BUS-H216	Human Resources	
BUS-H218	Business Communications	6
Total Credit Hours		24

*Students must demonstrate proficiency in order to meet prerequisite requirements in all courses.

Prerequisites for cooperative work experience are BOT-H204, 237, WP-H201, 202 and CS-H108.

Program Outcomes

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

1. Understand the structure of a business organization and the functional relationships of its various units.
2. Understand the flow of information in an office environment and the part played by a secretarial employee in using and maintaining that information flow.
3. Use a computer effectively in an office environment.
4. Demonstrate a high level of skill in the use of word processing software to produce business documents.
5. Integrate the use of word processing software, electronic spreadsheet software, and Internet resources to create business documents.

CERTIFICATE PROGRAMS

- Communicate effectively in a business environment, employing appropriate media for the information to be communicated.

Business Programming

Business Division

This certificate program will prepare students for applications and system programming positions within a business environment. There is currently a great demand for professionals with these skills, and the demand will continue into the next century. 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-H2223	COBOL I	3
CSC-H2226	COBOL II	3
CSC-H2216	VISUAL BASIC Programming	3
CSC-H2007	Introduction to Client/Server Systems	3
CSC-H1205	Information Systems in Organizations	3
CSC-H2102	Database Design and Applications	3
Total Credit Hours		18

Program Outcomes

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

- Acquire a familiarization with terminology and structure of various programming languages.
- Demonstrate the ability to use software tools for program development.
- Write, compile and run effective business applications in COBOL.
- Troubleshoot common programming problems and test solutions.
- Demonstrate a basic understanding of relational database concepts.

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 discussed. 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-H2007	Introduction to Client/Server Systems	3
CSC-H2290	Object-Oriented Programming using C++	3
CSC-H1205	Information Systems in Organizations	3
CSC-H2293	Programming with Oracle	3
CSC-H2295	Programming with PowerBuilder	3
CSC-H2102	Database Design and Applications	3
Total Credit Hours		18

Program Outcomes

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

- Demonstrate job knowledge in current technology, such as peer-to-peer networking, client/server applications, and object-oriented programming technology.
- Demonstrate the ability to use software tools for program development.
- Acquire a basic familiarization with programming concepts, logical relationships, and file structure.
- Demonstrate a basic understanding of relational database concepts.
- Create network and client/server applications.
- Develop client/server database front-ends.

Computer-Aided Drafting/Design Technology

Engineering Technologies Division

This one-year program is designed to prepare the student for entry-level positions in computer-aided drafting/design. Courses in reading, writing and mathematics provide the basis for a traditional course in technical drawing using pencil, paper and instruments on a drawing board. The student learns the fundamentals of engineering graphics including orthographic projection, multiple-view layouts, section and auxiliary views, and dimensioning. These skills are then transferred to the computer and augmented by courses in manufacturing processes and computer-aided manufacturing.

To earn the certificate, the following courses must be successfully completed:

Course No.	Title	Credits
ENG-H101	Composition	3
MEC-H1200	Introduction to Computers	3
MATH-H113	Technical College Algebra	3
MFG-H1100	Manufacturing Processes	4
DFT-H1110	Technical Drafting	3
		16
MATH-H117	Precalculus	3
MFG-H1104	Computer-Aided Manufacturing I	3
CAD-H1203	Two-Dimensional Computer-Aided Drafting	3
COMM-H101	Communications	3
		12
Total Credit Hours		28

Program Outcomes

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

- Demonstrate team-oriented human skills that permit effective participation in multicultural work and social environments.
- 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.
- Demonstrate proficiency in the use of CADD software for 2-dimensional applications.
- Produce finished engineering drawings suitable for use in manufacturing.
- Organize activities and perform work in an efficient, accurate manner.
- Apply knowledge of computer applications including word processing, spreadsheets, and other software related to CADD processes.

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
CJ-H101	Introduction to Criminal Justice	3
CJ-H103	Introduction to Security	3
CJ-H107	Introduction to Corrections	3
CJ-H108	Criminal Investigation	3
CJ-H205	American Legal Systems	3
CJ-H206	Criminal Law	3
CJ-H216	Introduction to Law Enforcement/ Community Relations	3
CJ-H290	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.

**Computer Crime Deterrence
Criminal Justice/Business**

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 at Naugatuck Valley Community College in the day or evening for the convenience of those adults who are employed full-time.

