

PROGRAMS OF STUDY

PROGRAMS OF STUDY

Northwestern Connecticut Community College offers two undergraduate degrees - the Associate in Arts and the Associate in Science. The College also awards certificates upon the completion of specific non-degree programs of study.

The Associate in Arts degree is awarded upon the successful completion of a program of study in the liberal arts and sciences. In order to obtain the Associate in Arts degree, the student must complete a one year sequence of a foreign language (American Sign Language is recognized as a foreign language at NCCC), and complete two laboratory science courses (8 credits).

The Associate in Science degree is awarded upon the successful completion of a program of study in a specific subject area or to those liberal arts and sciences graduates who choose not to fulfill the foreign language, laboratory science and physical education requirements.

A certificate is awarded upon completion of a non-degree program of study in certain fields. All courses taken for a certificate are applicable to an associate degree program. Note that some courses required to earn a certificate may have prerequisites.

Curricular patterns are designed for all fields of study offered at the College. In general, first-year students pursue similar programs, although some patterns require particular courses or the development of certain skills as a prerequisite to advanced or specialized courses.

Upon enrollment at the College, new students are given assessment tests which determine competencies in mathematics and English. Based on the information gained from these diagnostic tests, students are advised as to their proper placement in mathematics and English courses. All students are strongly advised to consult counselors or faculty advisors periodically during their course of study at the College in order to determine appropriate choices and sequences of courses. Curriculum sheets listing all required courses are available for all programs and can be obtained from the Center for Student Development at 56 Park Place East.

If a student is continuously enrolled, he or she may graduate under the current catalog or the catalog under which he or she entered, providing it is not older than 10 years. If a student is continuously enrolled for more than 10 years, then he or she may graduate under the current catalog or the catalog 10 years prior to his or her graduation. If a student has re-entered, he or she may graduate under the re-entry catalog, provided it is not more than 10 years old, or the current catalog.

ASSOCIATE DEGREE AND CERTIFICATE PROGRAMS

Fine Arts (Art, Art Hist, Graph Des, Mus, Photo)

Fine Art (A.S.)

- Animation & Video Arts (A.S.)
- Graphic Communication Design (A.S.)
- Graphic Design (C)
- Fine Arts (C)
- Desktop Publishing (C)

Behavioral Sciences (Psy, Soc, Anth, Hum Svcs)

Behavioral Studies (A.S.)

Human Services (A.S.)

- Child Studies Option
- Elder Studies Option
- Family Studies Option

Human Services (C)

Business & Management Administration (Acct, Fin, Mktg, Off Ops)

Business & Management Administration (A.S.)

- Accounting Option
- Banking Option
- Hospitality Option
- Marketing and Sales Option
- Office Operations Manager Option

Computer Science and Educational Technology Programs

Computer Systems Technology (A.S.)

Computer Information Systems Option (A.S.)

Computer Programming Option (A.S.)

Computer Business Applications (C)

Computer Programming (C)

Computer Systems Technology (C)

Webmaster/Internet Design Option (A.S.)

Webmaster/Internet Design (C)

Educational Technology: Classroom Instruction Option (A.S.)

Educational Technology: Classroom Instruction (C)

Educational Technology: System Support Option (A.S.)

Education Technology: Systems Support (C)

Engineering Technology

Engineering Science (A.S.)

Industrial Diagnostics (A.S.)

Technological Studies (A.S.)

- Engineering Technology Option
- Industrial Technology Option

General Studies (A.S.)

Health Careers

Allied Health Administration (A.S.)
Allied Health Science (C)
Medical Assistant (A.S.)
Medical Assisting (C)
Hospital Patient Care Technician (C)
Physical Therapist Assistant (Consortium Program with NVCC)

Liberal Arts and Sciences (A.A.)

Liberal Arts and Sciences (A.S.)

Social Sciences (Econ, Pol Sci, Geog)

Early Childhood Education (A.S.)
Child Development Associate Preparation (C)
Home Child Care (C)
Criminal Justice (A.S.)

Deaf Studies (A.A.)

Deaf Studies (C)

Recreation Leadership (A.S.)

Park Management Option

Therapeutic Recreation Option

Therapeutic Recreation (C)

Interpreter Preparation Program: ASL/English (A.S.)

Natural Science and Veterinary Technology

Natural Resources (A.S.)

Environmental Science Option

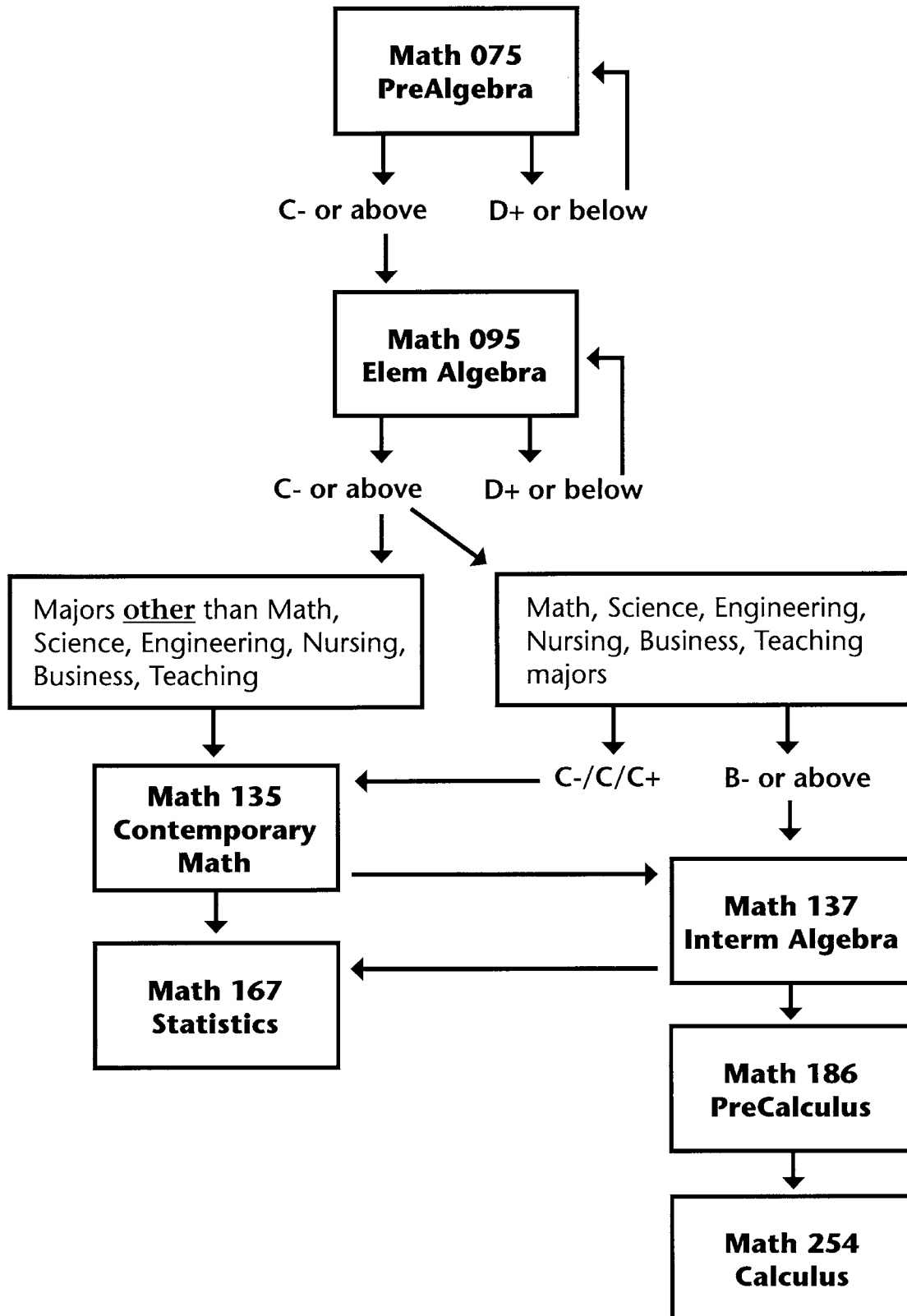
Veterinary Technology (A.S.)



ELECTIVES

“Elective” refers to any course offered in the College catalog numbered 100 or higher. Courses with numbers lower than 100 do not count toward fulfillment of degree credit requirements for graduation. Liberal Arts electives must be selected from the content areas listed below. Certain interdisciplinary courses may also satisfy requirements. Business electives may be selected from courses in accounting, business administration, business office technology, computer science, computer information systems, and computer systems technology. Most curricular patterns require electives from all areas.

MATH COURSES FLOWCHART



GENERAL EDUCATION

Within the context of its mission, Northwestern Connecticut Community College aspires to provide a basis for continuing growth and development for all students. In particular, the College expects that each student will develop a continuing interest in learning, effective communication skills, effective thinking skills, the ability to make informed choices concerning individual and social issues, and a foundation of interdisciplinary knowledge. As a practical application of this belief in general education, Northwestern has established a common multidisciplinary core which represents exposure to a broad range of academic subjects. The requirements of this common core are met by most degree programs offered by the College.

Common Core

Composition	3
Literature or Communication Elective	3
Behavioral Sciences Elective	3
Humanities and Fine Arts Elective	3
Mathematics Elective	3
Natural Sciences Elective	(4) 3
Social Sciences Elective	3
Liberal Arts & Sciences Elective	3
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	(25) 24

General Education Outcomes for NCCC

To meet their continuing academic, professional, and personal goals, Northwestern Connecticut Community College will prepare students to:

1. Comprehend, interpret, and analyze written text, oral messages, and multi-media presentations in a variety of contexts.
2. Produce effective written and oral communications in response to a specified task for a specified audience.
3. Apply mathematical concepts and skills to interpret, understand, and communicate quantitative and qualitative data.
4. Apply logical, critical, ethical, and creative processes and information to identify problems, evaluate alternative solutions, and make informed decisions.
5. Search for and obtain appropriate information efficiently through both traditional and electronic media, and evaluate this information for accuracy, perspective, and utility.
6. Demonstrate an understanding and relevant application of computer technology.
7. Integrate and apply appropriately the fundamental principles and methods of the natural and physical sciences, social sciences, and arts and humanities.
8. Demonstrate effective use of individual and team workplace skills.
9. Recognize the diversity of human behaviors and cultures as they relate to individual development

and group interaction, including key issues of age, class, disability, ethnicity, gender, race, religion, and sexual orientation.

10. Identify and evaluate ethical issues and conflicts, contribute to the community and society, and recognize the responsibility of the individual in a democracy.

Course Sequence

Courses in the following programs of study are listed by general education requirements and specific program requirements. Except in the cases of prerequisites, no exact sequence of courses is mandated, and students are free to select courses within their programs that are appropriate to any given semester. In general, however, first-year students should consider course schedules for their first two semesters that represent a mix of general education requirements, program requirements, and electives. All students are strongly advised to take an English sequence, a mathematics or natural science as required, and several courses in their chosen fields of study within the first year. Additionally, students usually take one or two of their restricted electives in the first year, filling requirements for social or behavioral science courses, for example.

Curriculum sheets include a suggested course sequence and are available for all academic programs.

It is important to note that all two-year degree programs consist of at least 60 credits and are based upon a student enrolling for a full load of 15 credits (or more) per semester. Those students who plan to enroll part-time or who are unsure of their fields of study should meet with an advisor to plan accordingly. Also, students should be aware that because of prerequisites and program requirements, some programs of study provide less flexibility in course sequence than others. All students should consult their faculty advisors prior to registration to ensure appropriate sequence of courses and choice of electives.

IMPORTANT NOTE:

THE COURSE REQUIREMENTS FOR THE FOLLOWING PROGRAMS ARE SUBJECT TO CHANGE. TO REVIEW THE MOST CURRENT INFORMATION ON COURSE REQUIREMENTS, PLEASE CHECK THE NCCC WEBSITE

ALLIED HEALTH ADMINISTRATION

Associate in Science Degree

The Allied Health Administration Associate degree program is designed for students interested in both health care and business. At the successful completion of this degree program, graduates will be ready for employment in the business side of healthcare. Students are provided a diverse course selection that will allow the development of skills needed for employment in insurance departments, hospital or medical business offices, nursing homes and other health related environments. Graduates may also elect to transfer into a baccalaureate degree program related to allied health administration.

Advisor: Barbara Berger, bberger@nwcc.commnet.edu, 860-738-6308

Note: A minimum grade of “C” is required in all MED*, Business and ACC* designated courses.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111 SOC* 101	General Psychology I OR Principles of Sociology	3
Humanities/Arts	COM* 173	Public Speaking	3
Mathematics	MAT* 167	Statistics w/ Technology	3
Natural/Physical Science	BIO* 115	Human Biology	4
Social Science	ECN* 101	Principles of Macroeconomics	3
Liberal Arts		Liberal Arts Elective	3
			25
Program Requirements			
	ACC* 113	Principles of Financial Accounting	3
	ACC* 117	Principles of Managerial Accounting	3
	BMG* 202	Principles of Management	3
	BBG* 210	Business Communication	3
	CSA* 105	Intro to Software Applications	3
	PHL* 112	Medical Ethics	3
			18
Specialized Program Requirements			
	MED* 111	Administrative Medical Assisting	3
	MED* 113	Healthcare Insurance	2
	MED* 115	Medical Coding	2
	MED* 125	Medical Terminology	3
	MED* 133	Clinical Medical Assisting	4
	MED* 250	Principles of Pharmacology	3
		MED* or Business Elective	3
			20
		Total	63

Pending approval

Program Outcomes

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

1. Competently communicate with healthcare providers, patients/clients, and business professionals.
2. Produce accurate documentation.
3. Competently function within an interdisciplinary healthcare team.
4. Demonstrate accurate problem-solving skills in the workplace.
5. Perform job-entry level competent administrative and management skills.

ANIMATION & VIDEO ARTS

Associate in Science Degree

This curriculum integrates strong traditional fine art skills with technology-based proficiency in two-dimensional and three-dimensional animation and live action video. This program is designed to support students for transfer in areas of animation, video, gaming, new media, and digital arts. This major provides students with skills to seek employment with animation and video production companies, television stations, multimedia companies, advertising agencies and web designers.

Advisor: Charles Dmytriw, cdmytriw@nwcc.commnet.edu, 860-738-6338

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts	ART* 101 ART* 102	Art History I OR Art History II	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural/Physical Science Elective	3 (4)
Social Science		Social Science Elective	3
			21 (22)
Program Requirements			
	ART* 111	Drawing I	3
	ART* 112	Drawing II	3
	ART* 113	Figure Drawing	3
	ART* 141	Photography I	3
	ART* 142	Photography II	3
	ART* 121	Two-Dimensional Design	3
	ART* 122	Three-Dimensional Design	3
	ART* 131 ART* 163	Sculpture OR Ceramics Handbuilding	3
			24
Specialized Program Requirements			
	ART* 274	Video & Motion Fundamentals	4
	ART* 275	Digital Video Postproduction	3
	ART* 276	Introduction to 3D Animation	3
	ART* 277	3D Character Animation	3
	ART* 278	Experimental Animation	3
			16
		Total	61 (62)

Program Outcomes

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

1. Demonstrate critical thinking and visual problem solving ability.
2. Use a variety of studio art tools, processes and media to produce original works of art.
3. Compile and present a portfolio of two and three dimensional art work.
4. Recognize and apply principles of effective design, composition and color theory.
5. Recognize the commonalities and interrelationships that exist between all forms of visual art studies in the program – drawing, two dimensional design, three dimensional design, pottery, photography, animation, and video.
6. Show knowledge of selected artists and aesthetic movements from the history of art; understand art as an expression of the human condition, including movies and animations.
7. Demonstrate story design by creating storyboards, treatments, and scripts for animations & live action videos.
8. Demonstrate concept development drawing character sketches and designing sets.
9. Demonstrate 2D & 3D animation skills producing short animations that tell a story.
10. Demonstrate video production and postproduction skills by completing short live action videos that tell a story.

The Art Department reserves the right to retain, exhibit, and reproduce any work

BEHAVIORAL STUDIES

Associate in Science Degree

This program has been designed to allow students to transfer easily to programs such as those offered through the UCONN BGS program at the Torrington campus, UCONN Neag School of Education, and UCONN School of Family Studies in Storrs. The UCONN program prepares students for positions in Human Services and Special education. This NCCC program provides students with the strong background in basic psychology needed to be successful in a BS degree program.

Advisor: Robert Beck, Ph.D., rbeck@nwcc.commnet.edu, 860-738-6386

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT* 137	Intermediate Algebra	3
Natural/Physical Science	BIO* 115	Human Biology	4
Social Science	HIS* 201 HIS* 202	U.S. History I OR U.S. History II	3
Liberal Arts	SOC* 101	Principles of Sociology	3
			25
Program Requirements			
	COM* 173	Public Speaking	3
	HSE* 101	Introduction to Human Services	3
	HSE* 202	Intro to Counseling/Interviewing	3
	PSY* 112	General Psychology II	3
	HSE* 235	Prof & Ethical Issues in Human Serv	3
	SOC* 104 PSY* 235	Sociology of the Family OR Family Dynamics	3
	HSE* 281	Human Services Field Work I	3
			21
Specialized Program Requirements			
	MED* 170 PSY* 204 PSY* 208	Law & Ethics Health Professional OR Child & Adolescent Development OR Psych of Adult Development & Aging	3
	PSY* 245	Abnormal Psychology	3
	RLS* 122	Proc & Tech in Therapeutic Rec	3
	PSY* 260	Psych of the Exceptional Child	3
	PSY* 298	Special Topics in Psychology	3
	PSY* 258	Behavior Modification	3
			18
		Total	64

Program Outcomes

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

1. Understand the psychosocial, cognitive and physical changes that occur across the life span.
2. Demonstrate proficiency in understanding the legal and ethical responsibilities of working with individuals with developmental disabilities.
3. Identify educational issues pertinent to varying levels of ability.
4. Understand the importance of consistency in treatment across settings.
5. Demonstrate proficiency in following simple behavior modification programs.
6. Develop at least rudimentary behavioral programs for individuals within a home or school setting.

