

GCC Catalog 2018-2019



GatewayCT.edu



Welcome Message



I am pleased to welcome you to Gateway Community College (GCC). Within these pages you will find a wealth of information about the college, its over 90 degree and certificate programs, policies and procedures, and all of the specifics you will need to navigate your time at GCC, from admission to graduation.

While the college catalogue is an important resource and reference for your GCC experience, I want to assure you that it isn't the whole story. It gives you names and qualifications of the faculty and staff, but it doesn't express how much they care, the support they provide for every student on the GCC campus, and their unwavering commitment to helping each student achieve success.

This catalogue provides a comprehensive review of our excellent academic programs and courses, expansive student activities, and the wealth of resources and opportunities available at GCC. As you attend workshops, interact with our exceptional faculty, engage in lectures, and become involved with on-campus clubs and organizations, you will quickly realize that you are embarking on a life changing experience that will expand your horizons and provide a foundation for your academic and personal growth. Here at GCC you will make new friends and

embark on new experiences that will forever change your life. We are excited to take this journey with you and will be there to provide support and share in your journey.

While studying at GCC, you will spend each day in a modern, state-of-the-art, light-filled campus that houses the latest technologies throughout the smart classrooms, computer labs and tech labs that simulate the real-world working environment. GCC students also have access to all of the benefits of studying in an historic college town including access to world-class museums, art galleries, theatres and year-around cultural activities all within walking distance.

GCC is committed to providing you with the education and skills you will need to meet the needs of the business and professional community, making you valuable in the workplace. Whether you're attending GCC to earn credits toward transfer to a four-year institution, or brushing up skills for professional development or personal enrichment, you will find the programs to help you realize your dreams and ambitions, and the people to help you get there.

I welcome you to Gateway Community College!

Sincerely,

A handwritten signature in black ink that reads "Paul Broadie II". The signature is written in a cursive, flowing style.

Paul Broadie II, Ph.D., President

Academic Calendar 2018 – 2019

FALL 2018

August 27	Professional Day
August 28	First Day of Regular Semester – Classes Begin
September 1	College is open – classes will be held
September 3	Labor Day (COLLEGE CLOSED)
September 4	Last Day to Add Classes
October 16	Reading Day
October 19	Mid-Term Deficiency Reports Due from Faculty
November 2	Last Day to Make up Incomplete Grades from spring 2018
November 9	Last Day to Withdraw from Individual Classes
November 21	Faculty Planning Day (NO CLASSES)
November 22 – 25	Thanksgiving Recess (NO CLASSES)
December 8	Last Day of Classes
December 10 - 15	Final Examinations
December 18	Last Day to Submit Final Grades (BY 12:00 NOON)
December 23	Semester Ends

SPRING 2019

January 21	Martin Luther King Day (COLLEGE CLOSED)
January 22	Professional Day
January 24	First Day of Regular Semester – Classes Begin
January 31	Last Day to Add Classes
February 15 - 18	President's Day Recess (COLLEGE CLOSED)
March 8	Mid-Term Deficiency Reports Due from Faculty
March 11 - 17	Spring Recess (NO CLASSES)
March 22	Last Day to Make up Incompletes from fall 2018
April 1	Last Day to Withdraw from Individual Classes
April 19	Day of Reflection (COLLEGE CLOSED)
May 11	Last Day of Classes
May 13 - 18	Final Examinations
May 21	Last Day to Submit Final Grades (BY 12 NOON)
May 27	Memorial Day (COLLEGE CLOSED)
June 1	Semester Ends

INTRODUCTION

About This Catalog

This catalog contains both academic and general information and Gateway Community College's policies at the time of publication. Each student is responsible for becoming thoroughly familiar with the catalog and the rules, regulations, and program requirements it contains. A student has the right to be graduated by the College under the conditions and requirements contained in the catalog in use at the time of initial registration. A student may elect to graduate under the conditions and requirements of a program contained in a subsequent catalog. However, in no case will a student be permitted to use requirements for graduation from more than one catalog.

About the College and our Students

Gateway Community College (GCC) provides the residents and businesses of the Greater New Haven area with innovative educational programs and social and cultural opportunities at its locations in New Haven and North Haven. On July 1, 1992, the New Haven location at Long Wharf, formerly known as South Central Community College, combined resources with Greater New Haven State Technical College in North Haven. This merged institution is one of twelve public community colleges in Connecticut.