Required Courses

Course No.	Title	Credits
CJ-H102	Computer Security and Data Protection	3
CJ-H104	Understanding and Detering Internet Crime	3
CJ-H106	Computer Virus, Terrorism, and Espionage	3
CSC-H1104	Computers I	3
CSC-H1116	Microcomputer Operating Systems	3
Total Credit Hours		15

Program Outcomes

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.

**Culinary Arts
Business Division**

The Culinary Arts certificate program at Naugatuck Valley Community-Technical College consists of twenty-eight (28) credits of specific skill courses which will prepare people for careers in food services. Three credits are granted for successful completion of a work experience at an approved food service establishment.

CERTIFICATE PROGRAMS

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
HM-H100	Food Protection Certification	1
HM-H101	Introduction to the Hospitality Industry	3
HM-H105	Food Preparation I	3
HM-H106	Food Production & Purchasing & Lab	3
HM-H207	Food & Beverage Cost Control	3
HM-H120	Service Management	3
HM-H202	Laws of Innkeeping	3
HM-H203	Catering & Event Management	3
HM-H290	Cooperative Work Experience	3
BIOL-H108	Nutrition Science	3
	Total Credit Hours	28

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 organization 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.

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 Fine Arts/Dance Degree option. Credits may be applied toward the degree program.

Students must successfully complete the following credit courses with a grade of "C" or better:

Course No.	Title	Credits
DANC-H101	History & Apprec. of World Dance	3
DANC-H102	Ballet I	3
DANC-H103	Jazz Dance I	
	or	
DANC-H105	Jazz Dance II	3
DANC-H106	Modern Dance I	3
DANC-H208	Repertory/Ensemble	3
DANC-H209	Composition/Ensemble	3
	Total Credit Hours	18

Program Outcomes

As a result of completing the Certificate Program in Dance, a student 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
HM-H100	Food Protection Certification*	1
HM-H105	Food Preparation I**	3
or		
HM-H106	Food Production & Purchasing & Lab***	
BIOL-H108	Nutrition Science	3
Total Credit Hours		7

*HM-H103 - Foodservice Sanitation & Hotel Housekeeping (3 credits) may be substituted for HM-H100.

**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 HM-H105 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.

Early Childhood Education

Behavioral and Social Sciences Division

The certificate program of thirty (30) credits in Early Childhood Education is 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 institutionalized child care without formal training in the area. For further information, contact the Behavioral and Social Sciences Division Director or the Program Coordinator.

Course No.	Title	Credits
ENG-H101	Composition	3
PSY-H101	General Psychology I	3
PSY-H201	Developmental Psychology	3
ECE-H101	Introduction to Early Childhood Education	3
ECE-H102	Early Literacy Development	3
ECE-H112	Creative Experiences in Art and Play	3
ECE-H122	Health, Safety & Nutrition	3
ECE-H222	Methods and Techniques in Early Childhood Education	3
ECE-H290	Student Teaching I	3
ECE-H291	Student Teaching II	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 emotional 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.
17. Plan, organize execute and evaluate classroom activities on a weekly basis.
19. Write a learning prescription based upon a child's strengths and needs.

CERTIFICATE PROGRAMS

20. Provide services that are both developmentally and individually appropriate.
21. Effectively critique their role as a teacher.

Electrical

Engineering Technologies

The Electrical Certificate will offer individuals who have completed the electrical training, the general education courses that will provide them with general knowledge and skills of value to them at the work site. These skills will prepare these individuals for promotional opportunities. NVCC provides these courses. The specialized courses will be available through the apprenticeship training program provided by the Independent Electrical Contractors of Connecticut.

In addition, the four-course, twelve (12) credit core of the certificate program will be recognized as an option to the College of Technology Technological Studies pathway program. See page 57 of this catalog.

Course No.	Title	Credits
MATH-H113	College Algebra	3
PHYS-H111	General Physics I	4
EET-H1200	Introduction to Computers	3
—	Electricity I*	3
—	Electricity II*	3
		16
ENG101	Composition	3
CHE1100	Chemical Principles	4
—	Electricity III*	3
—	Electricity IV*	3
		13
	Total Credit Hours	29

* Students recognized as having completed the Electrical Apprenticeship Training Program will receive credit for this course.

EMT-Paramedic

Allied Health/Nursing/Physical Education Division

The EMT-Paramedic Certificate Program is a four-semester program consisting of a total of 31 credits. The curriculum is designed to provide the student with the essential skills needed to serve as an entry-level paramedic. The EMT-P program follows the NEW National Department of Transportation curriculum and is competency-based. There are eight major sections within the EMT-P curriculum: Preparatory, Airway Management and Ventilation, Medical, Patient Assessment, Trauma, Special Considerations, Assessment Based Management and Operations. There are approximately 1200 hours of didactic, laboratory, and clinical experience in the program.