BUSINESS AND MANAGEMENT ADMINISTRATION

Associate in Science Degree

The Northwestern Connecticut Business and Management Administration Program is committed to creating critical thinkers and principle-centered organizational architects. Business is about managing risk and change. Northwestern degree candidates face the rigors of a business education that focuses on combining traditional business modalities with creative simulation and communication technology to produce graduates who are consensus builders and leaders.

As a business and management degree candidate you will:

- Develop requisite knowledge in the building blocks of business: accounting, finance, human capital, economics, strategy and communication.
- Gain an understanding of business in the global environment.
- Form effective working relationships with students and faculty in the areas of accounting, banking, general business management, marketing and sales, and office management.

Advisor: David Rodgers, drodgers@nwcc.commnet.edu, 860-738-6387

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Laboratory Science Elective	4
Social Science	ECN* 101	Principles of Macroeconomics	3
Liberal Arts		Laboratory OR Natural Science Elective	3 (4)
			25 (26)
Program Requirements			
	ACC* 113	Principles of Financial Accounting	3
	ACC* 117	Principles of Managerial Accounting	3
	BMK* 201 BMK* 214	Principles of Marketing OR International Marketing	3
	BFN* 201	Principles of Finance	3
	BMG* 220 BMG* 210	Human Resources Management OR Organizational Behavior	3
		Elective	3
			18
Specialized Program Requirements			
	BMG* 202	Principles of Management	3
	ECN* 102 ECN* 250	Principles of Microeconomics OR Money and Banking	3
	MAT* 167	Statistics with Technology	3
	CSA* 135	Spreadsheet Applications	3
	COM* 173 CSA* 155	Public Speaking OR Multimedia Communications	3
	BBG* 210	Business Communication	3
			18
		Total	61 (62)

Program Outcomes

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

1. Educate students for entry-level management employment.
2. Provide continuing education opportunities and career advancement.
3. Meet the community need for Business and Management education.

BUSINESS AND MANAGEMENT ADMINISTRATION ACCOUNTING OPTION Associate in Science Degree

The Northwestern Connecticut Business and Management Administration Program is committed to creating critical thinkers and principle-centered organizational architects. Business is about managing risk and change. Northwestern degree candidates face the rigors of a business education that focuses on combining traditional business modalities with creative simulation and communication technology to produce graduates who are consensus builders and leaders.

As a business and management degree candidate you will:

- Develop requisite knowledge in the building blocks of business: accounting, finance, human capital, economics, strategy and communication.
- Gain an understanding of business in the global environment.
- Form effective working relationships with students and faculty in the areas of accounting, banking, general business management, marketing and sales, and office management.

Advisor: David Rodgers, drodgers@nwcc.commnet.edu, 860-738-6387

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Laboratory Science Elective	4
Social Science	ECN* 101	Principles of Macroeconomics	3
Liberal Arts		Laboratory OR Natural Science Elective	3 (4)
			25 (26)
Program Requirements			
	ACC* 113	Principles of Financial Accounting	3
	ACC* 117	Principles of Managerial Accounting	3
	ACC* 271	Intermediate Accounting I	3
	ACC* 271	Intermediate Accounting II	3
	BFN* 201	Principles of Finance	3
		Elective	3
			18
Specialized Program Requirements			
	BMG* 202	Principles of Management	3
	ECN* 102 ECN* 250	Principles of Microeconomics OR Money and Banking	3
	MAT* 167	Statistics with Technology	3
	CSA* 135	Spreadsheet Applications	3
	COM* 173 CSA* 155	Public Speaking OR Multimedia Communications	3
	BBG* 210	Business Communication	3
			18
		Total	61 (62)

Program Outcomes

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

1. Use multi-variant financial statement analysis to make financial decisions.
2. Prepare statistical comparisons for use in the strategic budgeting process.
3. Determine inventory levels, order quantities and cash balance requirements, and make capital investment decisions.
4. Prepare monthly, quarterly and annual business reports.
5. Handle sales, real estate, and income tax computations.
6. Post and/or supervise the posting of accounts receivable and payables.
7. Apply data processing applications to routine accounting systems.

BUSINESS AND MANAGEMENT ADMINISTRATION

BANKING OPTION

Associate in Science Degree

The Northwestern Connecticut Business and Management Administration Program is committed to creating critical thinkers and principle-centered organizational architects. Business is about managing risk and change. Northwestern degree candidates face the rigors of a business education that focuses on combining traditional business modalities with creative simulation and communication technology to produce graduates who are consensus builders and leaders.

As a business and management degree candidate you will:

- Develop requisite knowledge in the building blocks of business: accounting, finance, human capital, economics, strategy and communication.
- Gain an understanding of business in the global environment.
- Form effective working relationships with students and faculty in the areas of accounting, banking, general business management, marketing and sales, and office management.

Advisor: David Rodgers, drodgers@nwcc.commnet.edu, 860-738-6387

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Laboratory Science Elective	4
Social Science	ECN* 101	Principles of Macroeconomics	3
Liberal Arts		Laboratory OR Natural Science Elective	3 (4)
			25 (26)
Program Requirements			
	ACC* 113	Principles of Financial Accounting	3
	ACC* 117	Principles of Managerial Accounting	3
	BMK* 201 BMK* 214	Principles of Marketing OR International Marketing	3
	BFN* 125	Principles of Banking	3
	BFN* 201	Principles of Finance	3
			15
Specialized Program Requirements			
	BMG* 202	Principles of Management	3
	ECN* 250	Money and Banking ¹	3
	MAT* 167	Statistics with Technology	3
	CSA* 135	Spreadsheet Applications	3
	COM* 173 BBG* 210 CSA* 155	Public Speaking OR Business Communication OR Multimedia Communications	3
	BBG* 231	Business Law I	3
	BBG* 232	Business Law II	3
			21
		Total	61 (62)

Program Outcomes

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

1. Have a basic comprehension of full-service banking and its impact on the economy, community, business and the consumer.
2. Apply the regional super-community bank model.
3. Determine conditions of liquidity, safety and income.
4. Understand the asset and liability management function.
5. Calculate risk adjusted return on capital.
6. Market and sell the various products and services banks offer.
7. Use forecasting, modeling, and simulation software as a decision tool.
8. Apply the principles underlying the diagnosis, restructuring and recovery of financially troubled companies.
9. Negotiate a bankruptcy restructure.
10. Understand the importance of the Community Reinvestment Act and other banking regulations.

¹ Directed elective. Required per transfer credit agreement between the Center for Financial Training and Connecticut Community Colleges.

BUSINESS AND MANAGEMENT ADMINISTRATION HOSPITALITY OPTION Associate in Science Degree

The Northwestern Connecticut Business and Management Administration Program is committed to creating critical thinkers and principle-centered organizational architects. Business is about managing risk and change. Northwestern degree candidates face the rigors of a business education that focuses on combining traditional business modalities with creative simulation and communication technology to produce graduates who are consensus builders and leaders.

As a business and management degree candidate you will:

- Develop requisite knowledge in the building blocks of business: accounting, finance, human capital, economics, strategy and communication.
- Gain an understanding of business in the global environment.
- Form effective working relationships with students and faculty in the areas of accounting, banking, general business management, marketing and sales, and office management.

Advisor: David Rodgers, drodgers@nwcc.commnet.edu, 860-738-6387

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Laboratory Science Elective	4
Social Science	ECN* 101	Principles of Macroeconomics	3
Liberal Arts		Laboratory OR Natural Science Elective	3 (4)
			25 (26)
Program Requirements			
	ACC* 113	Principles of Financial Accounting	3
	ACC* 117	Principles of Managerial Accounting	3
	HSP* 100	Intro to the Hospitality Industry	3
	HSP* 211 HSP* 242	Food & Beverage Cost Control OR Hotel Management	3
	HSP* 296	Cooperative Education	3
		Elective ¹	3
			18
Specialized Program Requirements			
	BMG* 202	Principles of Management	3
	ECN* 102 ECN* 250	Principles of Microeconomics OR Money and Banking	3
	MAT* 167	Statistics with Technology	3
	CSA* 135	Spreadsheet Applications	3
	COM* 173 CSA* 155	Public Speaking OR Multimedia Communications	3
	BBG* 210	Business Communication	3
			18
		Total	61 (62)

¹ Elective selected in consultation with advisor

Program Outcomes

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

1. Use systemic decision and problem solving models and be able to develop, budget, plan, implement and control a hospitality/tourism event.
2. Demonstrate a working knowledge of food and culinary theories and techniques.
3. Apply concepts of procurement and inventory to purchase, receive, store, issue and distribute food, and related items in food service operations.
4. Process reservations, register guests, process departure information and resolve guest billing problems.
5. Perform hotel and guest accounting, night audit and cost control functions.
6. Implement basic marketing, sale and merchandising programs.
7. Identify the critical industry activities leading to increased customer mindshare and value creation.

BUSINESS AND MANAGEMENT ADMINISTRATION MARKETING OPTION Associate in Science Degree

The Northwestern Connecticut Business and Management Administration Program is committed to creating critical thinkers and principle-centered organizational architects. Business is about managing risk and change. Northwestern degree candidates face the rigors of a business education that focuses on combining traditional business modalities with creative simulation and communication technology to produce graduates who are consensus builders and leaders.

As a business and management degree candidate you will:

- Develop requisite knowledge in the building blocks of business: accounting, finance, human capital, economics, strategy and communication.
- Gain an understanding of business in the global environment.
- Form effective working relationships with students and faculty in the areas of accounting, banking, general business management, marketing and sales, and office management.

Advisor: David Rodgers, drodgers@nwcc.commnet.edu, 860-738-6387

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Laboratory Science Elective	4
Social Science	ECN* 101	Principles of Macroeconomics	3
Liberal Arts		Laboratory OR Natural Science Elective	3 (4)
			25 (26)
Program Requirements			
	ACC* 113	Principles of Financial Accounting	3
	ACC* 117	Principles of Managerial Accounting	3
	BMK* 201	Principles of Marketing	3
	BMK* 140 BMK* 230	Retailing OR Advertising & Promotion	3
	BMK* 220	Sales	3
		Elective ¹	3
			18
Specialized Program Requirements			
	BMG* 202	Principles of Management	3
	ECN* 102 ECN* 250	Principles of Microeconomics OR Money and Banking	3
	MAT* 167	Statistics with Technology	3
	CSA* 135	Spreadsheet Applications	3
	COM* 173 CSA* 155	Public Speaking OR Multimedia Communications	3
	BBG* 210	Business Communication	3
			18
		Total	61 (62)

¹ Elective selected in consultation with advisor

Program Outcomes

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

1. Know the risks and strategic moves required to successfully market products and services in today's global market.
2. Perform a "marketing audit".
3. Grasp the interrelationships between marketing and the entire business process.
4. Apply market research methodologies.
5. Apply the marketing mix and twelve principles of marketing.

BUSINESS AND MANAGEMENT ADMINISTRATION OFFICE OPERATIONS MANAGER OPTION

Associate in Science Degree

The Northwestern Connecticut Business and Management Administration Program is committed to creating critical thinkers and principle-centered organizational architects. Business is about managing risk and change. Northwestern degree candidates face the rigors of a business education that focuses on combining traditional business modalities with creative simulation and communication technology to produce graduates who are consensus builders and leaders.

As a business and management degree candidate you will:

- Develop requisite knowledge in the building blocks of business: accounting, finance, human capital, economics, strategy and communication.
- Gain an understanding of business in the global environment.
- Form effective working relationships with students and faculty in the areas of accounting, banking, general business management, marketing and sales, and office management.

Advisor: David Rodgers, drodgers@nwcc.commnet.edu, 860-738-6387

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Laboratory Science Elective	4
Social Science	ECN* 101	Principles of Macroeconomics	3
Liberal Arts		Laboratory OR Natural Science Elective	3 (4)
			25 (26)
Program Requirements			
	BOT* 251	Administrative Procedures	3
	BOT* 211	Office Automation	3
	BOT* 260	Administrative Management	3
	BMG* 220 BMG* 210	Human Resource Management OR Organizational Behavior	3
	BFN* 201	Principles of Finance	3
		Elective ¹	3
			18
Specialized Program Requirements			
	BMG* 202	Principles of Management	3
	ECN* 102 ECN* 250	Principles of Microeconomics OR Money and Banking	3
	MAT* 167	Statistics with Technology	3
	CSA* 135	Spreadsheet Applications	3
	COM* 173 CSA* 155	Public Speaking OR Multimedia Communications	3
	BBG* 210	Business Communication	3
			18
		Total	61 (62)

¹ Elective selected in consultation with advisor

Program Outcomes

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

1. Apply customer relationship and problem solving techniques.
2. Communicate effectively both verbally and in writing.
3. Apply database management, word processing, internet, desktop publishing, sales and customer service knowledge.
4. Direct the human resources function in an office environment.

COMPUTER SYSTEMS TECHNOLOGY

Associate in Science Degree

The Computer Systems Technology Degree is for students seeking a career program in the computer fields. Students will acquire background and skills to enable them to work with digital machines from microprocessors to microcomputers to mainframe systems configured in Local Area and Wide Area Networks. Students will learn the logical and physical technologies associated with hardware, software, connectivity and project design and planning.

Advisor: Michael Gow, mgow@nwcc.commnet.edu, 860-738-6385

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition OR Communications Elective ¹	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective OR Electrical Tech/Engineering Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts		Liberal Arts Elective	3
			24 (25)
Program Requirements			
	CSA* 105 CSA* 205	Intro to Software Applications OR Advanced Applications	3
	CSC* 231	Database Design I	3
	CSC* 105	Programming Logic	3
	CSC* 210	C Programming	3
	CST* 140	Intro to Computer Hardware	3
	CST* 110	Intro to Information Technology	3
	CST* 210	Operating Systems	3
			21
Specialized Program Requirements			
	CSA* 135 CSA* 205	Spreadsheet Applications OR Multimedia Communication	3
	CSC* 205	Visual Basic I	3
	CST* 260 CSC* 250	Systems Architecture OR Systems Analysis & Design	3
	CST* 231	Data Communications & Networks	3
	CST* 235	Network Systems	3
			15
		Total	60 (61)
¹ CSA* 155, COM* 173 and BBG* 210 are approved selections as Communications Elective			

Program Outcomes

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

1. Demonstrate an understanding of the role and function of computers and effectively use the computer to solve problems.
2. Describe the basic technologies used in Local and Wide Area Networks including logical and physical technologies as well as hardware and software related issues.
3. Describe the various aspects of computer operating systems and their design and implementation.
4. Demonstrate a working knowledge of computer hardware through needs based specification and trouble-shooting skills.

COMPUTER SYSTEMS TECHNOLOGY COMPUTER INFORMATION SYSTEMS OPTION

Associate in Science Degree

The Computer Information Systems option prepares students for positions in business and industry with a concentration in computer skills. Individuals completing this degree program will enhance their present careers or begin new careers as the workforce changes to include necessary skills and knowledge of the microcomputer and associated software applications.

Advisor: Janet Cosgrove, jcosgrove@nwcc.commnet.edu, 860-738-6377.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition OR Communications Elective ¹	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective OR Electrical Tech/Engineering Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts		Liberal Arts Elective	3
			24 (25)
Program Requirements			
	CSA* 105 CSA* 205	Intro to Software Applications OR Advanced Applications	3
	CSC* 231	Database Design I	3
	CSC* 105	Programming Logic	3
	CSC* 210	C Programming	3
	CST* 140	Intro to Computer Hardware	3
	CST* 110	Intro to Information Technology	3
	CST* 210	Operating Systems	3
			21
Specialized Program Requirements			
	CSA* 135	Spreadsheet Applications	3
	CSA* 155	Multimedia Communication	3
	CSA* 163	The Internet	3
	CSA* 205 CST* 151	Advanced Applications OR Web Construction	3
	CSC* 232	Database Design II	3
			15
		Total	60 (61)

¹ CSA* 155, COM* 173 and BBG* 210 are approved selections as Communications Elective

Program Outcomes

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

1. Demonstrate an understanding of general business uses of computers, the software used by the business community, and application development for general business computing functions.
2. Demonstrate expertise in skills to be able to use the Microsoft Office Suite software applications.
3. Demonstrate an understanding of the role and function of computers and effectively use the computer to solve problems.
4. Demonstrate an understanding of the fundamentals and concepts, commands, and syntax of spreadsheet application software and preparation of spreadsheets for data analysis.
5. Demonstrate an understanding of the fundamentals and concepts, commands, and syntax of data base application software and preparation of data bases for data analysis.
6. Demonstrate an understanding of the fundamentals and concepts, commands, and syntax word processing and presentation application software and preparation of documents for communication and data analysis.

COMPUTER SYSTEMS TECHNOLOGY COMPUTER PROGRAMMING OPTION

Associate in Science Degree

The Computer Systems Technology Degree is for students seeking a career program in the computer fields. Students will acquire background and skills to enable them to work with digital machines from microprocessors to microcomputers to mainframe systems configured in Local Area and Wide Area Networks. Students will learn the logical and physical technologies associated with hardware, software, connectivity and project design and planning.

Advisor: Michael Gow, mgow@nwcc.commnet.edu, 860-738-6385

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	COM*	Communications Elective ¹	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective OR Electrical Tech/Engineering Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts		Liberal Arts Elective	3
			24 (25)
Program Requirements			
	CSA* 105 CSA* 205	Intro to Software Applications OR Advanced Applications	3
	CSC* 231	Database Design I	3
	CSC* 105	Programming Logic	3
	CSC* 210	C Programming	3
	CST* 140	Intro to Computer Hardware	3
	CST* 110	Intro to Information Technology	3
	CST* 210	Operating Systems	3
			21
Specialized Program Requirements			
	CSC* 232	Database Design II	3
	CSC* 205	Visual Basic I	3
	CSC* 209	Advanced Access with Visual Basic	3
	CST* 260 CSC* 250	Systems Architecture OR Systems Analysis & Design	3
	CSC*	Programming Elective	3
			15
		Total	60 (61)
¹ CSA* 155, COM* 173 and BBG* 210 are approved selections as Communications Elective			

Program Outcomes

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

1. Demonstrate an understanding of the role and function of computers and effectively use the computer to solve problems.
2. Demonstrate the basic techniques used in developing and managing software projects.
3. Demonstrate problem solving skills to design solutions for business problems.
4. Demonstrate a working knowledge of computer programming to create and maintain business applications.