In the academic year 2017-2018, the College served the educational needs of 9,710 full- and part-time students through 120 academic programs or program options that lead to a certificate or to an associate degree in arts, science, or applied science. There were approximately 1,700 more students enrolled in non-credit courses and Workforce Development programs. Courses are offered at convenient times for both full- and part-time study during the day, evening, and Saturdays. The College's 528 full- and part-time faculty members and 141 staff are committed to continuing the proud tradition of the institution. According to the Fall 2017 data, our student-faculty ratio is 16:1. In the fall 2017, females comprised 58.5% of the College enrollment; 53.8% of the students are ethnic minorities, and 68.9% attend GCC on a part-time basis. The average student age is 26. We look forward to serving the residents and businesses of South Central Connecticut.

In Academic Year 2016-2017, 32% of graduates chose to continue their studies at a four-year institution. The three top universities where our students earned acceptance were Southern Connecticut State University, University of Connecticut, and Quinnipiac University. Furthermore, 67% of our 2013-2014 graduates were found 'employed' immediately after graduation, according to the state department of labor statistics.

The downtown campus offers all credit and non-credit courses towards associate degrees and certificates in academic and career programs. The North Haven location currently houses our Automotive programs. All degree programs are transferable to four-year colleges and universities. Curricula have been designed with local employment needs in mind. Developmental courses in English, reading, and mathematics are offered to enhance student academic skill levels. English as a Second Language courses are also offered.

The community also benefits from Gateway's numerous credit-free offerings. The Office of Business and Industry Services and the Workforce Development Institute provide workforce development, business development and technology transfer programs.

Courses and programs are offered in response to the educational, economic, and socio-cultural needs of the region.

Mission and Purpose

The College community adopted the following mission statement in February 1997:

Gateway Community College offers high-quality instruction and comprehensive services in an environment conducive to learning. We respond to the changing academic, occupational, technological, and cultural needs of a diverse population.

To realize this mission, Gateway Community College:

- Offers a broad range of credit and credit-free liberal arts and sciences, technical, and career associate degree and certificate programs and courses leading to transfer, employment, and lifelong learning;
- Encourages student success and inclusion through stimulating learning opportunities, innovative teaching, support services, and co-curricular activities;
- Supports economic development through partnerships with business, industry, government, and our community by providing workforce development, business development, and technology transfer;
- Strengthens our community through the sponsorship of intellectual, cultural, social, and recreational events and activities;
- Engages students and community members as active, responsible leaders.

Accreditation

Gateway Community College is accredited by the New England Association of Schools and Colleges Inc. (NEASC) through its Commission on Institutions of Higher Education.

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

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

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

Program Accreditations

The Automotive Program - General Motors (ASEP) is certified by the National Automotive Technicians' Education Foundation Inc. (NATEF).

The Nutrition and Dietetics Program is currently granted probationary accreditation by the Accreditation Council for Education in Nutrition and Dietetics, 120 South Riverside Plaza, Suite 190, Chicago, Illinois 60606-6995, (312) 899-0040 ext. 5400 or (800) 877-1600; www.eatright.org.

The Joint Review Committee on Education in Radiologic Technology, 20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182, (312) 704-5300, www.JRCERT.org accredit the Radiologic Technology Programs (Radiation Therapy Technology and Radiography). The Diagnostic Medical Sonography Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) ([https://www.caahep.org/documents/file/for-program-directors/DMSStandards\(1\).pdf](https://www.caahep.org/documents/file/for-program-directors/DMSStandards(1).pdf)) (Recognized by the American Registry of Radiologic Technology, the Nuclear Medicine Technology Certification Board, and the American Society of Radiologic Technology). The Nuclear Medicine Technologist Program is accredited by The Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT), located at 820 W. Danforth Road, #B1, Edmond, OK 73003, (405) 285-0546; fax: (405) 285-0579 or mail@jrcnmt.org.

The Drug and Alcohol Recovery Counselor Program is approved by the Connecticut Certification Board, a member of the International Certification and Reciprocity Consortium/Alcohol and Other Drug Abuse, Inc.

Accreditation Commission for Education in Nursing (ACEN) located at 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326. Telephone: 404-975-5000; www.acenursing.org.

The Early Childhood Education Program is accredited by the National Association for the Education of Young Children (NAEYC), Commission on the Accreditation of Early Childhood Higher Education Programs, 1313 L Street, N.W., Washington DC 20005.