Clinical experience is usually one day a week, however students may be required to attend extra clinical days. These additional hours are arranged prior to the beginning of the semester so students may adjust their schedules accordingly.

The EMT-Paramedic curriculum is designed as a progressive curriculum and all prescribed courses must be taken in sequence in order to matriculate to the next level of instruction. A minimum grade of "C" must be achieved in all courses in order to advance to the next semester.

Graduates of the one-year certificate program will be qualified to take the National Registry Exam (written and practical). EMT-Paramedic graduates are educationally and clinically prepared for employment in a variety of settings such as: state, municipal, and private ambulance services or fire departments.

The faculty in the EMT-Paramedic program reserves the right to require withdrawal of any student in the program whose clinical performance is unsatisfactory.

Students who desire admission into the EMT-Paramedic Program and do NOT have the State of Connecticut Basic EMT certification MUST first take the Basic EMT course and become certified by the State of Connecticut. The Basic EMT course is offered for 6 credits at Naugatuck Valley Community College.

Admission Requirements

The applicant must meet the following requirements in addition to the general admission policies:

- High school diploma or GED certificate.
- Successful completion of the course of training for Basic EMT or EMT-I.
- Certification as a basic EMT or EMT-I.
- CT certification as an EMT or EMT-I.
- A current BLS-C certification (EMT certification does not nullify this requirement— both are required.)
- Qualified achievement on the College Placement Tests.
- Computer skills.
- Meet the technical standards needed as a student EMT- Paramedic.

Applicants who have completed all of the above will be scheduled for an interview with the Program Coordinator. An admissions committee screens all applicants and makes selections based on the established criteria.

Student Responsibilities

Once accepted, the student must assume the following obligations:

- Knowledge of all College policies.
- Purchase of books, manuals, and supplies which are required as part of the program.
- Purchase of uniforms for clinical practice which conforms to the guidelines established by the College.
- Fees for CPR, PALS, ACLS, PHTLS, and other additional requirements if necessary.
- Medical examination report by a licensed physician (within 3 months) **Completion and verification** of all required immunizations and lab testing before beginning class date. (Includes Hepatitis B-3 doses and titer), and
- Be able to perform the skills needed as a paramedic student.

Certification

A certificate will be awarded upon successful completion of all didactic courses and clinical practicums.

Course No.	Title	Credits
Semester I		
BIO-H129	Human Biology	3
EMT-P-H101	Advance PreHospital Care I	8
EMT-P-H191	Advance PreHospital Care Lab I (six hours per week)	2
		13
Semester II		
EMT-P-H102	Advanced PreHospital Care 11	10
EMT-P-H102	Clinical Practicum (1 – 2 days per week)	
EMT-P-H192	Instructional lab (six hours)	2
		12
Semester III		
EMT-P- H201	Advanced PreHospital Care III (Lecture and Laboratory)	4
Semester IV		
EMT-P-H202	Fall Internship (Minimum 250 hours of 'Ride Time')	2
	Total Credit Hours	31

Clinical Settings include but are not limited to:

- American Medical Response (Bridgeport Division)
- American Medical Response (Waterbury Division)
- American Medical Response (VEMS-Shelton Division)
- Bradley International Airport (Fire Department-EMS)
- Bridgeport Hospital- (Burn Unit)
- Bristol Hospital EMS
- Campion Ambulance Service (New Milford Hospital)
- Campion Ambulance service (Torrington Division)
- Campion Ambulance Service (Waterbury Division)
- Children's Medical Center (Hartford)
- Héritage Village Ambulance-Public Safety
- Hunters Ambulance Service
- St. Vincent's DePaul Shelter
- New Haven Fire Department
- Northwest Communications Dispatch Center
- St. Mary's Hospital (ED, One Stop Testing, Obstetrics, NICU, Cardiology, Pediatric ED, Substance Abuse Clinic, ICU)
- Waterbury Hospital (ED, OR, Respiratory, Cardiology, ICU, Behavioral Health).