COMPUTER SYSTEMS TECHNOLOGY WEBMASTER & INTERNET DESIGN OPTION

Associate in Science Degree

The Computer Systems Technology Degree is for students seeking a career program in the computer fields. Students will acquire background and skills to enable them to work with digital machines from microprocessors to microcomputers to mainframe systems configured in Local Area and Wide Area Networks. Students will learn the logical and physical technologies associated with hardware, software, connectivity and project design and planning.

Advisor: Janet Cosgrove, jcosgrove@nwcc.commnet.edu, 860-738-6377.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	COM*	Communications Elective ¹	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective OR Electrical Tech/Engineering Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts		Liberal Arts Elective	3
			24 (25)
Program Requirements			
	CSA* 105 CSA* 205	Intro to Software Applications OR Advanced Applications	3
	CSC* 231	Database Design I	3
	CSC* 105	Programming Logic	3
	CSC* 210	C Programming	3
	CST* 110	Intro to Information Technology	3
	CST* 210	Operating Systems	3
			18
Specialized Program Requirements			
	CSA* 163	The Internet	3
	CSA* 135 CSA* 155	Spreadsheet Applications OR Multimedia Communications	3
	CST* 150	Web Design & Development I	3
	CST* 250	Web Design & Development II	3
	CSA* 205 CST* 151	Advanced Applications OR Web Construction	3
	CSA* 207	Computer Applications in Management & Marketing	3
			18
		Total	60 (61)
¹ CSA* 155, COM* 173 and BBG* 210 are approved selections as Communications Elective			

Program Outcomes

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

1. Demonstrate competency with underlying fundamentals of websites as regards to software, control structures, and required hardware for development and maintenance of comprehensive web/Internet pages for commercial presence.
2. Demonstrate expertise in both HTML and JavaScript languages/scripting for creation of comprehensive webpages.
3. Demonstrate an understanding of an integrated approach to software applications and webpage development as used in business environments.
4. Demonstrate expertise in research and evaluation of the functions and features of Internet sources to incorporate into applications and web development for use in business environments.

CRIMINAL JUSTICE Associate in Science Degree

This program is designed to be a career-oriented program that provides students with the necessary knowledge to gain employment in the field of Criminal Justice. Program course work will allow an opportunity for students to transfer to a four-year institution. Students will participate in applied learning through in-class, hands-on assignments as well as internships/fieldwork at Criminal Justice sites.

Advisor: Barry D’Onofrio, bdonofrio@nwcc.commnet.edu, 860-738-6389

Note: A grade of “C-“ or higher is required in all CJS* courses.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	COM* 173	Public Speaking	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective ¹	3
Natural/Physical Science		Natural Science Elective	3 (4)
Social Science	HIS* 201 HIS* 202	U.S. History I OR U.S. History II	3
Liberal Arts		Social Science Elective OR Behavioral Science Elective ²	3
			24 (25)
Program Requirements			
	SOC* 101	Introduction to Sociology	3
		Elective ²	3
			6
Specialized Program Requirements			
	CJS* 101	Introduction to Criminal Justice	3
	CJS* 120	Police & The Community	3
	CJS* 211	Criminal Law I	3
	CJS* 212	Criminal Law II	3
	CJS* 213	Evidence & Criminal Procedures	3
	CJS* 220	Criminal Investigation	3
	CJS* 250	Police Organization & Administration	3
	CJS* 258	Street Gangs & Organized Crime	3
	CJS* 291	Criminal Justice Practicum	3
	CJS*	Criminal Justice Elective	3
			30
		Total	60 (61)
¹ MAT* 135, MAT* 137 or MAT* 167 recommended			
² SOC* 240 – Criminology or SOC* 241 – Juvenile Delinquency recommended			



Program Outcomes

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

1. Explain and identify the structure and function of the criminal justice system.
2. Explain and identify the philosophy of community policing and its impact on the criminal justice system.
3. Explain and identify the programs facing various segments of the criminal justice system.
4. Explain and identify elements of the U.S. Constitution as it relates to the criminal justice system.
5. Apply the basic concepts of criminal law.
6. Explain and identify sociological aspects of criminology, juvenile delinquency and street gangs.

See the “Special Programs” section for information on the Forensic Science Transfer Pathway.

DEAF STUDIES

Associate in Arts Degree

The Associate degree in Deaf Studies will give students competence in American Sign Language and an appreciation for the culture, contributions, and contemporary issues of deaf people. Course work is designed to provide information on the linguistic, historical, and cultural background of the deaf community, with particular emphasis on the perspective of deaf people acculturated in a hearing society. This degree is constructed for either career or transfer students. This program prepares students for job opportunities as teachers' aids, residential program counselors, job coaches, communication specialists, deaf community advocates, and paraprofessionals with the deaf. Also, the program prepares students for transferring into Bachelor's degree programs, such as those at Boston University, Northeastern University, Gallaudet University with a major in Deaf Studies, Deaf Education, Counseling, or related majors.

Advisor: Job Ayantola, jayantola@nwcc.commnet.edu, 860-738-6370
Anna Rinaldi, arinaldi@nwcc.commnet.edu, 860-738-6379

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts	PSY* 204	Child & Adolescent Development	3
			24 (25)
Program Requirements			
		Program Elective ¹	3
		Program Elective ¹	3
			6
Specialized Program Requirements			
	ASL* 101	American Sign Language I	3
	ASL* 102	American Sign Language II	3
	ASL* 201	American Sign Language III	3
	ASL* 202	American Sign Language IV	3
	ASL* 205	Linguistics of ASL	3
	DSC* 101	Visual/Gestural Communication	3
	DSC* 114	Intro to Deaf People & Deaf Culture I	3
	DSC* 214	Intro to Deaf People & Deaf Culture II	3
	DSC* 218	Selected Topics in Deaf Studies	3
	DSC* 219	ASL Literature	3
	DSC* 222	Field Experience in Deaf Studies	3
			33
		Total	63 (64)

¹ ANT* 101, PSY* 245, PSY* 260 or SOC* 101

Program Outcomes

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

1. Communicate at an advanced level using American Sign Language.
2. Demonstrate an in-depth understanding of and sensitivity to American deaf culture.
3. Describe the major characteristics of ASL literature and storytelling.
4. Understand the linguistic aspects of American Sign Language.
5. Educate others with information on deafness and available resources.

EARLY CHILDHOOD EDUCATION

Associate in Science Degree

The Early Childhood Education program prepares students for transfer to baccalaureate programs as well as for immediate employment in programs such as preschools, child care centers and Head Start. Students receive experience by observing and teaching in the College's Child Development Center Laboratory School, as well as in a variety of early childhood programs. These experiences enable the student to implement the theory received in the college classroom in a practical hands-on setting.

Advisor: Linda Day, lday@nwcc.commnet.edu, 860-738-6305

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts	ENG* 114	Children's Literature	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts	PSY* 204	Child & Adolescent Development	3
			24 (25)
Program Requirements			
	PSY* 260	Psych of the Exceptional Child ¹	3
	HPE*	Physical Activities	1
	HPE*	Physical Activities	1
		Elective ²	3
			8
Specialized Program Requirements			
	ECE* 101	Intro to Early Childhood Education	3
	ECE* 103	Creative Experiences for Children	3
	ECE* 106	Music & Movement for Children	3
	ECE* 109	Science & Math for Children	3
	ECE* 176	Health, Safety & Nutrition	3
	ECE* 210	Observation, Participation & Seminar	3
	ECE* 222	Methods & Techniques in ECE	3
	ECE* 231	Early Language & Literacy Devel	3
	ECE* 290	Student Teaching I ³	3
	ECE* 291	Student Teaching II ³	3
			30
		Total	62 (63)
¹ Offered only in alternate years ² ECE* 141, ECE* 206, RLS* 102, RLS* 201, SOC* 104 and ACC*100 are recommended as electives. Other electives to meet the needs and desires of students are planned with the academic advisor. ³ Consent of Coordinator and a minimum 2.5 GPA in ECE courses are required to be eligible for student teaching.			

Program Outcomes

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

1. Identify, document, and assess elements that determine quality in early childhood programs.
2. Design a learning environment and use teaching strategies that are based upon child development and learning theory.
3. Plan, implement, and evaluate a developmentally appropriate curriculum that fosters children's personal and social, physical, cognitive, and creative development.
4. In a variety of early childhood settings, examine program philosophy and goals, classroom design, teacher/child interaction, curriculum planning and implementation, assessment of the young child, involvement of the family/community as well as issues of diversity.
5. Demonstrate "best practice" in an early childhood setting.

A REQUIRED FIELD TRIP IS PLANNED EACH SEMESTER.

EDUCATIONAL TECHNOLOGY CLASSROOM INSTRUCTION OPTION

Associate in Science Degree

This program is designed for students interested in a career in the field of education. It gives them the required liberal arts basic and it provides technical expertise needed in the classroom setting. It can be the first step of a liberal arts transfer program for students planning to complete a baccalaureate degree for teacher certification in the State of Connecticut. It can also be a career program for students interested in an instructional support position in an elementary or secondary school. This program was developed as an online distance learning program through a developmental grant from the CT Distance Learning Consortium. All of the courses already exist at Northwestern and many are being converted on online delivery. All of the liberal arts courses are available on ground at NCCC, online within the Community College System, and many are currently available online through NCCC.

Advisor: Beverly King, bking@nwcc.commnet.edu, 860-738-6323
Janet Cosgrove, jcosgrove@nwcc.commnet.edu, 860-738-6377

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY*	Psychology Elective	3
Humanities/Arts	ART* MUS*	Art Elective OR Music Elective	3
Mathematics	MAT* 167 MAT* 186 MAT*	Statistics with Technology OR Precalculus OR Higher Level Math	3(4)
Natural/Physical Science		Natural/Physical Science Elective	3 (4)
Social Science		Sociology Elective	3
Liberal Arts		Liberal Arts Elective	3
			24 (26)
Program Requirements			
	HIS* 201 HIS* 202	U.S. History I OR U.S. History II	3
		Laboratory Science Elective	4
		Liberal Arts Elective	3
	CSA* 105	Intro to Software Applications	3
	CSA* 163	The Internet	3
	CSC* 102	Intro to Computer Science	3
	EDT* 200	Multimedia Tools for Instruction	3
	EDT* 202	Research & Eval: Apps of the Internet	3
			25
Specialized Program Requirements			
	EDT* 204	Classroom Support Software	3
	EDT* 210	Curriculum Infusion Unit Study	3
	CSA* 205	Advanced Applications	3
	CST* 150	Web Design & Development I	3
			12
		Total	61 (63)

Program Outcomes

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

1. Demonstrate in-depth knowledge of the Internet, including web terminology and web page creation.
2. Demonstrate knowledge in standards for evaluation of web sites and material on the Internet.
3. Demonstrate competency in search and research strategies for course materials, instructional methods and knowledge base of subject matter.
4. Demonstrate competency in software technologies for classroom management and student-based applications.
5. Demonstrate the ability to create complex instructional material using multimedia tools and the Internet.
6. Demonstrate proficiency in integration of computer technologies as a supportive and technological focus in Educational Technology issues.

EDUCATIONAL TECHNOLOGY TECHNICAL SYSTEMS SUPPORT OPTION

Associate in Science Degree

This program is designed for students interested in a career in the field of education. It gives them the required liberal arts basic and it provides technical expertise needed in the classroom setting. It can be the first step of a liberal arts transfer program for students planning to complete a baccalaureate degree for teacher certification in the State of Connecticut. It can also be a career program for students interested in an instructional support position in an elementary or secondary school. This program was developed as an online distance learning program through a developmental grant from the CT Distance Learning Consortium. All of the courses already exist at Northwestern and many are being converted to online delivery. All of the liberal arts courses are available on ground at NCCC, online within the Community College System, and many are currently available online through NCCC.

Advisor: Beverly King, bking@nwcc.commnet.edu, 860-738-6323

Janet Cosgrove, jcosgrove@nwcc.commnet.edu, 860-738-6377

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Psychology Elective	3
Humanities/Arts	ART* MUS*	Art Elective OR Music Elective	3
Mathematics	MAT* 167 MAT* 186 MAT*	Statistics w/ Technology OR Precalculus OR Higher Level Math	3 (4)
Natural/Physical Science		Natural/Physical Science Elective	3 (4)
Social Science		Sociology Elective	3
Liberal Arts		Liberal Arts Elective	3
			24 (26)
Program Requirements			
	HIS* 201 HIS* 202	U.S. History I OR U.S. History II	3
		Laboratory Science Elective	4
		Liberal Arts Elective	3
	CSA* 105	Intro to Software Applications	3
	CSA* 163	The Internet	3
	CSC* 102	Intro to Computer Science	3
	EDT* 200	Multimedia Tools for Instruction	3
	EDT* 202	Research & Eval: Apps of the Internet	3
			25
Specialized Program Requirements			
	CST* 110 CST* 140	Intro to Information Technology OR Intro to Computer Hardware	3
	CST* 231	Data Communications & Networks	3
	EDT* 206	Standards & Proc for Tech Support	3
	EDT* 212 CST* 235	Inst & Admin Network Systems OR Network Systems	3
			12
		Total	61 (63)

Program Outcomes

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

1. Demonstrate knowledge in standards for evaluation of web sites and material on the Internet.
2. Demonstrate competency in search and research strategies for course materials, instructional methods and knowledge base of subject matter.
3. Demonstrate understanding and proficiency in hardware technologies in classrooms, including computers, peripherals, networking mechanisms, and multimedia add-ons.
4. Demonstrate expertise in product comparisons based on price, components, and company reputation.
5. Demonstrate proficiency in integration of computer technologies as a supportive and technological focus in Educational Technology issues.

ENVIRONMENTAL SCIENCE

Associate in Science Degree

This program is designed for students with an interest in forestry, fisheries and wildlife resources. This program provides students with a strong background in basic sciences as well as introduces them to concepts in nature conservancy and resource management. Students enrolled in the Environmental Science program prepare for transfer into forestry, fisheries and wildlife management BS degree programs such as those offered through the School of Natural Resource Management at UCONN, environmental studies programs at Post University and programs at other colleges and universities.

Advisor: Tara Jo Holmberg, tholmberg@nwcc.commnet.edu, 860-738-6363

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Art Elective	3
Mathematics	MAT* 137 MAT* 186	Intermediate Algebra OR Pre-calculus	3 (4)
Natural/Physical Science	BIO* 121	General Biology I	4
Social Science	ECN* 101	Principles of Macroeconomics	3
Liberal Arts	COM* 173	Public Speaking	3
			25 (26)
Program Requirements			
	BIO* 122	General Biology II	4
	BIO* 235	Microbiology	4
	CHE* 121	General Chemistry I	4
	CSC* 102	Introduction to Computer Science	3
	EVS* 100	Intro to Environmental Science	3
	HIS* 201 HIS* 202	US History I OR US History II	3
	MAT* 167	Statistics with Technology	3
	HPE*	Physical Education Elective	1
	HPE*	Physical Education Elective	1
			26
Specialized Program Requirements			
	CHE* 122	General Chemistry II	4
		Lab Science Elective	4
		Elective	3
			11
		Total	62 (63)

Pending Approval

Program Outcomes

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

1. Demonstrate basic laboratory skills and a working knowledge of safety procedures.
2. Understand and be able to apply the scientific method of inquiry.
3. Demonstrate a basic understanding of experimental design and statistical analysis.
4. Explain the principles of evolution, ecology and natural selection.
5. Understand basic cellular and organismal biological principles.
6. Demonstrate basic understanding of chemical concepts, chemical formulas, compounds, reactions and basic acid/base theory.
7. Explain principles of solution chemistry.
8. Explain principles governing gases.
9. Demonstrate a basic understanding of field sampling, soil composition and pH testing.
10. Understand the fundamental scientific principles surrounding environmental issues.
11. Define the term environment and identify some important environmental concerns we face today.
12. Evaluate the major environmental risks we face and how risk assessment and risk acceptability are determined.
13. Identify the importance of wicked problems, resilience, and adaptive management in environmental planning.
14. Transfer to a four year program in Environmental Science.

ENVIRONMENTAL SCIENCE NATURAL RESOURCES OPTION

Associate in Science Degree

This program is designed for students with an interest in forestry, fisheries and wildlife resources. This program provides students with a strong background in basic sciences as well as introduces them to concepts in nature conservancy and resource management. Students enrolled in the Natural Resources program prepare for transfer into forestry, fisheries and wildlife management BS degree programs such as those offered through the School of Natural Resource Management at UCONN, environmental studies programs at Post University and programs at other colleges and universities.

Advisor: Tara Jo Holmberg, tholmberg@nwcc.commnet.edu, 860-738-6363

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Art Elective	3
Mathematics	MAT* 137 MAT* 186	Intermediate Algebra OR Pre-calculus	3 (4)
Natural/Physical Science	BIO* 121	General Biology I	4
Social Science	ECN* 101	Principles of Macroeconomics	3
Liberal Arts	COM* 173	Public Speaking	3
			25 (26)
Program Requirements			
	BIO* 122	General Biology II	4
	BIO* 235	Microbiology	4
	CHE* 121	General Chemistry	4
	CSC* 102	Introduction to Computer Science	3
	EVS* 100	Intro to Environmental Science	3
	HIS* 201 HIS* 202	US History I OR US History II	3
	MAT* 167	Statistics with Technology	3
	HPE*	Physical Education Elective	1
	HPE*	Physical Education Elective	1
			26
Specialized Program Requirements			
	BIO* 178	General Ecology	4
	CHE* PHY*	Chemistry Elective OR Physics Elective	4
		Elective	3
			11
		Total	62 (63)

Pending Approval

Program Outcomes

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

1. Demonstrate basic laboratory skills and a working knowledge of safety procedures.
2. Understand and be able to apply the scientific method of inquiry.
3. Demonstrate a basic understanding of experimental design and statistical analysis.
4. Understand basic cellular and organismal biological principles.
5. Explain the principles of evolution, ecology and natural selection.
6. Demonstrate basic understanding of chemical concepts, including chemical formulas, compounds, reactions and basic acid/base theory.
7. Demonstrate a basic understanding of field sampling, soil composition and pH testing.
8. Explain plant nutritional requirements and the symptoms of nutritional deficiencies in plants.
9. Use a dichotomous key for plant identification.
10. Demonstrate a basic knowledge of the various types of species interactions that occur within communities and a fundamental understanding of succession.
11. Explain the various processes that shape communities from terrestrial and aquatic community structure sampling and analysis.
12. Understand the fundamental scientific principles surrounding environmental issues.