Program Outcomes

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

1. Demonstrate the ability to comprehend, apply, and evaluate clinical information relevant to the role of the EMT-Paramedic practitioner.
2. Develop sound ethical, philosophical and moral professional characteristics consistent with professional and employer expectations for the EMT-Paramedic practitioner.
3. Demonstrate technical proficiency in all skills necessary to fulfill the role of EMT-paramedic practitioner.
4. Demonstrate verbal and written communication skills consistent with the EMT-paramedic practitioner given selected scenarios.
5. Demonstrate competency in EMT-Paramedic practice.
6. Demonstrate the ability to function as a member of the prehospital emergency team.
7. Demonstrate the ability to write accurate and legible ambulance run forms.

Readmission to the EMT-Paramedic Program is based on faculty review, clinical evaluations, current grade point average (2.0), and evidence of interim efforts on candidate's part to strengthen areas of weakness. In addition, readmission can only be granted if there are available openings, clinical resources, available faculty, and hospital placements. Students who fail the clinical component of the EMT-Paramedic Program will not be considered for readmission. Please contact the EMT-Paramedic Coordinator or the Director of Allied Health/ Nursing/Physical Education for additional requirements.

**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 Industrial Environmental Management Certificate Program is to prepare students for a position in industry dealing with the compliance of environmental regulations.

Course No.	Title	Credits
MATH-H113	College Algebra	3
ENV-H1403	Safe Handling of Hazardous Materials	3
ENV-H1408	Environmental Regulations	3
ENV-H1417	Environmental Control Processes	3
CHEM-H101	Introduction to Chemistry	4
		16
ENG-H101	Composition	3
COMM-H101	Communications	3
ENV-H1104	Environmental Chemistry	3
ENV-H1410	Environmental Measurement	3
ENV-H1414	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.

CERTIFICATE PROGRAMS

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-H112	Creative Experience in Art and Play	3
ECE-H122	Health, Safety & Nutrition	3
ECE-H290	Student Teaching I	3
ECE-H206	Administration and Supervision of Early Childhood Programs	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 classroom 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)		
FIN-H101	Principles of Finance	3
FIN-H202	Money and Banking	3
FIN-H203	Financial Management	3
FIN-H206	Principles of Investments	3
One elective to be chosen from:		
FIN-H207	Real Estate Law	3
FIN-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.

Fine Arts/Studio Art Arts and Humanities Division

The Fine Arts certificate program in Studio 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-H116	Drawing I	3
ART-H109	Painting I	3
ART-H101	Discovery in Art	

	or	
ART-H102	19th and 20th Century Art	3
ART-H117	Drawing II	3
ART-H110	Painting II	3
ART-H105	Design I	3
ART-H131	Printmaking	3
ART-H112	Sculpture I	3
Elective	Art	3
	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.

Gerontology

Behavioral and Social Sciences Division

Social services for the elderly are provided by many different kinds of agencies with different 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
HS-H103	Death and Dying	3
HS-H101	Introduction to Human Services	3
HS-H209	Gerontology	3
SOC-H101	General Sociology	3
PSY-H101	General Psychology I	3
SOC-H102	Contemporary Sociological Issues	3
HS-H203	Principles, Methods & Techniques of Counseling and Interviewing	3
PSY-H210	Psychology of Adolescence and Adulthood	3
PSY-H211	Behavior Modification Skills	3
HS-H291	Cooperative Work Experience	3
	Total Credit Hours	30

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.
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 and how to deal with them.
6. State the psychological theories that may help the Social Service worker.
7. Understand sociocultural dynamics that underlay social issues in America today.
8. Be knowledgeable about and sensitive enough to persons in need of social service, and skillful enough to provide support, and build on the individual's strengths and capabilities.
9. Provide elders the support and information necessary to build self-esteem and empowerment skills.

10. Maintain accurate records, collect and evaluate data, and submit all documentation required to appropriate sources in a timely fashion.

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
HORT-H101	Landscape Mechanics and Construction	4
HORT-H150	Woody Plants	3
HORT-H154	Herbacious Plants	3
HORT-H206	Landscape Design I	3
	or	
HORT-H183	Floral Design	3
HORT-H207	Landscape Maintenance	3
HORT-H209	Arboriculture	3
	or	
HORT-H215	Plant Propagation and Hybridization	4
HORT-H212	Greenhouse Management I	4
HORT-H290	Cooperative Work Experience	3
Elective	Horticulture**	3
	Total Credit Hours	29-30

NOTE:

*Prerequisite HORT-H150 -Woody Plants or waiver by coordinator.

****Horticulture Electives**

HORT-H162	Turf Management
HORT-H164	Landscaping Small Properties
HORT-H205	Pest Control in Ornamentals and Turf
HORT-H208	Landscape Design II
HORT-H213	Greenhouse Management II

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.