FINE ARTS

Associate in Science Degree

Northwestern's Fine Art Program is designed to expand the student's creative potential through a series of studio courses and academic electives. The program prepares students for transfer to four year programs in art. Additionally, students develop entry level career skills.

Students learn traditional as well as contemporary approaches to fine art and design. They develop a portfolio which includes a wide variety of art media and highlights areas of special interest. They gain an awareness of current and historical art at NCCC's Gallery, a facility which hosts an array of professional and student art exhibitions.

Advisor: Janet Nesteruk, jnesteruk@nwcc.commnet.edu, 860-738-6384

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts	ART* 101	Art History I	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural/Physical Science Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts		Liberal Arts Elective	3
			24 (25)
Program Requirements			
	ART* 102	Art History II	3
	ART* 111	Drawing I	3
	ART* 112	Drawing II	3
	ART* 141	Photography I	3
	ART* 121	Two-Dimensional Design	3
	ART* 122	Three-Dimensional Design	3
	GRA* 151	Graphic Design I	3
			21
Specialized Program Requirements			
	ART* 113	Figure Drawing I	3
	ART* 151	Painting I	3
	ART* 152	Painting II	3
	ART*	Ceramics or Sculpture Elective	3
	ART* 298	Special Topics: Portfolio	3
			15
		Total	60 (61)

Program Outcomes

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

1. Demonstrate critical thinking and visual problem solving ability.
2. Use a variety of studio art tools, processes and media to produce original works of art.
3. Compile and present a portfolio of two and three dimensional art work.
4. Recognize and apply principles of effective design, composition and color theory.
5. Understand the relationship of form to content in a work of art; demonstrate the ability to use form to convey a specific content.
6. Recognize the commonalities and interrelationships that exist between all forms of visual art studied in the program – drawing, painting, two dimensional design, three dimensional design, ceramics, painting, photography, basic graphic design.
7. Show knowledge of selected artists and aesthetic movements from the history of art; understand art as an expression of the human condition.
8. Utilize art terminology in critically evaluating works of art and design.
9. Demonstrate the ability to use computers and scanners for artistic purposes.
10. Demonstrate techniques for exhibiting art in a gallery setting.

The Art Department reserves the right to retain, exhibit, and reproduce any work submitted by students for credit in any art course.

FINE ARTS: GRAPHIC COMMUNICATION DESIGN OPTION Associate in Science Degree

Northwestern's Graphic Communication Design option is designed to prepare students for transfer and career opportunities in the field of graphic design. The program prepares students for employment with printers, corporate graphic design department, design studios, advertising agencies, commercial and photographic studios, fashion, marketing and media buying organizations, video and media promotion departments, newspapers and publishers, signage and environmental design businesses, and animation and internet design studios.

Northwestern's graphic design students learn the principles and processes of graphic design while working in up-to-date computer and photography studios. They develop a portfolio of original works of graphic design, computer art and fine art, which can be used for employment and transfer.

Advisor: Susan Berg, sberg@nwcc.commnet.edu, 860-738-6342

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts	ART* 101	Art History I	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural/Physical Science Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts	ART* 102	Art History II	3
			24 (25)
Program Requirements			
	ART* 111	Drawing I	3
	ART* 112	Drawing II	3
	ART* 141	Photography I	3
	ART* 121	Two-Dimensional Design	3
	ART* 122	Three-Dimensional Design	3
	GRA* 151	Graphic Design I	3
	GRA* 252	Graphic Design II	3
			21
Specialized Program Requirements			
	ART* 113	Figure Drawing I	3
	ART* 142	Photography II	3
	ART* 151	Painting I	3
	GRA* 253	Graphic Design III	3
	GRA* 254	Graphic Design IV	3
			15
		Total	60 (61)

Program Outcomes

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

1. Demonstrate critical thinking and visual problem solving ability.
2. Use a variety of studio art tools, processes and media to produce original works of art.
3. Compile and present a portfolio of two and three dimensional art work.
4. Recognize and apply principles of effective design, composition and color theory.
5. Understand the relationship of form to content in a work of art; demonstrate the ability to use form to convey a specific content.
6. Recognize the commonalities and interrelationships that exist between all forms of visual art studies in the program – drawing, painting, two dimensional design, three dimensional design, pottery, painting, photography, basic graphic design.
7. Show knowledge of selected artists and aesthetic movements from the history of art; understand art as an expression of the human condition.

The Art Department reserves the right to retain, exhibit, and reproduce any work submitted by students for credit in any art course.

GENERAL STUDIES

Associate in Science Degree

The wide range of electives available in the General Studies curriculum permits the student who has not decided on a vocational or academic goal to explore various areas of study under the guidance of an academic advisor. With such advising, a student may create a program of study suitable as a foundation for transfer to a four year college or university, or may concentrate gradually in a particular vocational area, or may select those courses of personal intellectual stimulation. This program's outcome is especially aligned with the General Education Outcomes for the College.

Advisor: Assigned according to student's area of interest.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts	HIS*	History Elective	3
			24 (25)
Program Requirements			
		Computer Science Elective	3
		Communication Elective ¹	3
			6
Specialized Program Requirements			
		Elective	3
		Elective	3
		Elective	3
		Elective	3
		Elective	3
		Elective	3
		Elective	3
		Elective	3
		Elective	3
			30
		Total	60 (61)

¹ BBG* 210 or COM* 173
Electives, to meet the needs and desires of the student, are planned through counseling. It is strongly recommended that at least one course be taken in the non-liberal arts to explore careers.

Program Outcomes

The General Education component in all programs of study at NCCC, including the General Studies degree program, encompasses the following competency or knowledge-based learning outcomes:

1. Critical thinking skills.
2. Effective verbal, written, oral and visual communication skills.
3. Familiarity with multiple areas of traditional knowledge supporting intellectual excellence and openness.
4. Integrated studies among disciplines.
5. Commitment to social accountability and responsibility.
6. Awareness of the world at large.
7. Information literacy.
8. Values lifelong learning.

See the "Special Programs" section for information on the Teaching Careers in Elementary Education Transfer Pathway.

HUMAN SERVICES

Associate in Science Degree

The Human Services program provides a combination of general education and specialized courses in Psychology, Sociology and Social Work. It enables the student to acquire the knowledge and experience needed for immediate employment as a paraprofessional in a variety of positions in casework, welfare, mental retardation and other settings which require similar skills. It also prepares the student for transfer to a baccalaureate program in Human Services (B.S.) or a Bachelor of Social Work (B.S.W.) program. Transfer articulation with several state colleges ensures a smooth transfer from NCCC to the next significant educational step on a career ladder.

Advisor: Dr. Kathy Kinane, kkinane@nwcc.commnet.edu, 860-738-6315

Prerequisite: PSY* 111 – General Psychology I required before beginning this program

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 104	Psychology of Adjustment	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts	POL* 122	Politics of Social Welfare	3
			24 (25)
Program Requirements			
	HSE* 101	Intro to Human Services	3
	HSE* 203	Theories of Counseling	3
	HSE* 235	Professional & Ethical Issues in Human Services	3
	HSE* 281	Human Services Field Work I	3
	HSE* 282	Human Services Field Work II	3
	RLS* 201	First Aid & Emergency Care	3
	BBG* 210 COM* 173	Business Communication OR Public Speaking	3
			21
Specialized Program Requirements			
	HSE* 202	Intro to Counseling/Interviewing	3
	HSE* PSY*	Human Services Elective OR Psychology Elective	3
	PSY* 245	Abnormal Psychology	3
	SOC*	Sociology Elective	3
		Computer Science/Information Systems Elective	3
		Elective	3
		Elective	3
			21
		Total	66 (67)

Program Outcomes

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

1. Write clear and accurate reports.
2. Collaborate with peers and effectively participate in discussions aimed at determining the best course of action in particular problem situations.
3. Effectively use appropriate interviewing and counseling skills to communicate with clients.
4. Participate in case management discussions to determine the application of counseling and psychotherapy theories to specific problems.
5. Articulate the principles of the Diagnostic and Statistical Manual which forms the basis of mental and behavioral diagnoses.
6. Read professional journals and relevant literature in the fields of Human Services.
7. Articulate relevant ethical codes and standards with clients as guides for professional behavior.
8. Articulate the legal and ethical requirements of professional practice.
9. Maintain accurate records and develop appropriate documentation required of Human Services workers.
10. Evaluate limits of competency and need for continuing supervision.

HUMAN SERVICES CHILD STUDIES OPTION

Associate in Science Degree

The Human Services program provides a combination of general education and specialized courses in Psychology, Sociology and Social Work. It enables the student to acquire the knowledge and experience needed for immediate employment as a paraprofessional in a variety of positions in casework, welfare, mental retardation and other settings which require similar skills. It also prepares the student for transfer to a baccalaureate program in Human Services (B.S.) or a Bachelor of Social Work (B.S.W.) program. Transfer articulation with several state colleges ensures a smooth transfer from NCCC to the next significant educational step on a career ladder.

Advisor: Dr. Kathy Kinane, kkinane@nwcc.commnet.edu, 860-738-6315

PSY* 111 – General Psychology I is required before beginning this program

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 104	Psychology of Adjustment	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective ¹	3 (4)
Social Science		Social Science Elective	3
Liberal Arts	POL* 122	Politics of Social Welfare	3
			24 (25)
Program Requirements			
	HSE* 101	Intro to Human Services	3
	HSE* 203	Theories of Counseling	3
	HSE* 235	Professional & Ethical Issues in Human Services	3
	HSE* 281	Human Services Field Work I	3
	HSE* 282	Human Services Field Work II	3
	RLS* 201	First Aid & Emergency Care	3
	BBG* 210 COM* 173	Business Communication OR Public Speaking	3
			21
Specialized Program Requirements			
	ECE* 222	Methods & Techniques in ECE	3
	PSY* 204	Child & Adolescent Development	3
	PSY* 235	Family Dynamics	3
	SOC* 104	Sociology of the Family	3
		Computer Science/Information Systems Elective	3
		Program Elective ²	3
		Social Science Elective	3
			21
		Total	66 (67)

¹ BIO* 115 – Human Biology recommended

² PSY* 141, PSY* 210, RLS* 102, RLS* 122, or MED* 250

Program Outcomes

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

1. Write clear and accurate reports.
2. Collaborate with peers and effectively participate in discussions aimed at determining the best course of action in particular problem situations.
3. Effectively use appropriate interviewing and counseling skills to communicate with clients.
4. Participate in case management discussions to determine the application of counseling and psychotherapy theories to specific problems.
5. Articulate the principles of the Diagnostic and Statistical Manual which forms the basis of mental and behavioral diagnoses.
6. Read professional journals and relevant literature in the fields of Human Services.
7. Articulate relevant ethical codes and standards with clients as guides for professional behavior.
8. Articulate the legal and ethical requirements of professional practice.
9. Maintain accurate records and develop appropriate documentation required of Human Services workers.
10. Evaluate limits of competency and need for continuing supervision.

HUMAN SERVICES ELDER STUDIES OPTION

Associate in Science Degree

The Human Services program provides a combination of general education and specialized courses in Psychology, Sociology and Social Work. It enables the student to acquire the knowledge and experience needed for immediate employment as a paraprofessional in a variety of positions in casework, welfare, mental retardation and other settings which require similar skills. It also prepares the student for transfer to a baccalaureate program in Human Services (B.S.) or a Bachelor of Social Work (B.S.W.) program. Transfer articulation with several state colleges ensures a smooth transfer from NCCC to the next significant educational step on a career ladder.

Advisor: Dr. Kathy Kinane, kkinane@nwcc.commnet.edu, 860-738-6315

PSY* 111 – General Psychology I is required before beginning this program

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 104	Psychology of Adjustment	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective ¹	3 (4)
Social Science		Social Science Elective	3
Liberal Arts	POL* 122	Politics of Social Welfare	3
			24 (25)
Program Requirements			
	HSE* 101	Intro to Human Services	3
	HSE* 203	Theories of Counseling	3
	HSE* 235	Professional & Ethical Issues in Human Services	3
	HSE* 281	Human Services Field Work I	3
	HSE* 282	Human Services Field Work II	3
	RLS* 201	First Aid & Emergency Care	3
	BBG* 210 COM* 173	Business Communication OR Public Speaking	3
			21
Specialized Program Requirements			
	HSE* 202	Intro to Counseling/Interviewing	3
	PSY* 208	Psychology of Adulthood Development & Aging	3
	PSY* 235	Family Dynamics	3
	SOC* 114	Sociology of Aging	3
		Computer Science/Information Systems Elective	3
		Program Elective ²	3
		Social Science Elective	3
			21
		Total	66 (67)

¹ BIO* 115 – Human Biology recommended

² PSY* 141, PSY* 210, RLS* 102, RLS* 122 or MED* 250

Program Outcomes

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

1. Write clear and accurate reports.
2. Collaborate with peers and effectively participate in discussions aimed at determining the best course of action in particular problem situations.
3. Effectively use appropriate interviewing and counseling skills to communicate with clients.
4. Participate in case management discussions to determine the application of counseling and psychotherapy theories to specific problems.
5. Articulate the principles of the Diagnostic and Statistical Manual which forms the basis of mental and behavioral diagnoses.
6. Read professional journals and relevant literature in the fields of Human Services.
7. Articulate relevant ethical codes and standards with clients as guides for professional behavior.
8. Articulate the legal and ethical requirements of professional practice.
9. Maintain accurate records and develop appropriate documentation required of Human Services workers.
10. Evaluate limits of competency and need for continuing supervision.

HUMAN SERVICES FAMILY STUDIES OPTION Associate in Science Degree

The Human Services program provides a combination of general education and specialized courses in Psychology, Sociology and Social Work. It enables the student to acquire the knowledge and experience needed for immediate employment as a paraprofessional in a variety of positions in casework, welfare, mental retardation and other settings which require similar skills. It also prepares the student for transfer to a baccalaureate program in Human Services (B.S.) or a Bachelor of Social Work (B.S.W.) program. Transfer articulation with several state colleges ensures a smooth transfer from NCCC to the next significant educational step on a career ladder.

Advisor: Dr. Kathy Kinane, kkinane@nwcc.commnet.edu, 860-738-6315

PSY* 111 – General Psychology I is required before beginning this program

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 104	Psychology of Adjustment	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective ¹	3 (4)
Social Science		Social Science Elective	3
Liberal Arts	POL* 122	Politics of Social Welfare	3
			24 (25)
Program Requirements			
	HSE* 101	Intro to Human Services	3
	HSE* 203	Theories of Counseling	3
	HSE* 235	Professional & Ethical Issues in Human Services	3
	HSE* 281	Human Services Field Work I	3
	HSE* 282	Human Services Field Work II	3
	RLS* 201	First Aid & Emergency Care	3
	BBG* 210 COM* 173	Business Communication OR Public Speaking	3
			21
Specialized Program Requirements			
	HSE* 202	Intro to Counseling/Interviewing	3
		Program Elective ²	3
	PSY* 235	Family Dynamics	3
	PSY* 245	Abnormal Psychology	3
	SOC* 104	Sociology of the Family	3
		Social Science Elective	3
		Computer Science/Information Systems Elective	3
			21
		Total	66 (67)

¹ BIO* 115 – Human Biology recommended
² PSY* 141, or MED* 250

Program Outcomes

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

1. Write clear and accurate reports.
2. Collaborate with peers and effectively participate in discussions aimed at determining the best course of action in particular problem situations.
3. Effectively use appropriate interviewing and counseling skills to communicate with clients.
4. Participate in case management discussions to determine the application of counseling and psychotherapy theories to specific problems.
5. Articulate the principles of the Diagnostic and Statistical Manual which forms the basis of mental and behavioral diagnoses.
6. Read professional journals and relevant literature in the fields of Human Services.
7. Articulate relevant ethical codes and standards with clients as guides for professional behavior.
8. Articulate the legal and ethical requirements of professional practice.
9. Maintain accurate records and develop appropriate documentation required of Human Services workers.
10. Evaluate limits of competency and need for continuing supervision.

INTERPRETER PREPARATION ASL/ENGLISH

Associate in Science Degree

The Interpreter Preparation Program (IPP) is a program of study leading to an Associate in Science degree. The purpose of the program is to provide quality interpreter education in a multidisciplinary and interdisciplinary endeavor, focusing on preparing interpreters and transliterators of ASL and English. The professional career program is a comprehensive, sequenced, and integrated series of courses that is intended to provide students with the necessary techniques and skills required for professional work as interpreters. Graduates are encouraged to continue with their education, however, by transferring to baccalaureate degree programs. Students already possessing a college degree may transfer in applicable credits to satisfy the General Education Requirements. NCCC has the only post-secondary degree program in interpreter preparation in Connect-

Please reference State of CT Amendment LCO No. 4839, Section 68 for details.

Advisor: Stephanie Trent, strent@nwcc.commnet.edu, 860-738-6321

Program Prerequisites: To learn effectively to interpret between two languages, one must already be fluent in both languages and have a working knowledge of the two cultures she or he will mediate. Therefore, entrance requirements to the program are completion of ALL of the following courses: DSC* 110 Orientation to Deafness; DSC* 114 Intro to Deaf People & Deaf Culture I; and fluency in American Sign Language (usually the equivalent of 3-4 semesters) as evidenced by a screening tool.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102 BBG* 210	Literature & Composition OR Business Communication	3
Behavioral Science	ANT* 101 SOC* 101 PSY* 111	Intro to Anthropology OR Principles of Sociology OR General Psychology I	3
Humanities/Arts		Fine Art or Humanities Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Natural Science Elective	3 (4)
Social Science		Social Science Elective	3
Liberal Arts	ASL* 205	Linguistics of American Sign Lang	3
			24 (25)
Program Requirements			
		Program Elective ¹	3
			3
Specialized Program Requirements			
	INT* 103	Pre-Interpreting Skills	3
	INT* 112	Consecutive Interpreting	3
	INT* 121	Professional Standards in Interpreting	3
	INT* 134	Educational Interpreting	3
	INT* 212	Simultaneous Interpreting	4
	INT* 214	Advanced Interpreting: Sign to Voice	3
	INT* 216	Transliteration: English to English	3
	INT* 230	Interpreting w/ Specialized Populations	3
	INT* 231	Intro to Interp. In Health Care Sit	3
	INT* 240	Practicum in Interpreting	3
	INT* 241	Seminar	3
			34
		Total	61 (62)

¹ INT* 132, BBG* 210 (if ENG* 102 already taken), DSC* 114, DSC* 214, DSC* 218, DSC* 219 or three 1 credit specialized ASL/Interpreting courses.

Program Outcomes

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

1. Interpret meaning by striving to achieve dynamic equivalence of a message.
2. Communicate bilingually using English and American Sign Language.
3. Act biculturally, having sensitivity to and awareness of American deaf culture.
4. Act ethically in applying the underlying principles of the RID Code of Ethics.
5. Use appropriate business skills.
6. Educate others with information on deafness and available resources.

LIBERAL ARTS & SCIENCES

Associate in Art Degree/Associate in Science Degree

The Liberal Arts and Sciences degree is designed for students planning to continue their education for a baccalaureate degree. Courses include the General Education classes required by four year colleges and universities. Advisors help choose the best electives according to a student's area of interest.

See the Academic Information section for degree requirements for Associate in Art versus Associate in Science degrees. See the "Special Transfer Programs" section for information on Biology, English, History, Psychology, and Teaching Careers Transfer Pathways.

Advisor: Assigned according to student's area of interest.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Art/Music Elective	3
Mathematics	MAT* 167 MAT* 186 MAT*	Statistics with Technology OR Precalculus OR Math Elective higher than MAT* 137	3 (4)
Natural/Physical Science		Laboratory Science Elective	4
Social Science		POL*, GEO* OR ECN* Elective	3
Liberal Arts		Liberal Arts Elective	3
			25
Program Requirements			
	HIS* 101 HIS* 102 HIS* 201 HIS* 202	Western Civilization I OR Western Civilization II OR US History I OR US History II	3
	PHL*	Philosophy Elective	3
		Laboratory Science Elective	4
		Liberal Arts Elective	3
		Liberal Arts Elective	3
		Liberal Arts Elective	3
		Liberal Arts Elective	3
		Liberal Arts Elective	3
		Elective	3
		Elective	3
		Elective	3
		Elective	3
			37
		Total	62 (63)

For most effective transfer, courses listed by intended baccalaureate major are suggested below. Consultation with an academic advisor prior to actual course selection is highly recommended.

BEHAVIORAL SCIENCES:

PSY* 111 General Psychology I	3
PSY* 112 General Psychology II	3
Psychology Electives	6
MAT* 167 Statistics w/ Tech	3

COMPUTER SCIENCE:

CSC* 105 Programming Logic	3
Programming Languages	6
MAT* 167 Statistics w/ Tech	3
CSC* 290 Adv Program Seminar	3

MATHEMATICS:

CSC* 105 Programming Logic	3
MAT* 254 Calculus I	4
MAT* 256 Calculus II	4

PHYSICAL SCIENCE:

CHE* 121 General Chemistry I	4
CHE* 122 General Chemistry II	4
PHY* 121 General Physics I	4
PHY* 122 General Physics II	4

Program Outcomes

The General Education component in all programs of study at NCCC, including the Liberal Arts and Sciences degree programs encompass the following competency or knowledge-based learning outcomes:

1. Critical thinking skills.
2. Effective verbal, written, oral and visual communication skills.
3. Familiarity with multiple areas of traditional knowledge supporting intellectual excellence and openness.
4. Integrated studies among disciplines.
5. Commitment to social accountability and responsibility.
6. Awareness of the world at large.
7. Information literacy.
8. Values lifelong learning.

MEDICAL ASSISTANT Associate in Science Degree

This program will offer students immediate opportunity for employment in medical offices and ambulatory care centers. The objective of this program is to provide the classroom, laboratory, and field experience that prepares students to be job entry-level competent. The Medical Assisting associate degree program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Advisor: Barbara Berger, bberger@nwcc.commnet.edu, 860-738-6308

Note: A minimum grade of “C” (2.00) is required for all MED* designated courses. Additionally, all MED* and BIO* designated courses must be completed within 4 years.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition OR Communication Elective	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Art Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science	BIO* 115	Human Biology	4
Social Science		Social Science Elective	3
Liberal Arts	BIO* 235	Microbiology	4
			26
Program Requirements			
	MED* 111	Administrative Medical Assisting	3
	MED* 113	Healthcare Insurance	2
	MED* 115	Medical Coding	2
	MED* 125	Medical Terminology	3
	MED* 133	Clinical Medical Assisting	4
	MED* 245	Clinical Laboratory Procedures & Practices	4
	MED* 250	Principles of Pharmacology	3
	MED* 281	Medical Assisting Externship	4
	PHL* 112	Medical Ethics	3
			28
Specialized Program Requirements			
	CSA* 105	Introduction to Software Applications	3
	MED* 211	Introduction to Medical Transcription	3
	RLS* 201	First Aid & Emergency Care	3
			9
		Total	63

Pending approval.

Program Outcomes

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

1. Sit for the national medical assisting certification examination.
2. Perform all medical assisting skills at a job-entry level competency.
3. Accurately maintain healthcare records, upholding all laws and regulations.
4. Demonstrate accurate problem solving abilities when working as a medical assistant.
5. Communicate effectively with patients, families and other healthcare providers.
6. Demonstrate behaviors consistent within the Medical Assisting Code of Ethics.
7. Competently function within the medical assisting scope of practice.
8. Competently function within an interdisciplinary healthcare team.

RECREATION LEADERSHIP

Associate in Science Degree

Employment opportunities in the recreation field have been growing at a steady pace over recent years. Most positions require a Bachelor's degree while others are available to Associate degree graduates. Positions in the public sector, such as those in municipal and county park and recreation departments, as well as those in the voluntary sector, such as YMCA and Scouting have continued to become available at attractive salaries. Students learn valuable competencies through experiential learning opportunities, such as class projects and field work. Many students transfer to the University of Connecticut, Southern Connecticut State University, Springfield College, or other colleges to pursue advanced degrees.

Advisor: H. Clark Schroeder, hcschroeder@nwcc.commnet.edu, 860-738-6427

Note: A minimum grade of "C" is required in all recreation courses.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Art Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Lab Science Elective ¹	4
Social Science		Social Science Elective	3
Liberal Arts	COM* 173	Public Speaking	3
			25
Program Requirements			
	RLS* 101	Intro to Recreation & Leisure Serv	3
	RLS* 201	First Aid & Emergency Care	3
	RLS* 215	Rec Leadership & Supervision	3
	RLS* 219	Field Work in Recreational Leadership	3
	SOC* 101	Principles of Sociology	3
	HPE*	Physical Activities ¹	1
	HPE*	Physical Activities ¹	1
			17
Specialized Program Requirements			
	RSL* 102	Social Recreation	3
	RLS* 103	Social & Folk Dance	2
	RLS* 121	Intro to Therapeutic Recreation Serv	3
	RLS* 145	Park Management	3
		Computer Science Elective	3
		Program Elective ¹	3
		Elective ¹	3
			20
		Total	62

¹ Selected in consultation with advisor.

Program Outcomes

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

1. Discuss the history of the recreation movement in the United States and the importance of play to all children and adults.
2. Determine the recreational needs and interests of people in a given population area.
3. Develop programs and activities designed for residents of a given geographical area.
4. Demonstrate effective problem solving abilities in community relation settings.
5. Conduct a variety of small and large group recreational activities.
6. Schedule league and tournament activities.
7. Design and lay out athletic fields and indoor competition areas as well as child play areas.
8. Manage a community recreation department, including personnel management, budgeting, park and facility design, committee work, and conducting public meetings.
9. Manage the growth of turf grass, ornamentals and trees.
10. Identify a variety of special population groups and understand their special needs.
11. Develop programs and activities designed for the abilities of disabled residents.
12. Administer emergency first aid.
13. Communicate effectively both orally and in writing.
14. Deliver effective public presentations regarding recreation in modern society.

RECREATION LEADERSHIP PARK MANAGEMENT OPTION

Associate in Science Degree

Employment opportunities in the Park Management field are found mostly in the public sector in municipal, county, state and national parks and forests. Some positions are also available in private, commercial and other areas. Graduates of this career program pursue positions as park maintenance supervisors, groundskeepers, park rangers, golf course superintendents, forest service workers and park managers. Students learn valuable competencies through experiential learning opportunities such as class projects and field work.

Advisor: H. Clark Schroeder, hcschroeder@nwcc.commnet.edu, 860-738-6427

Note: A minimum grade of “C” is required in all recreation courses.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Art Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science	BIO* 121	General Biology I	4
Social Science		Social Science Elective	3
Liberal Arts	COM* 173	Public Speaking	3
			25
Program Requirements			
	RLS* 101	Intro to Recreation & Leisure Serv	3
	RLS* 201	First Aid & Emergency Care	3
	RLS* 215	Rec Leadership & Supervision	3
	RLS* 219	Field Work in Recreational Leadership	3
	SOC* 101	Principles of Sociology	3
	HPE*	Physical Activities ¹	1
	HPE*	Physical Activities ¹	1
			17
Specialized Program Requirements			
	BIO* 170	Ecology OR Science Elective ¹	3
	RLS* 145	Park Management	3
		Business Elective	3
		Lab Science Elective ¹	4
		Elective	3
		Elective	3
			19
		Total	61

¹ Selected in consultation with advisor.

Program Outcomes

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

1. Discuss the history of the recreation movement in the United States and the importance of play to all children and adults.
2. Demonstrate effective problem solving abilities in park maintenance settings.
3. Schedule league and tournament activities.
4. Design and lay out athletic fields and indoor competition areas as well as child play areas.
5. Manage a community recreation department maintenance crew.
6. Manage the growth of turf grass, ornamentals and trees.
7. Administer emergency first aid.
8. Communicate effectively both orally and in writing.
9. Deliver effective public presentations regarding recreation in modern society.
10. Design and lay out athletic fields and indoor competition areas as well as child play areas.

RECREATION LEADERSHIP THERAPEUTIC RECREATION OPTION

Associate in Science Degree

Recreational therapists, also referred to as therapeutic recreation specialists, provide treatment services and recreation activities

games, dance and movement, drums, music, and community outings, therapists treat and maintain the physical, mental and emotional well-being of their clients. Therapists help individuals reduce depression, stress and anxiety; recover basic motor functioning and reasoning abilities; build confidence; and socialize effectively so that they can enjoy greater independence, as well as reduce or eliminate the effects of their illness or disability. In addition, therapists help integrate people with disabilities into the community by teaching them how to use community resources and recreational activities.

Advisor: H. Clark Schroeder, hcschroeder@nwcc.commnet.edu, 860-738-6427

Note: A minimum grade of “C” is required in all recreation courses.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Art Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science		Laboratory Science Elective ¹	4
Social Science		Social Science Elective	3
Liberal Arts	COM* 173	Public Speaking	3
			25
Program Requirements			
	RLS* 101	Intro to Recreation & Leisure Serv	3
	RLS* 201	First Aid & Emergency Care	3
	RLS* 215	Rec Leadership & Supervision	3
	RLS* 219	Field Work in Recreational Leadership	3
	SOC* 101	Principles of Sociology	3
	HPE*	Physical Activities ²	1
	HPE*	Physical Activities ²	1
			17
Specialized Program Requirements			
	HSE* 202	Intro to Counseling & Interviewing	3
	RLS* 102	Social Recreation	3
	RLS* 103	Social & Folk Dance	2
	RLS* 121	Intro to Therapeutic Recreation Serv	3
	RLS* 122	Procedures & Techniques in Therapeutic Recreation	3
	RLS* 221	Therapeutic Recreation Programming	3
		Computer Science Elective ¹	3
			20
		Total	62

¹ BIO* 115 is recommended
² Selected in consultation with advisor.

Program Outcomes

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

1. Discuss the history of the recreation movement in the United States and the importance of play to all children and adults.
2. Manage a residential treatment center's therapeutic recreation department effectively and efficiently.
3. Develop programs and activities designed for the abilities of disabled clients.
4. Demonstrate effective problem solving abilities in therapeutic recreation settings.
5. Obtain client information through interview, observation and research.
6. Competently function within an interdisciplinary healthcare team.
7. Identify a variety of special population groups and understand their special needs.
8. Communicate effectively with clients, their families, co-workers and administrators.
9. Conduct a variety of small and large group recreational activities.
10. Schedule league and tournament activities.
11. Develop recreational activities and programs specifically designed to meet the needs and interests of clients while bringing about a desired change.
12. Administer emergency first aid.
13. Communicate effectively both orally and in writing.
14. Deliver effective public presentations regarding recreation in modern society.

VETERINARY TECHNOLOGY

Associate in Science Degree

The Associate Degree in this AVMA fully-accredited program will prepare students for immediate employment in veterinary offices, biological research facilities, drug and feed manufacturing companies, and in the animal production industry. The objective of this program is to provide the classroom, laboratory, and field experience that will prepare students to be job entry-level competent. After completing the Associate Degree program, eligible students may transfer seamlessly to the College of Agriculture and Natural Resources at the University of Connecticut to major in either Animal Science or Pathobiology. The NCCC Veterinary Technology Program promotes graduate success through a combination of challenging studies, extensive on-site hands-on learning opportunities, affiliations with off-site veterinary clinics, and continued emphasis on the need for lifelong learning.

Advisor: Nancy Marchetti, D.V.M, nmarchetti@nwcc.commnet.edu, 860-738-6483

NOTE: a minimum grade of “C” (2.00) is required for all VET* designated courses. Additionally, all VET* and BIO* designated courses must be completed within 5 years.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	VET* 102	Vet Office Mgmt & Communication	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Art Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science	BIO* 235	Microbiology	4
Social Science		Social Science Elective	3
Liberal Arts	BIO* 238	Parasitology	3
			25
Program Requirements			
	BIO* 211	Anatomy & Physiology I (w/ Vet Animal Lab)	4
	BIO* 212	Anatomy & Physiology II (w/ Vet Animal Lab)	4
	MED* 125	Medical Terminology	3
	MED* 250	Principles of Pharmacology	3
			14
Specialized Program Requirements			
	VET* 100	Introduction to Animal Care	2
	VET* 101	Introduction to Veterinary Technology	3
	VET* 151	Small Animal Veterinary Technology	4
	VET* 152	Large Animal Veterinary Technology	4
	VET* 205	Veterinary Laboratory Procedures	3
	VET* 212	Principles of Imaging	1
	VET* 220	Animal Pathology	3
	VET* 230	Veterinary Anesthesia & Surgical Nursing (Lab & Lecture)	4
	VET* 240	Periodontology & Oral Radiology	2
	VET* 280	Veterinary Technology Externship I	1
	VET* 281	Veterinary Technology Externship II	2
			29
		Total	68

Program Admission Prerequisites:

BIO* 121 – General Biology OR
 BIO* 115 – Human Biology with a grade of “C” or above
 CHE* 111 – Concepts of Chemistry
(Above courses must be college level courses with a grade of “C” or above and taken within 5 years prior to entering the program)
 CSA* 105 – Intro to Software Apps
 MAT*095 – Elementary Algebra Foundations or equivalent

Other Requirements:

- Interview w/ fulltime veterinary technology program faculty member
- for any VET* course numbered 150 or higher, a health physical and rabies vaccination certificate are required.
- Students must be capable of lifting a minimum of 50 lbs. and must be in overall good health.
- It is strongly recommended that applicants experience 20 hours or more of experience at a veterinary practice.

Program Outcomes

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

1. Demonstrate a solid understanding of the wide variety of knowledge needed within the career, including anatomy and physiology, laboratory procedures, medical and surgical nursing skills, and clinical pathology.
2. Demonstrate the entry-level skills and the knowledge applicable for a wide variety of careers, including employment at veterinary clinics, zoos, wildlife rehabilitation centers, research facilities, pharmaceutical sales, as well as drug and feed manufacturing companies.
3. Sit for the Veterinary Technician National Examination.
4. Demonstrate analytical problem-solving and decision-making skills applicable to the role of the veterinary technician in the field of animal healthcare.

ALLIED HEALTH SCIENCE Certificate

This certificate program is recommended for students who may plan to pursue careers in nursing, dental hygiene and many other allied health programs.

Nursing Preparation:

Through careful academic advising, students gain a strong academic foundation as they complete nursing prerequisites and the liberal arts and sciences courses required in various Associate and Bachelor's degree RN programs in Connecticut and Massachusetts.

Dental Hygiene:

Students work with an advisor to prepare for admission to the Dental Hygiene program at Tunxis Community College.

Other Allied Health Programs:

Many of the courses in the Allied Health Certificate program also prepare students to enter other allied health programs such as medical assisting, physical therapist assistant, radiology technology, respiratory therapy, and others. Students must work with an advisor and consult specific program requirements to select the appropriate courses for each program.

Completion of the certificate does NOT guarantee acceptance into a nursing or allied health program.

Advisor: Alison Jassen (pre-nursing), ajassen@nwcc.commnet.edu, 860-738-6391

Barbara Berger (pre-physical therapy), bberger@nwcc.commnet.edu, 860-738-6308

Program Requirements		
ENG* 101	Composition	3
MAT* 137	Intermediate Algebra	3
PSY* 111	General Psychology I	3
SOC* 101	Principles of Sociology	3
BIO* 211	Anatomy & Physiology I	4
BIO* 212	Anatomy & Physiology II	4
BIO* 235	Microbiology	4
CHE* 111	Concepts of Chemistry	4
	Total	28

Program Outcomes

1. Demonstrate understanding of the structure and function of the human body and how the structure and function of various systems are inter-related.
2. Demonstrate understanding of factors that promote health and disease.
3. Demonstrate the ability to write effectively.
4. Meet prerequisites for most regional nursing and other allied health programs.