CERTIFICATE PROGRAMS

- Manage the procedures used in landscape constructions and in the maintenance of small engines.
- Design flower beds, and mixed borders; place trees and shrubs for a variety of gardens for both residential and commercial properties.
- Access available resources to incorporate technological innovations.
- Demonstrate those skills, abilities and values which allow a person to function as a free and responsible citizen.

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 is approved by the American Bar Association. See admission requirements to the Legal Studies/Paralegal Certificate Program below.

Admission requirements are controlled by the "Guidelines for Legal Assistant Education Programs" of the American Bar Association. Admission to the Legal Studies/Paralegal Certificate program is limited to students who have previously earned at **least sixty (60) semester hours** of credit from an approved, regionally accredited postsecondary institution in general education courses. Students who do not meet the admission requirements should consider the Associate in Science in Legal Assistant Studies/Paralegal program. The topic of ethics and the paralegal's role in the legal profession are emphasized throughout 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
LAP-H101	Introduction to Law and Legal Issues	3
LAP-H102	Real Estate	3
LAP-H104	Legal Research and Writing	3
LAP-H105	Advanced Legal Research and Writing	3
LAP-H201	Estate Planning	3
LAP-H203	Litigation	3

Choose two of the following:

LAP-H290	Cooperative Work Experience	3
LAP-H202	Family Law	3
LAP-H204	Criminal Procedure and Constitutional Law Seminar	3
LAP-H205	Advanced Legal Issues Seminar	3
LAP-H206	Bankruptcy Practice	3
Total Credit Hours		24

Program Outcomes

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

- Interview client(s) and condense fact patterns into a concise legal analysis.
- Explain the structure of the State and Federal Court system, including Trial Court function(s) and Appellate Court functions.
- Identify historical, sociological and political trends that have changed, and continue to change, the American legal system.
- Explain the role of forensic science in evidentiary matters pertaining to civil and criminal litigation.

- Research a particular fact pattern to identify all legal issues, and describe the competing arguments that can be advanced by parties to a controversy.
- Explain the role of the judiciary in providing a balance to the legislative and executive functions of government.
- Differentiate between liability issues and damage issues in legal controversies.
- 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.
- Identify and present a logical plan for a client taking into account the strengths and weaknesses of adopting various legal positions.
- Maintain organized financial data concerning a client's case file.
- Foster good relations between the law firm, department, or public entity and the clients served.
- Demonstrate organization in handling multiple client case files and maintain strict docket control for timely case file review.
- Understand conflict resolution as viewed from the theoretical perspective and the pragmatic perspective.
- Apply common law principles and statutory principles where appropriate.
- Recognize fundamental tort and contract principles that are found in different areas of the law.

Management

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)		
BUS-H101	Business Organization	3
BUS-H213	Principles of Management I	3
BUS-H214	Organizational Management and Behavior	3
ACCT-H101	Financial Accounting	3

Elect three of the following, totaling 9 credits:

BUS-H216	Human Resources	
BUS-H218	Business Communications	
BUS-H105	Business Law I	
BUS-H251	Marketing	
MGT-H2107	Principles of Supervision	
ACCT-H102	Managerial Accounting	
Total Credit Hours		9

Program Outcomes

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

- Demonstrate basic knowledge of management, human resources, and organizational development in an entry level management position.
- 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.
- 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.

**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 process 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
MATH-H096	Elementary Algebra	3
MFG-H1100	Manufacturing Processes	4
DFT-H1124	Blueprint Reading	3
MEC-H1200	Introduction to Computers	3
MATH-H102	Intermediate Algebra	3
MFG-H1104	Computer-Aided Manufacturing I	3
MFG-H1120	Metrology	3
MFG-H2230	Statistical Process Control	3
	Total Credit Hours	25

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
BUS-H153	Salesmanship	3
BUS-H251	Marketing I	3
BUS-H254	Consumer Behavior	3
BUS-H260	Electronic Commerce Marketing Principles *	3
CS-H251	Computer Applications in 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 Web Page Design Certificate, a Webmaster Certificate, successful completion of CS-H108 The Microcomputer as a Productivity Tool (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 the electronic commerce process.
3. Prepare marketing material to be disseminated via electronic modalities to include: sales literature, customer 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.