Allied Health Concentration:

NCCC has a collaborative arrangement with the Hartford Hospital School of Allied Health. Students may take courses at NCCC to meet specific prerequisites and course requirements for the Radiography, Radiation Therapist and Histology Technician programs at Hartford Hospital. The course prerequisites that students take at NCCC vary for each program but generally include math and science courses. In addition, students may take specific courses, such as Medical Terminology and Anatomy & Physiology I and II, at NCCC to meet program requirements at Hartford Hospital. An advisor will work with students to select appropriate courses. Students take the courses with specific career training at Hartford Hospital.

Students completing the Radiography, Radiation Therapist, and Histology technician programs may transfer the Hartford Hospital courses to NCCC for academic credit. These credits may be used to meet degree requirements for the Associate Degree in General Studies. Students will need to take additional courses at NCCC to complete the AS degree requirements.

NCCC has an agreement with Naugatuck Valley Community College to accept NCCC students into the NVCC Nursing Program. For more information, please see the "Nursing Partnership" page in the Special Transfer Programs section of this catalog.

COMPUTER BUSINESS APPLICATIONS

Certificate

This certificate program is focused on preparing the student to apply computer applications such as word processing, spreadsheets, database, internet, e-mail, and presentation software to the solution of problems and have competency in office procedures. This program also prepares students for work responsibilities including researching and organizing information, electronic communication and business correspondence, preparing electronic communication and business correspondence, preparing electronic presentations and information and document processing. Graduates are prepared for positions as administrative assistant, executive assistant and other information support roles.

Advisor: Janet Cosgrove, jcosgrove@nwcc.commnet.edu, 860-738-6377

Program Requirements		
CSA* 105	Intro to Software Applications	3
CSA* 135	Spreadsheet Applications	3
CSA* 231	Database Design I	3
CSA* 205	Advanced Applications	3
	Computer Science Elective	3
	Total	15

Program Outcomes

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

1. Demonstrate an understanding of general business uses of computers, the software used by the business community, and application development for general business computing functions.
2. Demonstrate expertise in skills to be able to use the Microsoft Office Suite software applications.
3. Demonstrate an understanding of the role and function of computers and effectively use the computer to solve problems.
4. Demonstrate an understanding of the fundamentals and concepts, commands, and syntax of spreadsheet application software and preparation of spreadsheets for data analysis.
5. Demonstrate an understanding of the fundamentals and concepts, commands, and syntax of data base application software and preparation of data bases for data analysis.
6. Demonstrate an understanding of the fundamentals and concepts, commands, and syntax word processing and presentation application software and preparation of documents for communication and data analysis.



WEBMASTER & INTERNET DESIGN Certificate

The growth of the Internet and the expansion of the World Wide Web (the graphical portion of the Internet) have generated a variety of occupations related to the design, development, and maintenance of Web sites and their servers. For example, webmasters are responsible for all aspects of a Web site, including performance issues such as speed of access, and for approving the content of the site. Internet developers or Web developers, also called Web designers, are responsible for day-to-day site design and creation. (Occupational Outlook Handbook)

Advisor: Janet Cosgrove, jcosgrove@nwcc.commnet.edu, 860-738-6377

Program Requirements		
CSA* 105 CSA* 205	Intro to Software Applications OR Advanced Applications	3
CSA* 163	The Internet	3
CSA* 296	Computer Applications	3
CST* 150	Web Design & Development I	3
CST* 250	Web Design & Development II	3
	Total	15

Program Outcomes

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

1. Demonstrate competency with underlying fundamentals of websites as regards to software, control structures, and required hardware for development and maintenance of comprehensive web/Internet pages for commercial presence.
2. Demonstrate expertise in both HTML and JavaScript languages/scripting for creation of comprehensive webpages.
3. Demonstrate an understanding of an integrated approach to software applications and webpage development as used in business environments.
4. Demonstrate expertise in research and evaluation of the functions and features of Internet sources to incorporate into applications and web development for use in business environments.



COMPUTER PROGRAMMING Certificate

Students will acquire background and skills to enable them to work with digital machines from microprocessors to micro-computers to mainframe systems configured in Local Area and Wide Area Networks. Students will learn the logical and physical technologies associated with hardware, software, connectivity and project design planning.

Advisor: Michael Gow, mgow@nwcc.commnet.edu, 860-738-6385

Program Requirements		
	Programming Language	3
	Programming Language	3
	Advanced Programming Language	3
	Advanced Programming Language	3
	Computer Science Elective	3
	Total	15

Program Outcomes

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

1. Demonstrate an understanding of the role and function of computers and effectively use the computer to solve problems.
2. Demonstrate the basic techniques used in developing and managing software projects.
3. Demonstrate problem solving skills to design solutions for business problems.
4. Demonstrate a working knowledge of computer programming to create and maintain business applications.

COMPUTER SYSTEMS TECHNOLOGY Certificate

Program Requirements		
CST* 140 CST* 110	Intro to Computer Hardware OR Information Technology ¹	3
CST* 210	Operating Systems	3
	Liberal Arts Elective ²	3
CST* 231	Data Communications & Networks	3
CST* 235	Network Systems	3
CST* 260	System Architecture	3
CSC* 295	Cooperative Educ/Work Experience	3
	Total	21

¹ Students should choose one of these courses based upon their previous computer experience and their need for expertise in either intensive hardware concepts or overview of implementation and installation topics. Students may also choose to take both of these courses during their participation in this program.

² CSC courses are approved Liberal Arts Electives and are recommended courses.

Program Outcomes

Upon successful completion of all program requirements of either certificate, graduates should be able to:

1. Demonstrate an understanding of the role and function of computers and effectively use the computer to solve problems.
2. Describe the basic technologies used in Local and Wide Area Networks including logical and physical technologies as well as hardware and software related issues.
3. Describe the various aspects of computer operating systems and their design and implementation.
4. Demonstrate a working knowledge of computer hardware through needs based specification and troubleshooting skills.

HOME CHILD CARE Certificate

This is a career program which aims to prepare students to work as child care providers in their own homes or in the child's home. All courses are applicable to an Associate in Science degree program in Early Childhood Education.

Advisor: Linda Day, lday@nwcc.commnet.edu, 860-738-6305

Program Requirements		
ECE* 101 ECE* 141	Intro to Early Childhood Ed OR Infant/Toddler Growth & Devl ¹	3
ECE* 103	Creative Experiences for Children	3
ECE* 176	Health, Safety & Nutrition	3
ECE* 206	Admin & Supervision in EC Programs	3
ECE* 290	Student Teaching I ²	3
	Total	15
¹ Offered only in alternate years.		
² Consent of coordinator and a minimum of 2.5 GPA in Early Childhood Education courses are required to be eligible for student teaching.		

Program Outcomes

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

1. Identify, document, and assess elements that determine quality in early childhood programs.
2. Design a learning environment and use teaching strategies that are based upon child development and learning theory.
3. Plan, implement, and evaluate a developmentally appropriate curriculum that fosters children's personal and social, physical, cognitive, and creative development.
4. In a variety of early childhood settings, examine program philosophy and goals, classroom design, teacher/child interaction, curriculum planning and implementation, assessment of the young child, involvement of the family/community as well as issues of diversity.
5. Demonstrate "best practice" in an early childhood setting.

CHILD DEVELOPMENT ASSOCIATE PREPARATION Certificate

Successful completion of the Child Development Associate (CDA) preparation training program fulfills the CSA credential's hourly education requirement and enables students to make application for the nationally recognized CDA Credential. The 12 college credits can also be applied to an Associate Degree in Early Childhood Education

Program Requirements		
ECE* 101 ECE* 141	Intro to Early Childhood Ed OR Infant/Toddler Growth & Devl ¹	3
ECE* 182	Child Development	3
ECE* 180	CDA Credential Preparation	3
ECE* 181	CDA Credential Preparation II	3
	Total	12
¹ Offered only in alternate years.		

Program Outcomes

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

1. Identify, document, and assess elements that determine quality in early childhood programs.
2. Design a learning environment and use teaching strategies that are based upon child development and learning theory.
3. Plan, implement, and evaluate a developmentally appropriate curriculum that fosters children's personal and social, physical, cognitive, and creative development.
4. In a variety of early childhood settings, examine program philosophy and goals, classroom design, teacher/child interaction, curriculum planning and implementation, assessment of the young child, involvement of the family/community as well as issues of diversity.

DEAF STUDIES Certificate

The Deaf Studies Certificate program will help students gain an in-depth understanding of the Deaf Community as well as understanding of bilingual and bicultural issues, especially those with B.A degree or higher.

Advisor: Anna Rinaldi, arinaldi@nwcc.commnet.edu, 860-738-6379

Program Requirements		
ASL* 101	American Sign Language I	3
ASL* 102	American Sign Language II	3
ASL* 201	American Sign Language III	3
ASL* 202	American Sign Language IV	3
ASL* 205	Linguistics of ASL	3
DSC* 101	Visual/Gestural Communication	3
DSC* 114	Introduction to Deaf People & Deaf Culture I	3
DSC* 218	Selected Topics in Deaf Studies	3
DSC* 219	ASL Literature	3
DSC* 222	Field Experience in Deaf Studies	3
	Total	30

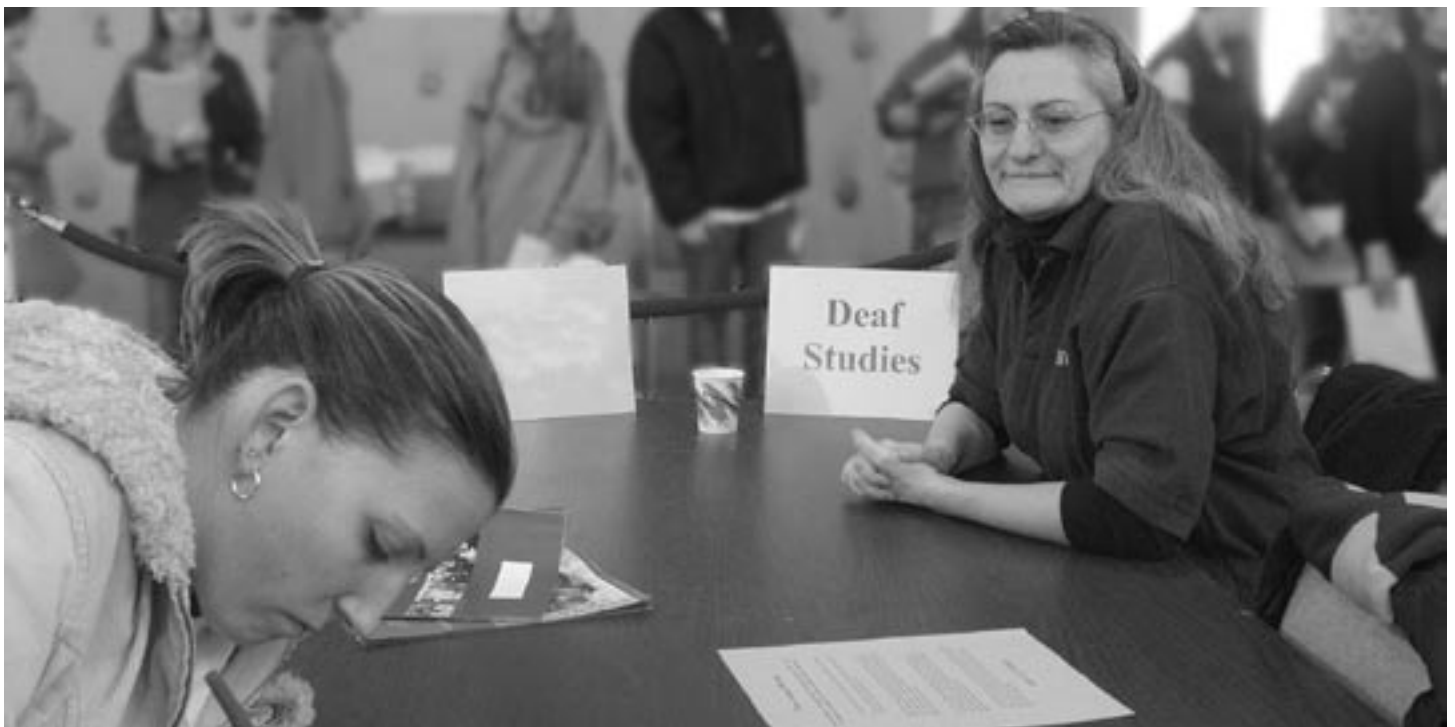
Program Outcomes

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

1. Communicate at an advanced level using American Sign Language.
2. Demonstrate an in-depth understanding of and sensitivity to American deaf culture.
3. Describe the major characteristics of ASL literature and storytelling.
4. Understand the linguistic aspects of American Sign Language.
5. Educate others with information on deafness and available resources.

Career Opportunities:

- > Teacher's Aide
- > Residential program counselors
- > Job coaches
- > Communication specialist
- > Deaf community advocate
- > Paraprofessional with the deaf



EDUCATIONAL TECHNOLOGY CLASSROOM INSTRUCTION OPTION Certificate

These certificates have been developed as an online distance learning program through a development grant from the Connecticut Distance Learning Consortium. The specialized Educational Technology and computer courses are offered through NCCC as the online selections and are available online throughout the Connecticut Community College System. Teachers in the State of Connecticut will benefit from the unique concentration of technology for the classroom.

Advisor: Beverly King, bking@nwcc.commnet.edu, 860-738-6323
Janet Cosgrove, jcosgrove@nwcc.commnet.edu, 860-738-6377

Program Requirements		
CST* 150 CST* 151	Web Design Development I OR Web Construction	3
EDT* 200	Multimedia Tools for Instruction	3
EDT* 202	Research & Evaluation: Applications for the Internet	3
EDT* 204	Classroom Support Software	3
EDT* 210	Curriculum Infusion Unit	3
	Total	15

Program Outcomes

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

1. Demonstrate in-depth knowledge of the Internet, including web terminology and web page creation.
2. Demonstrate knowledge in standards for evaluation of web sites and material on the Internet.
3. Demonstrate competency in search and research strategies for course materials, instructional methods and knowledge base of subject matter.
4. Demonstrate competency in software technologies for classroom management and student-based applications.
5. Demonstrate the ability to create complex instructional material using multimedia tools and the Internet.
6. Demonstrate proficiency in integration of computer technologies as a supportive and technological focus in Educational Technology issues.

EDUCATIONAL TECHNOLOGY TECHNICAL SYSTEMS SUPPORT Certificate

Advisor: Beverly King, bking@nwcc.commnet.edu, 860-738-6323
Janet Cosgrove, jcosgrove@nwcc.commnet.edu, 860-738-6377

Program Requirements		
CST* 110	Information Technology	3
CST* 140	Intro to Computer Hardware	3
CST* 231	Data Communications & Networks	3
CST* 235 EDT* 212	Network Systems OR Instruct & Admin Network Systems	3
EDT* 200	Multimedia Tools for Instruction	3
EDT* 206	Standards & Proc/Tech Support	3
	Total	18

Program Outcomes

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

1. Demonstrate understanding and proficiency in hardware technologies in classrooms, including computers, peripherals, networking mechanisms, and multimedia add-ons.
2. Demonstrate expertise in product comparisons based on price, components, and company reputation.
3. Demonstrate knowledge in standards for evaluation of web sites and material on the Internet.
4. Demonstrate competency in search and research strategies for course materials, instructional methods and knowledge base of subject matter.
5. Demonstrate proficiency in integration of computer technologies as a supportive and technological focus in Educational Technology issues.

FINE ARTS Certificate

The Fine Arts Certificate Program is a program for the student who wishes to begin or continue the study of art at the college level. All courses can be applied to the Associate degree program in Fine Art.

Advisor: Janet Nesteruk, jnesteruk@nwcc.commnet.edu, 860-738-6384

Program Requirements		
ART* 111	Drawing I	3
ART* 112	Drawing II	3
ART* 113	Figure Drawing I	3
ART* 121	Two-Dimensional Design	3
ART* 122	Three-Dimensional Design	3
ART* 151	Painting I	3
ART* 298	Special Topics: Art Portfolio	3
ART*	Ceramics Elective	3
	Total	24

Program Outcomes

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

1. Create original works of art using two and three-dimensional materials.
2. Assemble a portfolio of artwork.



DESKTOP PUBLISHING Certificate

This certificate program aims to prepare students for entry level jobs in business, public relations, advertising and publishing. Students will gain basic competency in computer assisted design and will be able to produce brochures, newsletters and related materials.

Advisor: Sue Berg, sberg@nwcc.commnet.edu, 860-738-6342

Program Requirements		
GRA* 151	Graphic Design I	3
GRA* 252	Graphic Design II	3
GRA* 253	Graphic Design III	3
CSA* 105	Intro to Software Applications	3
ENG* 101 BBG* 210	Composition OR Business Communication	3
	Total	15

Program Outcomes

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

1. Demonstrate critical thinking and visual problem solving ability.
2. Use both the PC and Macintosh platforms.
3. Understand the organization of space on the printed surface.

GRAPHIC DESIGN Certificate

Northwestern's Graphic Design Program aims to provide the student with entry level graphic design skills. All courses are applicable to an Associate Degree. Northwestern's graphic design students learn the principles and processes of graphic design while working in up-to-date computer graphics and photography studios. They develop a portfolio of original works of graphic design, computer illustration and desktop publishing.

In addition to their 12-credit certificate program, many students opt to take Graphic Design IV: Computer Animation. This course introduces the student to the basics of animation, multimedia, three dimensional modeling, and presentation software.