CERTIFICATE PROGRAMS

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 mental retardation 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
HS-H101	Introduction to Human Services	3
HS-H204	Disabilities and Mental Health	3
PSY-H101	General Psychology I	3
SOC-H101	Introduction to Sociology	3
SOC-H102	Contemporary Sociological Issues	3
PSY-H201	Developmental Psychology	3
HS-H203	Principles, Method & Techniques of Counseling and Interviewing	3
PSY-H211	Behavior Modification Skills	3
PSY-H212	Abnormal Psychology	3
HS-H291	Cooperative Work Experience	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 diverse challenges facing people with mental illness, and use effective advocacy strategies to overcome 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 Social Service worker.
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. Be knowledgeable about and sensitive enough to persons in need of social service and skillful enough to provide support, and build on the individual strengths and capabilities.
9. Provide disadvantaged people the support and information necessary to build self-esteem and empowerment skills.
10. Apply knowledge and skills needed to work with people with mental illness in a variety of agency settings.
11. Maintain accurate records, collect and evaluate data, and submit all documentation required to appropriate sources in a timely fashion.

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 for companies including IBM.

Course No.	Title	Credits
CSC-H1104	Computers I	3
CSC-H1116	Microcomputer Operating Systems	3
CSC-H1122	Networking Technologies	3
CSC-H1205	Information Systems in Organizations	3
CSC-H2303	Local Area Networks	3
CSC-H2307	Servicing and Support of Local Area Networks	3
CSC-H2220	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-H1116	Microcomputer Operating Systems	3
CSC-H1122	Networking Technologies	3
CSC-H2216	VISUAL BASIC Programming	3
CSC-H2303	Local Area Networks & Lab	3
CSC-H2305	Advanced Local Area Networks & Lab	3
CSC-H2307	Servicing & Supporting LAN's & Lab	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.

Multimedia Technology

Arts and Humanities Division

The certificate in Multimedia Technology is designed for individuals who have already earned advanced degrees, are currently employed in art/media professions, and are looking to NVCC for skill-enhancement opportunities. Students entering this certificate program should already have a foundation in the core components of multimedia 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 Fine Arts/Multimedia Technology degree option. Certificate credits may also be applied toward the degree program.

Students must successfully complete the following credit courses with a grade of "C" or better:

Course No.	Title	Credits
MM-H104	Multimedia Authoring I	3
MM-H108	Digital Imaging	3
MM-H110	Digital Video Production	3
MM-H205	Multimedia Authoring II	3
MM-H212	3-D Graphics & Animation	3
MM-H215	Multimedia Web Authoring	3
Total Credit Hours		18

Program Outcomes

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

1. Create 2-D graphics, 3-D graphics, digital audio and digital video clips.
2. Produce animated sequences.
3. Utilize various programming languages.
4. Author multimedia software for CD-ROM and Internet distribution.
5. Apply project management techniques.

Object-Oriented Programming

Business Division

This certificate program recognizes the need to educate students in the area of the new trend of 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.

Course No.	Title	Credits
CSC-H2216	VISUAL BASIC Programming	3
CSC-H2284	Advanced VISUAL BASIC Programming	3
CSC-H2290	Object-Oriented Programming using C++	3
CSC-H2294	Advanced C++ Programming	3
CSC-H2291	Introduction to JAVA Programming	3
CSC-H2102	Database Design and Applications	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.

Plastics Specialization

Engineering Technologies Division

The Plastics Specialization certificate is a cooperative venture between the College and the Connecticut Section of the Society of Plastic Engineers. The growth of the plastics industry continues to create demand for qualified personnel. Trained people participate in all phases of the plastics industry from raw materials suppliers to plastics manufacturers, from plastics compounders and converters to suppliers and product users.

This certificate program is offered to:

- familiarize potential employees with the plastics field,
- enable employees to upgrade their skills,
- enable people to become more marketable in their careers, and
- provide business and industry with qualified plastics personnel.

All courses are offered at Naugatuck Valley Community-Technical College in the evening for the convenience of working adults. Semesters begin in September and January to ensure the rapid completion of the certificate program. Qualified counselors are available in the evening to assist the student with career, program or other related concerns.

The instructional staff is composed of plastics professionals from throughout Connecticut who are experienced in teaching courses with a real-world insight into the plastics field. All the instructional staff are available to answer questions and solve problems.

The CT Section of the Society of Plastics Engineers (SPE) is a professional organization dedicated to advancing the plastics industry and providing continuing education opportunities for its members. The SPE conducts monthly meetings, arranges trade shows, and provides scholarships for worthy students pursuing the plastics field.