Advisor: Sue Berg, sberg@nwcc.commnet.edu, 860-738-6342

Program Requirements		
ART* 141	Photography I	3
GRA* 151	Graphic Design I	3
GRA* 252	Graphic Design II	3
GRA* 253	Graphic Design III	3
	Total	12

Program Outcomes

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

1. Understand the organization of space on the printed surface.
2. Be fluent in state of the art graphic design software.
3. Create a graphic design portfolio for transfer or employment.

HUMAN SERVICES Certificate

The Human Services certificate is a career program designed for students seeking to develop skills necessary for employment in the field of Human Services. All courses transfer to the Associate Degree in Human Services. The student is provided with the knowledge and experience needed to immediate employment as a paraprofessional in a variety of positions in casework, probation, mental health, geriatric counseling, welfare, mental retardation and other settings which require similar skills.

Advisor: Dr. Katherine Kinane, kkinane@nwcc.commnet.edu, 860-738-6315

Prerequisite: PSY* 111 – General Psychology I

Program Requirements		
HSE* 101	Introduction to Human Services	3
HSE* 202	Intro to Counseling/Interviewing	3
HSE* 203	Theories of Counseling	3
HSE* 235	Prof & Ethical Issues in Human Serv	3
HSE* 281	Human Services Field Work I	3
HSE* 282	Human Services Field Work II	3
RLS* 201	First Aid & Emergency Care	3
PSY* 104	Psychology of Adjustment	3
PSY* 245	Abnormal Psychology	3
	Total	27

CAREER OPPORTUNITIES:

- Counselor in a Residential Treatment Center
- Case manager with a welfare department
- Health care worker in a nursing home
- Direct worker with the physically and mentally challenged
- Probation counselor
- Youth services worker
- Drug/Alcohol counselor aide
- Group home supervisor
- Or transfer to a baccalaureate program in Human Services or Social Work



HOSPITAL PATIENT CARE TECHNICIAN Certificate

This certificate program combines the competencies of a certified nurse assistant with clinical medical assisting competencies. This program will prepare students for a career in medical facilities, specifically hospital settings.

Advisor: Barbara Berger, bberger@nwcc.commnet.edu, 860-738-6308

Successful completion of this program requires a minimum grade of “C” in all courses. Students must be a CNA or currently enrolled in a CNA program.

Program Requirements		
MED* 125	Medical Terminology	3
MED* 133	Clinical Medical Assisting	4
MED* 245	Clinical Laboratory Procedures and Practices	4
MED* 285	Externship in HPCT	3
	Total	14

Program Outcomes

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

1. Effectively communicate as a healthcare team member.
2. Perform all technical skills needed as a Hospital Patient Care Technician.
3. Interpret more commonly-used medical terminology.
4. Participate in a healthcare environment comply with legal and ethical codes of behavior.
5. Produce accurate healthcare documentation.
6. Perform as an integral member of a healthcare team.

MEDICAL ASSISTING Certificate

This certificate program provides the necessary skills and knowledge to be employed as a medical assistant. All courses transfer to the Associate Degree program in medical assisting. Students should have basic typing and computer skills for this certificate.

Advisor: Barbara Berger, bberger@nwcc.commnet.edu, 860-738-6308

Program Requirements		
MED* 111	Administrative Medical Assisting	3
MED* 125	Medical Terminology	3
MED* 133	Clinical Medical Assisting	4
MED* 113	Healthcare Insurance	2
MED* 245	Clinical Laboratory Procedures and Practices	4
MED* 250	Principles of Pharmacology	3
MED* 281	Medical Assisting Externship	4
BIO* 115	Human Biology	4
PHL* 112	Medical Ethics	3
	Total	30

Pending approval.

Program Outcomes

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

1. Have the necessary knowledge and skills to be employed as a medical assistant.
2. Produce accurate documentation.
3. Competently function within an interdisciplinary healthcare team.
4. Perform job-entry level competent administrative and management skills.

RECREATION LEADERSHIP: ADVENTURE EDUCATION Certificate

This course of study offers the participant both the technical/safety skills and the leadership/group process skills necessary to lead adventure programs. Students will learn to facilitate adventure games and group initiatives as well as lead people on a challenge ropes course and an indoor climbing wall. This is an experiential model that can be implemented in schools, recreation programs, camps, therapeutic recreation programs, youth service bureaus, and substance abuse rehabilitation programs.

Admission to this certificate program requires a screening process. Prospective applicants are asked to speak with the program coordinator at NCCC to obtain further information and necessary application forms. The coursework for this program must be completed in two consecutive semesters beginning in September. Students must be willing to commit to a six credit module in the Fall and a six credit module in the Spring offered on Wednesday evenings and Saturdays. Wilderness First Responder is a 72 hour eight day course which will be offered separately. Field work placement must follow satisfactory completion of all of the other coursework.

Advisor: H. Clark Schroeder, hcschroeder@nwcc.commnet.edu, 860-738-6427

Program Requirements		
RLS* 171	Programming Adventure Education	3
RLS* 172	Adventure Based Counseling	3
RLS* 175	Leadership & Grp Process In Ad Ed ¹	3
RLS* 176	Ropes Course Management	3
RLS* 179	Field Work in Adventure Education	3
RLS* 271	Wilderness First Responder	4
	Total	19

¹ Prerequisite: PSY* 111

Program Outcomes

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

1. Conduct large and small group activities using the Adventure Programming model.
2. Practice appropriate framing and debriefing of Adventure Programming activities.
3. Develop an Adventure Programming curriculum for a chosen population.
4. Properly sequence Adventure Programming activities appropriate to the needs and abilities of the group.
5. Discuss how Adventure Programming activities appropriate the needs and abilities of the group.
6. Properly utilize climbing equipment used in Adventure Programming including the tying of knots, use of climbing harnesses and climbing hardware.
7. Effectively manage an adventure Programming facility including high and low elements.
8. Ensure the safety of participants in an Adventure Program including inspection of facilities and rescue procedures.
9. Train Challenge course staff.
10. Develop an emergency plan, and train all personnel in the execution of the plan.
11. Administer first aid in situations where emergency services are not always available.
12. Belay climbers, teach proper belaying techniques, and supervise safe climbing activities.
13. Practice the logistical aspects of Adventure Programming including equipment control and inventory, intake procedures, budgeting, safety regulations, etc.



RECREATION LEADERSHIP: THERAPEUTIC RECREATION

Certificate

Graduates of this program are qualified to work as Therapeutic Recreation Directors under Connecticut State Regulations. Employment opportunities in the Therapeutic Recreation field have been growing at a steady pace over recent years. Connecticut State Law requires extended care facilities to employ one full-time Recreational Therapist for each 60 beds in the facility. This, along with the steady growth of facilities of this type in the state, has created many jobs for qualified Recreational Therapists. Most positions require that applicants meet minimal state requirements, which graduates of this program do. Students learn valuable competencies through experiential learning opportunities, such as class projects and fieldwork. Many graduates of this program elect to continue on to pursue an Associate Degree. All courses taken in the certificate program apply toward the Associate Degree.

Advisor: H. Clark Schroeder, hcschroeder@nwcc.commnet.edu, 860-738-6427

A minimum grade of “C” is required in all Recreation courses.

Program Requirements		
RLS* 101	Intro to Recreation & Leisure Services	3
RLS* 121	Intro to Therapeutic Recreation Service	3
RLS* 122	Proc & Tech in Therapeutic Recreation	3
RLS* 215	Recreational Leadership & Supervision	3
RLS* 219	Field Work in Recreation Leadership	3
RLS* 221	Therapeutic Recreation Programming	3
	Elective ¹	3
	Total	21

¹ Complete either PSY* 111 – General Psychology I, RLS* 210 – First Aid & Emergency Care or, RLS* 102 – Social Recreation

Program Outcomes

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

1. Discuss the History of the Recreation Movement in the United States and the importance of play to all children and adults.
2. Design and implement recreational programs under the supervision of a qualified Therapeutic Recreation Director in a Residential Treatment Center.
3. Develop programs and activities designed for the abilities of disabled clients.
4. Obtain client information through interview, observation and research.
5. Identify a variety of special population groups and understand their special needs.
6. Conduct a variety of small and large group recreational activities.
7. Schedule league and tournament activities.
8. Develop recreational activities and programs specifically designed to meet the needs and interests of clients while bringing about a desired change.
9. Deliver effective public presentations regarding recreation in modern society.



SPECIAL TRANSFER PROGRAMS

NURSING PARTNERSHIP

Northwestern Connecticut Community College has a collaborative agreement with Naugatuck Valley Community College (NVCC) guaranteeing that NVCC will reserve a designated number of seats for NCCC students who meet admission requirements in the Associate Degree RN program. NCCC students who meet prerequisites (listed below) are eligible to apply for admission to the NVCC Nursing Program through the NCCC Admissions department. Students planning to apply for admission to the NVCC Nursing Program MUST meet with the pre-nursing advisor to ensure that all procedures and requirements to meet prerequisites and eligibility are met. Admission to the nursing program at NVCC is competitive based upon Grade Point Average.

NCCC also prepares students for admission to many other Associate Degree and Bachelor's degree RN programs in Connecticut and Massachusetts. Advisors work with students to help them gain admission to nursing programs and to prepare them for the academic challenges of a nursing program. The ultimate goal is not only to prepare students for admission to a nursing program, but to prepare students for successful completion of a nursing program. Since requirements for the various nursing programs vary, students are encouraged to meet with an advisor very early in their program of study.

Students who wish to transfer to a nursing program should matriculate into either the Allied Health Certificate program or the General Studies program.

To be eligible for admissions through NCCC, students must complete Anatomy & Physiology I and II and either Intermediate Algebra or Chemistry at NCCC within five years prior to the year they plan to enter the nursing program.

Advisor: Alison Jassen, ajassen@nwcc.commnet.edu, 860-738-6391



PHYSICAL THERAPIST ASSISTANT

Associate in Science Degree

The physical therapist assistant is a paraprofessional who delivers services under the supervision of a physical therapist. Work for a physical therapist assistant might be in a hospital, school system, private office, home health agency, industrial setting or rehabilitation hospital. This course of study provides the specific training necessary to enter a career as a physical therapist assistant. This is a “selective admissions program” and is provided through a consortium in collaboration with Capital, Housatonic, Manchester, Naugatuck Valley, Northwestern Connecticut and Tunxis Community Colleges. Individuals applying for admission to the Physical Therapist Assistant program may apply at only one location.

The Physical Therapist Assistant program is licensed by the Connecticut Board of Governors of Higher Education and is accredited by the Commission on Accreditation in Physical Therapy Education/APTA, 1111 North Fairfax St., Alexandria, VA 22314-1488, 703-684-2782.

Advisor: Barbara Berger, bberger@nwcc.commnet.edu, 860-738-6308

Prerequisites: MAT* 137 – Intermediate Algebra, Chemistry or Physics, BIO* 211 – Anatomy & Physiology I with a minimum grade of “C” taken within the last 5 years prior to entering the PTA Program.[^]

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Art Elective	3
Mathematics	MAT*	Mathematics Elective	3
Natural/Physical Science	BIO* 212	Anatomy & Physiology II	4
Social Science		Social Science Elective	3
Liberal Arts	COM* 173	Public Speaking	3
			25
Program Requirements			
	PTA* 120	Introduction to Physical Therapy	3
	PTA* 125	Physical Therapy for Function	4
	PTA* 220	Introduction to Physical Therapy Clinic	1
	PTA* 230	Physical Agents in Physical Therapy	4
	PTA* 235	Kinesiology for Rehabilitation	4
	PTA* 250	Therapeutic Exercise	5
	PTA* 253	Pathophysiology for Rehabilitation	3
	PTA* 258	PTA in the Healthcare Arena	2
	PTA* 260	Physical Therapy Seminar	2
	PTA* 262	PTA Internship II	5
	PTA* 265	PTA Internship III	5
			38
		Total	63

Program Outcomes

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

1. Sit for examination for state licensure/ registration as a physical therapist assistant.
2. Perform physical therapy interventions under the supervision of a physical therapist.
3. Accurately obtain patient information through data collection.
4. Demonstrate accurate problem-solving abilities when working as a physical therapist assistant.
5. Competently communicate with physical therapists, patients, families and other health care providers.
6. Effectively provide education to patients, families, and other caregivers.
7. Produce documentation supporting physical therapy services.
8. Demonstrate behaviors that comply with appropriate statutes and with the ethical standards established by the American Physical Therapy Association.
9. Competently function within an interdisciplinary health care team.

All PTA* courses must be taken in sequence with the exception of electives. The curriculum is designed as a progression of increasing complexity. A grade of “C” or higher must be achieved in all PTA* and BIO* courses and a grade of “P” must be attained in the clinical education components.

[^] For a complete list of selective admission requirements, including approved prerequisite courses contact the Director of Admissions or the Allied Health Program Coordinator.

BIOLOGY TRANSFER PATHWAY

Associate in Science Degree – Liberal Arts & Science

The objective of this pathway is to prepare students for transfer to a baccalaureate degree in Biology, BioMolecular Sciences or Biochemistry at a four-year college or university as well as for entry-level laboratory technician positions.

Students who earn an associate's degree in Liberal Arts & Sciences through the Biology Pathway will be able to:

- Transfer into a bachelor's degree program in biology, molecular biology and biotechnology.
- Transfer into pre-professional programs such as pre-vet or pre-med.
- Transfer into a bachelor's degree in medical laboratory sciences such as cytology and histology.
- Transfer into secondary biology education program.
- Pursue careers as laboratory technicians in academic or industrial settings

Students who successfully complete this pathway can transfer to Central Connecticut State University's BioMolecular Science Program with junior standing under an articulation agreement with the CCSU College of Technology. Contact a NCCC Biology Faculty Advisor for more details on this articulation agreement.

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT* 186	Precalculus	4
Natural/Physical Science	BIO* 121	General Biology I	4
Social Science		Social Science Elective	3
Liberal Arts	HIS* 101 HIS* 102 HIS* 201 HIS* 202	Western Civilization I OR Western Civilization II OR U.S. History I OR U.S. History II	3
			26
Program Requirements			
	BIO*	Biology Elective	4
	BIO*	Biology Elective	4
	BIO*	Biology Elective	4
	BIO* CHE* PHY*	Biology Elective OR Chemistry Elective OR Physics Elective	4
			16
Specialize Program Requirements			
	BIO* 122	General Biology II	4
	BIO* 235	Microbiology	4
	CHE* 121	General Chemistry I	4
	CHE* 122	General Chemistry II	4
		Elective	3
			19
		Total	61

Program Outcomes

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

1. Demonstrate basic laboratory skills and working knowledge of safety procedures.
2. Understand and be able to apply the scientific method of inquiry.
3. Demonstrate a basic understanding of experimental design and analysis.
4. Explain basic cellular and organism principles.
5. Demonstrate an understanding of basic chemical concepts.
6. Perform biotechnology techniques including:
 - Gel electrophoresis
 - Restriction digests
 - Bacterial transformation
 - Polymerase Chain Reaction
 - DNA fingerprinting.
7. Use a light microscope to view and interpret slides.
8. Properly prepare slides for microbiological examination.
9. Perform simple and differential staining techniques including Gram stains.
10. Demonstrate aseptic techniques for the handling of microorganisms and instruments, including:
 - Sterilization and maintenance of sterile transfer instruments
 - Perform aseptic transfer
 - Obtain samples.
11. Use appropriate microbes in a sample using serial dilution techniques.
12. Estimate the number of microbes in a sample using serial dilution techniques.
13. Use standard microbiology laboratory equipment correctly.
14. Perform and analyze immunological tests.



ENGLISH TRANSFER PATHWAY

Associate in Art Degree – Liberal Arts & Science

The objective of this pathway is to prepare students for transfer to a baccalaureate degree in English at a four-year college or university as well as to foster a better understanding and respect for the past.



General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts	ART*/MUS*	Art or Music Elective	3
Mathematics	MAT* 167 MAT* 186 MAT*	Statistics with Technology OR Precalculus OR Math Elective higher than MAT* 137	3 (4)
Natural/Physical Science	BIO* CHE* PHY*	Biology Elective OR Chemistry Elective OR Physics Elective	4
Social Science		Social Science Elective	3
Liberal Arts		Liberal Arts Elective	3
			25 (26)
Program Requirements			
	PHL*	Philosophy Elective	3
		Foreign Language Electives ¹	6
	BIO* CHE* PHY*	Biology Elective OR Chemistry Elective OR Physics Elective	4
	HIS* 101 HIS* 102 HIS* 201 HIS* 202	Western Civilization I OR Western Civilization II OR U.H. History I OR U.S. History II	3
			16
Specialize Program Requirements			
		Liberal Arts Elective	3
		Liberal Arts Elective	3
English (survey)	ENG* 221 ENG* 222 ENG* 231 ENG* 232	American Literature I AND American Literature II OR British Literature I AND British Literature II	6
English (genre)	ENG* 214 ENG* 213 ENG* 211	Drama OR Poetry OR Short Story	3
English	ENG* 281 ENG* 200	Creative Writing OR Advanced Composition	3
		Elective	3
			21
		Total	62 (63)

¹ The language requirement will be waived for any student who has completed 3 years of a single foreign language in high school with a grade of "C" or better. If the language requirement is waived, 6 credits in liberal arts courses will be substituted.

HISTORY TRANSFER PATHWAY

Associate in Art Degree – Liberal Arts & Science

The objective of this pathway is to prepare students for transfer to a baccalaureate degree in History at a four-year college or university as well as to foster a better understanding and respect for the past.