Course No.	Title	Credits
CAD-H1203	Computer-Aided Drafting I	3

Elect four courses to earn the certificate:

PLA-H1100	Introduction to Plastics Technology	3
PLA-H1105	Injection Molding of Plastics	3
PLA-H1110	Plastic Product Design	3
PLA-H1115	Mold Design for Plastics Manufacturing	3
PLA-H1120	Plastics Process Engineering	3
PLA-H1125	Plastics Manufacturing Management	3

Program Outcomes

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

1. Adjust and troubleshoot process variables.
2. Set molds; check mold safety and the operation of a mold.

CERTIFICATE PROGRAMS

3. Relate product and process requirements.
4. Determine when mold maintenance is required.
5. Understand materials and material preparation requirements for processing.

Pre-Service Correction Certificate

Behavioral and Social Sciences Division

This certificate was developed in response to a request from the State Department of Correction. Its goal is to recruit and retain higher educated personnel to meet the many challenges of corrections today and into the future. The program curriculum provides the foundation needed for individuals interested in a career with the Department of Correction. Upon the successful completion of this certificate, the Department of Correction will waive the written entrance examination administered by the Department of Administrative Services. In addition, completion of the 15-credit certificate provides students who are interested in further education the opportunity for admissions into a Criminal Justice Associate in Science degree program. This certificate may be pursued on a full or part-time basis. For further information, contact the Division Director or the Program Coordinator.

Course No.	Title	Credits
CJ-H107	Introduction to Corrections	3
SOC-H102	Contemporary Sociological Issues	3
COMM-H101	Communications	3
ENG-H236	Technical Writing	3
CJ-H290	Criminal Justice Cooperative Work Experience	3
Total Credit Hours		15

Program Outcomes

The student who successfully completes this certificate will be able to:

1. Discuss the history and development of the system of corrections in America
2. Explain the structure of the Connecticut Department of Correction
3. Discuss contemporary correctional issues, including prisoner's rights, overcrowding, prison building, early release programs, the costs of corrections, privatization, and the changing emphasis in correctional theory
4. Provide examples of ways in which social forces affect our everyday lives
5. Explain how deviance is interpreted as a product of society
6. Evaluate the various explanations of deviance
7. Present oral reports before a group
8. Demonstrate work skills relevant to the Connecticut Department of Correction
9. Process forms and other paperwork that would be handled by a Correction Officer
10. Integrate the theoretical and practical applications of the Pre-Service Correction Certificate.

Quality Control

Engineering Technologies Division

The certificate in Quality Control is a program designed to prepare men and women for paraprofessional positions in the Quality Control profession. The student learns the basics of the technical, statistical and managerial aspects of modern quality control. The student develops this capability through the exposure to practical statistics, management techniques, scientific principles, writing experience, manufacturing processes and technical data acquired in the successful completion of the

program requirements. A student who obtains a Quality Control Certificate is prepared to enter the growing field as a quality control inspector, test group leader, quality control technician, quality assurance analyst, or assistant quality control engineer.

This program is a joint undertaking of Naugatuck Valley Community College and the Naugatuck Valley Section of the American Society for Quality Control. The sequence of courses in the program is excellent preparation for the certified Quality Control Technician (C.Q.T.) and Certified Quality Control Engineer (C.Q.E.) certification exams sponsored by the American Society of Quality Control. All courses in this program are transferable to the associate degree in the Quality Assurance curriculum.

Course No.	Title	Credits
ENG-H101	Composition	3
MATH-H113	College Algebra	3
MFG-H1100	Manufacturing Processes	4
MGT-H1200	Introduction to Computers	3
MFG-H1122	Quality Assurance Organization & Management	3
DFT-H1124	Blueprint Reading	3
MFG-H1120	Metrology	3
MFG-H2230	Statistical Process Control	3
MGT-H2105	Total Quality	3
Total Credit Hours		28

Program Outcomes

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

1. Apply communication and presentation skills related to the discipline.
2. Demonstrate team-oriented human skills that permits effective participation in multicultural work and social environments.
3. Apply quality practices and applications in the following areas; quality planning, quality systems, cost of quality and continuous improvement tools.
4. Understand and utilize appropriate statistical principles and applications including terms and concepts, distributions, statistical inference and acceptance sampling.
5. Demonstrate proficiency in selection and utilization of measurement systems with respect to terms and definitions, metrology, repeatability and reproducibility studies.
6. Apply management tools including affinity diagrams, tree diagrams, process decision program charts, matrix diagrams and others as related to the discipline.
7. Understand and utilize appropriate product, process, and materials control including classification of characteristics and defects, identification of materials and status, materials segregation practices, materials review board criteria and procedures and statistical process control including basics, control charts and implementation.