Advisor: Todd Bryda, tbryda@nwcc.commnet.edu, 860-738-6302

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science		Behavioral Science Elective	3
Humanities/Arts	ART* MUS*	Art Elective ¹ or Music Elective ¹	3
Mathematics	MAT* 167	Statistics with Technology OR	3 (4)
	MAT* 186	Precalculus OR	
	MAT*	Math Elective higher than MAT* 137	
Natural/Physical Science	BIO*	Biology Elective OR	4
	CHE*	Chemistry Elective OR	
	PHY*	Physics Elective	
Social Science		Social Science Elective	3
Liberal Arts		Liberal Arts Elective	3
			25 (26)
Program Requirements			
	PHL*	Philosophy Elective	3
		Foreign Language Electives ²	6
	BIO*	Biology Elective OR	4
	CHE*	Chemistry Elective OR	
	PHY*	Physics Elective	
			13
Specialize Program Requirements			
	HIS* 101	Western Civilization I OR	9
	HIS* 102	Western Civilization II OR	
	HIS* 201	U.H. History I OR	
	HIS* 202	U.S. History II	
	HIS*	History Elective ³	3
	HIS*	History Elective ³	3
		Liberal Arts Elective	3
		Elective	3
		Elective	3
			24
		Total	62 (63)
¹ Directed elective to be chosen in consultation with advisor ² Complete either SPA* 101 & SPA* 102 OR GER* 101 & GER* 102. The language requirement will be waived for any student who has completed 3 years of a single foreign language in high school. ³ HIS* 213 or higher			



Program Outcomes

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

1. Understand and critically analyze primary and secondary historical sources.
2. Engage in informed critical debate on major historical issues.
3. Demonstrate knowledge of major historical events and related effects.

PSYCHOLOGY TRANSFER PATHWAY

Associate in Art Degree – Liberal Arts & Science

The objective of this pathway is to prepare students for transfer to a baccalaureate degree in Psychology at a four-year college or university as well as to foster a better understanding and respect for the past.

Advisor: Robert Beck, PhD, rbeck@nwcc.commnet.edu, 860-738-6386



General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	SOC* 101	Principles of Sociology	3
Humanities/Arts	ART* MUS*	Art Elective OR Music Elective	3
Mathematics	MAT* 167	Statistics with Technology	3
Natural/Physical Science	BIO* CHE* PHY*	Biology Elective OR Chemistry Elective OR Physics Elective	4
Social Science		Social Science Elective	3
Liberal Arts		Liberal Arts Elective	3
			25
Program Requirements			
	PHL*	Philosophy Elective	3
		Foreign Language Electives ¹	6
	BIO* CHE* PHY*	Biology Elective OR Chemistry Elective OR Physics Elective	4
	HIS* 101 HIS* 102 HIS* 201 HIS* 202	Western Civilization I OR Western Civilization II OR U.H. History I OR U.S. History II	3
			16
Specialize Program Requirements			
	PSY* 111	General Psychology I	3
	PSY* 112	General Psychology II	3
	PSY*	Psychology Elective	3
	PSY*	Psychology Elective	3
	PSY*	Psychology Elective	3
		Elective ²	3
		Elective ²	3
			21
		Total	62
¹ The language requirement will be waived for any student who has completed 3 years of a single foreign language in high school with a grade of "C" or better. If the language requirement is waived, 6 credits in liberal arts courses will be substituted. ² PHL* 112 Healthcare Ethics or HSE* 235 Professional & Ethical Issues in Human Services are recommended.			

TRANSFER PATHWAY FOR TEACHING CAREERS

The transfer pathway for teaching careers is an advising programs at NCCC provide direction for students planning to enter specific education programs that lead to teaching certification in the State of Connecticut through cooperative agreements with a variety of colleges and universities. Students may elect to prepare for teacher certification in:

- Early Childhood Education** – Birth through Kindergarten or Nursery School through Grade 3
(see following pages)
- Elementary Education** – Grades K through 6 (see following pages)
- Secondary Education** – Grades 7 through 12 (see following pages)

Students work with advisors to:

1. **Select a Major** – The Connecticut Department of Education requires that students select a liberal arts major in addition to their education certificate coursework.
2. **Meet Admission Requirements for Specific Schools of Education** – Students do not generally begin to take education courses until their junior year after they have been admitted to an education program.
3. **Prepare to Take the Praxis I Test** – The Connecticut Department of Education requires that students take the Praxis I test or qualify for exemption before admission to a college or university school of education. Students can use the Learning Plus software in the Academic Skills Center for Praxis preparation. Community College students can use this service for free. Non-community college students can register for this service through the Continuing & Extended Studies department.

Advisors: Sharon Gusky, sgusky@nwcc.commnet.edu, 860-738-6395
Dr. Keith Adams, kadams@nwcc.commnet.edu, 860-738-6301

All students planning to transfer to an education program must work closely with an advisor. Together the student and the advisor plan the best program of study based upon the student's transfer goal.



EARLY CHILDHOOD EDUCATION TEACHING CAREERS TRANSFER PATHWAY

Associate in Science Degree – Early Childhood Education

The objective of this pathway is to prepare students for transfer to a baccalaureate degree in Early Childhood Education at a four-year college or university. For certification the State of Connecticut requires students to choose an area of concentration such as: English, History, Mathematics, Psychology, Science or Social Studies. Upon completing this pathway, students can receive an Associate's Degree in Early Childhood Education.

Advisor: Linda Day, lday@nwcc.commnet.edu, 860-738-6305

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts	ENG* 114	Children's Literature	3
Mathematics	MAT* 137	Intermediate Algebra	3
Natural/Physical Science		Natural/Physical Science Elective ¹	3 (4)
Social Science		Social Science Elective ²	3
Liberal Arts	PSY* 204	Child & Adolescent Psychology	3
			24 (25)
Program Requirements			
		Elective ¹	3
	PSY* 260	Psych of the Exceptional Child	3
	HPE*	HPE Elective	2
			8
Specialized Program Requirements			
	ECE* 101	Intro to Early Childhood Education	3
	ECE* 103	Creative Experiences for Children	3
	ECE* 106	Music and Movement for Children	3
	ECE* 109	Science and Math for Children	3
	ECE* 176	Health, Safety and Nutrition	3
	ECE* 210	Observation, Participation & Seminar	3
	ECE* 222	Methods and Techniques in ECE	3
	ECE* 231	Early Language & Literacy	3
	ECE* 290	Student Teaching I	3
	ECE* 291	Student Teaching II	3
			30
		Total	62 (63)

¹ Electives should be chosen with your advisor.
² HIS* 201 recommended.



Program Outcomes

The General Education component in all programs of study at NCCC, including the General Studies degree programs, encompass the following competency or knowledge-based learning outcomes:

1. Critical thinking skills.
2. Effective verbal, written, oral and visual communication skills.
3. Familiarity with multiple areas of traditional knowledge supporting intellectual excellence and openness.
4. Integrated studies among disciplines.
5. Commitment to social accountability and responsibility.
6. Awareness of the world at large.
7. Information literacy.
8. Values lifelong learning.

Additional information for students wishing to become teachers:

In addition to completing the required courses, students will need to pass the PRAXIS I exam and must have 30 hours of documented experience working with children. They will also need to meet the admissions requirements for the School of Education at the transfer institution; these vary from institution to institution.

It is very important that students pursuing this pathway enroll in the Transfer Express Program and work closely with their advisor.

Students should be aware that most baccalaureate degree programs which offer certification in early childhood education require a total of 130 or more credits of study including at least one semester of full-time student teaching during your last year at the four-year institution.

ELEMENTARY EDUCATION TEACHING CAREERS TRANSFER PATHWAY

Associate in Science Degree – General Studies

The objective of this pathway is to prepare students for transfer to a baccalaureate degree in Elementary Education at a four-year college or university. At the community college level, students will focus on completing their general education requirements and on completing the first two years of study in their chosen major. The State of Connecticut requires students to choose a major in a subject area such as: English, Science, Mathematics, History or Social Studies. Upon completing this pathway, students can receive an Associate's Degree in General Studies.

Advisors: Dr. Keith Adams, kadams@nwcc.commnet.edu, 860-738-6301
Sharon Gusky, sgusky@nwcc.commnet.edu, 860-738-6395

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT* 137	Intermediate Algebra	3
Natural/Physical Science	EVS* 100	Introduction to Environmental Science	3
Social Science		Social Science Elective	3
Liberal Arts	PSY* 201	Lifespan Development	3
			24
Program Requirements			
	HIS* 201 HIS* 202	U.S. History I OR U.S. History II	3
	CSC* 102	Introduction to Computer Science	3
	COM* 173	Public Speaking	3
			9
Specialized Program Requirements			
	MAT*	Mathematics Elective ¹	3
	BIO*	Biology Lab Science Elective	4
	ENG*	200 level English Literature Elective	3
		Social Science Elective	3
		Directed Elective ¹	3
		Directed Elective ¹	3
		Directed Elective ¹	3
		Directed Elective ¹	3
		Directed Elective ¹	3
			28
		Total	61

¹ Directed Electives in your subject area should be chosen with your advisor.



Program Outcomes

The General Education component in all programs of study at NCCC, including the General Studies degree programs, encompass the following competency or knowledge-based learning outcomes:

1. Critical thinking skills.
2. Effective verbal, written, oral and visual communication skills.
3. Familiarity with multiple areas of traditional knowledge supporting intellectual excellence and openness.
4. Integrated studies among disciplines.
5. Commitment to social accountability and responsibility.
6. Awareness of the world at large.
7. Information literacy.
8. Values lifelong learning.

Additional information for students wishing to become teachers:

In addition to completing the required courses, students will need to pass the PRAXIS I exam and must have 30 hours of documented experience working with children. They will also need to meet the admissions requirements for the School of Education at the transfer institution; these vary from institution to institution.

It is very important that students pursuing this pathway enroll in the Transfer Express Program and work closely with their advisor.

Students should be aware that most baccalaureate degree programs which offer certification in education require a total of 130 or more credits of study including at least one semester of full-time student teaching during your last year at the four-year institution.

TEACHING CAREERS IN SECONDARY EDUCATION TRANSFER PATHWAY

Associate in Science Degree – Liberal Arts & Studies

The objective of this pathway is to prepare students for transfer to a baccalaureate degree in Secondary Education at a four-year college or university. At the community college level, students will focus on completing their general education requirements and on completing the first two years of study in their chosen major. The State of Connecticut requires students to choose a major in a subject area such as: English, Science, Mathematics, History, Social Studies or Foreign Languages. Upon completing this pathway, students can receive an Associate's Degree in Liberal Arts & Sciences.

Advisors: Dr. Keith Adams, kadams@nwcc.commnet.edu, 860-738-6301
Sharon Gusky, sgusky@nwcc.commnet.edu, 860-738-6395

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I	3
Humanities/Arts		Humanities or Arts Elective	3
Mathematics	MAT*	Mathematics Elective (above MAT* 137)	3 (4)
Natural/Physical Science		Lab Science Elective	4
Social Science		Social Science Elective	3
Liberal Arts	PSY* 201	Lifespan Development	3
			24 (25)
Program Requirements			
	PHL*	Philosophy Elective	3
	HIS* 201 HIS* 202	U.S. History I OR U.S. History II	3
		Lab Science Elective	4
			10
Specialized Program Requirements			
		Social Science Elective ²	3
	ENG*	English Literature Elective (200 level or higher)	3
	COM* 173	Public Speaking	3
	CSC* 102	Introduction to Computer Science	3
		Directed Elective ¹	3
		Directed Elective ¹	3
		Directed Elective ¹	3
		Directed Elective ¹	3
		Directed Elective ¹	3
			27
		Total	61 (62)

¹ Directed Electives in your subject area should be chosen with your advisor.
² Economics or History recommended



Program Outcomes

The General Education component in all programs of study at NCCC, including the General Studies degree programs, encompass the following competency or knowledge-based learning outcomes:

1. Critical thinking skills.
2. Effective verbal, written, oral and visual communication skills.
3. Familiarity with multiple areas of traditional knowledge supporting intellectual excellence and openness.
4. Integrated studies among disciplines.
5. Commitment to social accountability and responsibility.
6. Awareness of the world at large.
7. Information literacy.
8. Values lifelong learning.

Additional information for students wishing to become teachers:

In addition to completing the required courses, students will need to pass the PRAXIS I exam and must have 30 hours of documented experience working with children. They will also need to meet the admissions requirements for the School of Education at the transfer institution; these vary from institution to institution.

It is very important that students pursuing this pathway enroll in the Transfer Express Program and work closely with their advisor.

Students should be aware that most baccalaureate degree programs which offer certification in education require a total of 130 or more credits of study including at least one semester of full-time student teaching during your last year at the four-year institution.

FORENSIC SCIENCE TRANSFER PATHWAY

Associate in Science Degree – General Studies

The Forensic Science Transfer Pathway is NOT a program but a selection of courses for those students who wish to transfer into a forensic science program at a four-year institution. Upon completion of recommended science, criminal justice and general education courses, students in this pathway will receive an **Associate's Degree in General Studies**.

They become identified primarily with law enforcement – an image enhanced by television and movies. This is misleading because forensic scientists are involved in all aspects of criminal cases. The forensic scientist's goal is the evenhanded use of all available information to determine facts, and subsequently, the truth.

The forensic scientist's role in the civil justice arena is expanding. Issues range from questions of the validity of a signature on a will, to a claim of product liability, to questions of whether a corporation is complying with environmental laws, and the protection of constitutionally guaranteed individual rights. Forensic science is a rewarding career where the love of science can be applied to the good of society, public health and public safety.

Advisor: Barry D'Onofrio, bdonofrio@nwcc.commnet.edu, 860-738-6389

General Education Requirements			
	ENG* 101	Composition	3
Literature or Communication	ENG* 102	Literature & Composition	3
Behavioral Science	PSY* 111	General Psychology I OR	3
Humanities/Arts	ART*	Art Elective ¹	3
Mathematics	MAT* 186	Precalculus	4
Natural/Physical Science	BIO* 121	General Biology I	4
Social Science		Social Science Elective	3
Liberal Arts	COM* 173	Public Speaking	3
			26
Program Requirements			
	BIO* 115 BIO* 235	Human Biology OR Microbiology	4
	CHE* 121	General Chemistry I	4
	CHE* 122	General Chemistry II	4
	CJS* 101	Introduction to Criminal Justice	3
	CJS* 211	Criminal Law I	3
	CJS* 213	Evidence & Criminal Procedures	3
	CJS* 220	Criminal Investigation	3
	CJS* 225	Forensic Science	3
	HIS* 102	Western Civilization II	3
	PHL*	Philosophy Elective ²	3
		Computer Science Elective	3
			36
		Total	62

¹ ART* 101 – Art History I or ART* 102 – Art History II recommended.
² PHL* 111 – Ethics recommended



Program Outcomes

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

1. Understand and employ methods of processing physical evidence from crime scenes.
2. Promote comprehension of the importance of the forensic science laboratory and its role in law enforcement.
3. Create an awareness of the recognition, collection, preservation and evaluation of physical evidence.
4. Expose students to the latest physical and chemical testing methods and show each method's value in varied situations.

THE COLLEGE OF TECHNOLOGY

The Connecticut College of Technology is an innovative program leading to a Bachelor of Science degree in engineering or technology. After completing the AS degree in Engineering Science students may follow the pathway directly into the University of Connecticut with no loss of credit. The Associate in Science degree in Technological Studies leads directly into engineering and technology programs at other private and public universities. Students considering enrollment in these programs should discuss their goals with an appropriate academic advisor.

This program is designed for entry to Central Connecticut State University's School of Technology or Charter Oak State College. The "Technological Studies Pathway" consists of courses which provide the foundation for: 1) a Bachelor of Science Degree from Central Connecticut State University in Engineering Technology, Industrial Technology, or Technology Education; 2) a Bachelor of Science Degree from Charter Oak State College.

A minimum course grade of "C" is required and completion of the program of study is required for continuing as a junior at CCSU's School of technology or at Charter Oak. As of 2002, a reverse articulation agreement with CCSU allows students to complete their entire technology concentration (up to 39 technology credits) at a community college and apply the credits toward the B.S. in Industrial Technology at CCSU.

There are several options that consist of 4-5 specialized courses that are designated at community colleges. These include Integrator Technician, Electrical Contractors, Industrial Electronics, Precision Machining, Waste Water Technician, and industrial Diagnostics

INDUSTRIAL TECHNOLOGY OPTION

ENGINEERING TECHNOLOGY OPTION

General Education Requirements			General Education Requirements		
ENG* 101	Composition	3	ENG* 101	Composition	3
ENG* 102	Literature & Composition	3	ENG* 102	Literature & Composition	3
COM* 173	Public Speaking	3	COM* 173	Public Speaking	3
HIS*	History Elective	3	HIS*	History Elective	3
ECN* 101	Principles of Macroeconomics	3		<i>Technical Writing</i>	3
PHL*	Philosophy Elective OR		PHL*	Philosophy Elective OR	
	Fine Arts Elective OR			Fine Arts Elective OR	
ENG*	English Literature Elective	6	ENG*	English Elective	6
GEO*	Geography Elective OR		ECN*	Economics Elective OR	
POL*	Political Science Elective OR		GEO*	Geography Elective OR	
HIS*	History Elective	3	POL*	Political Science Elective OR	
			HIS*	History Elective	3
PSY*	Psychology Elective OR		ANT*	Anthropology Elective OR	
SOC*	Sociology Elective	3	PSY*	Psychology Elective OR	
			SOC*	Sociology Elective	3
		27			27
Program Requirements			Program Requirements		
CHE* 111	Concepts of Chemistry	4	CHEM* 111	Concepts of Chemistry	4
PHY* 110	Introductory Physics	4	PHY* 121	General Physics I	4
MAT* 167	Statistics with Technology	3	PHY* 122	General Physics II	4
MAT* 186	Precalculus	4	MAT* 167	Statistics with Technology	3
		15	MAT* 186	Precalculus	4
Specialized Program Requirements			MAT* 254	Calculus I	4
ENGR 110	<i>Introduction to CAD</i>	3	MAT* 256	Calculus II	4
CSC* 102	Introduction to Computer Science	3			27
	<i>Technical Writing</i>	3	Specialized Program Requirements		
BMG* 202	Principles of Management	3	ENGR 110	<i>Introduction to CAD</i>	3
	<i>Directed Elective</i>	3	CSC* 102	Introduction to Computer Science	3
	<i>Directed Elective</i>	3	CSC* 219	C Programming	3
	<i>Directed Elective</i>	3		<i>Applied Mechanics (Statics)</i>	3
	<i>Directed Elective</i>	3		<i>Applied Mechanics (Dynamics)</i>	3
		24		<i>Intro to ET/Engineering</i>	3
	Total	66			18
				Total	72

*Note:
Courses in
Italics are
not Offered
at NCCC.*