Sales Support and Customer 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
BUS-H153	Salesmanship	3
BUS-H218	Business Communications	3
BUS-H251	Marketing I	3
BUS-H254	Consumer Behavior	3
CS-H251	Computer Applications in 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 CS-H108 (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.

Social Services Aide

Behavioral and Social Sciences Division

The growing complexity of community problems which are distinctly social in nature has created a need for more well-informed professionals who are able to cope with these difficulties. There is a rapidly growing need for human service providers who understand the problem areas of children, youth, employment, domestic relations, underprivileged groups, and the racial tensions that exist in many of our urban communities.

Course No.	Title	Credits
HS-H101	Introduction to Human Services	3
PSY-H101	General Psychology I	3
SOC-H101	General Sociology	3
SOC-H102	Contemporary Sociological Issues	3
PSY-H201	Developmental Psychology	3
HS-H203	Principles, Methods & Techniques of Counseling and Interviewing	3
PSY-H211	Behavior Modification Skills	3
SOC-H201	Marriage and the Family	3
SOC-H204	Minorities in American Society	3
HS-H291	Cooperative Work Experience	3
Total Credit Hours		30

Program Outcomes

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

1. 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.
2. State the psychological theories that may help the Social Service worker.
3. Explain what effects the social conditions in the United States have on psychological problems and how to deal with them.
4. Understand sociocultural dynamics that underlay social issues in America today.

5. Be knowledgeable about formal and informal assessment practices that reflect both the needs and strengths of disadvantaged people.
6. Be knowledgeable and sensitive enough to provide support, and build on the individual strengths and capabilities.
7. Provide disadvantaged people the support and information necessary to build self-esteem and empowerment skills.
8. Apply knowledge of interpersonal and motivational skills and techniques learned in psychology and sociology courses when working with people with social disadvantages, other members of the human service team, and community groups.
9. Identify causes, consequences and solutions to inequality due to race, age, religion and economics.
10. Maintain accurate records, collect and evaluate data, and submit all documentation required to appropriate sources in a timely fashion.

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
COMM-H101	Communications	3
ENG-H101	Composition	3
MEC-H1200	Introduction to Computers	
or		
CS-H108	Microcomputer as a Productivity Tool	3
ENG-H236	Technical Writing	3
ENG-H250	Introduction to Desktop Publishing	
or		
MM-H101	Introduction to Multimedia	
or		
ART-H150	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.

CERTIFICATE PROGRAMS

Wastewater

Mathematics/Science Division

The Department of Environmental Protection has worked cooperatively with the Connecticut Community Colleges to develop this certificate as a means for 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
MATH-H113	College Algebra	3
BIOL-H103	General Biology	4
CS-H108	Microcomputer as a Productivity Tool	3
WMT-H110	Wastewater I	3
WMT-H112	Wastewater II	3
CHEM-H101	Introduction to Chemistry	4
ENG-H101	Composition	3
WMT-H114	Wastewater III	3
WMT-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.

Wastewater (Advanced)

Mathematics/Science Division

The Advanced Wastewater Certificate offers students a core of courses to prepare them for certification as Wastewater III and IV Operators. The Connecticut Community Colleges in collaboration with the Department of Environmental Protection developed the certificate to provide training for current employees in municipal wastewater treatment plants as well as to educate a new pool of certified operators.

Course No.	Title	Credits
MATH-H117	Precalculus	3
EET-H1010	Electrical Applications & Lab	3
PSY-H1 01	General Psychology	3
WMT-H210	Advanced Wastewater I	3
	Directed Elective	3
		15
ENV-H1408	Environmental Regulations	3
WMT-H212	Advanced Wastewater II	3
	Directed Elective	3
	Directed Elective	3
		12

Program Outcomes

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

1. Address odor control using chemical and biological treatments, scrubbers, and activated carbon absorption.
2. Investigate treatment of activated sludge in municipal and industrial waste.
3. Know processes used for management of residual solids.
4. Determine the use of chemicals and filtration systems for the removal of solids from effluents.
5. Remove phosphorus using biological systems, lime precipitation, and aluminum flocculation.
6. Remove nitrogen using biological systems, ammonia stripping, chlorination, and water hyacinth cultures.
7. Know wastewater reclamation.
8. Apply federal, state, municipal environmental regulations to wastewater management.
9. Perform quantitative solutions to environmental problems concerning public health, air and water pollution.