The Early Learning Center is accredited by the National Association Education for Young Children (NAEYC) Early Learning Program Accreditation Council.

Licensure

Curricula are approved and licensed by the Board of Governors for Higher Education in the state of Connecticut. The state of Connecticut, Department of Education, Veterans Education Division, approves the College's programs for the education and training of veterans under provisions of Section 1775, Chapter 36, Title 38, USC.

ATM Machines

ATM machine is located in the North building entrance by security station.

Cafeteria

While classes are in session, food service is open Monday through Thursday 8:00 A.M. to 2:00 P.M., and from 3:00 P.M. to 7:00 P.M., and on Fridays from 8:00 A.M. to 1:00 P.M. Special hours are posted when classes are not in session. Hot and cold sandwiches, salads, side dishes, soups, and soda are available. Snacks and beverages are also available from vending machines.

College Closing

If, because of inclement weather or other emergencies, the College announces a delayed opening, class/activity cancellation, or governor's order for closing, the following radio and television stations are notified: WELI, WKCI, WICC, WEBE, WKSS, WPLR, STAR, WTIC, WTNH TV 8, WFSB TV 3, and WVIT TV 30. Please tune in to these stations for up-to-the-minute reports. Students may also call the Weather Telephone Line at (203) 285-2049.

Early Learning Center Preschool

Telephone: (203) 285-2131

Weather Hotline: (203) 285-2610

Students with three- to five-year-olds can benefit by enrolling their child in an onsite laboratory preschool. The Early Learning Center, located on the first floor of the College, is a fully licensed NAEYC accredited preschool program for young children open five days a week during the school year. The stimulating learning environment is based on the belief that each child is an individual and should be allowed to develop at his or her own pace, thus it is centered on the interests, needs, and abilities of its participants. A variety of experiences encourages children to think, analyze problems, and arrive at logical conclusions. To accomplish this, the Early Learning Center provides three curriculum models: Child Development, Modified Montessori, and Diversified Creative Curriculum. Breakfast, lunch, and an afternoon snack are included in the program.

The center's hours are Monday through Friday from 7:30 a.m. to 5:30 p.m. The weekly cost to students enrolled for a minimum of three credits at Gateway Community College is \$170 per week for full time preschool; the community rate for non-students is \$275 per week for full-time preschool.

For more information, contact Sarah Chambers, Director at (203) 285-2132.

Parking

Individual Type and Parking Garage Access:

- Credit Students: Parking access for registered credit students will begin two weeks before the start of classes and end the day of finals
- Summer Session Students: parking access will begin the first day of class and end the last day of class for the sessions for which they have registered
- Winter Session Students: parking access will begin the first day of class and end the last day of class for the sessions for which they have registered
- Non-Credit (CCE) Students: parking access will begin the first day of the course and end the last day of course for which they have registered
- Faculty & Staff: parking access is granted based on active employee dates
- Student Employees: parking access is granted based on active employee dates
- Affiliated Staff: parking access is granted based on inputted field in Banner. Manual deactivation will be required.

Reserved parking:

- Available on the first level and designated spaces on second and third levels of the Gateway garage, for full-time faculty and staff only
- Eligible faculty/ staff must display their parking hanger or will be ticketed
- Part-time faculty and staff will park in remaining Gateway Garage spaces or in the Temple Street Garage

Visitor Parking

- Anyone visiting the college for business before the semester begins will be considered a visitor.
- Visitors will park in the Temple Street Garage and receive a ticket.
- Tickets will be validated by Gateway at the Security areas.

Cards are valid for the hours of Garage Operation (see below)

Hours of College Parking Garage Operation

Spring and Fall Semesters

Gateway Garage

Monday – Friday 6:00 a.m. - 11:30 p.m.
 Saturday Saturday 7:00 a.m. - 5:00 p.m.
 Sundays Closed

Temple Street Garage

24 hours - 7 days/week

Winter Intersession and Summer

Reduced daily hours/No Saturdays or Sundays

Traffic violations are punishable by fines and/or towing of vehicles at the owners' expense. Parked vehicles that create a hazard, impede traffic flow or restrict parking will be tagged and/or towed at the owner's expense.

Fines are payable in the Business Office within one week of issuance. Failure to pay fines will result in a hold on student registration for future courses until the fine is paid.

All violations are subject to appeal throughout the Traffic Appeals Committee. Request for appeal should be made through the Dean of Administrative Affairs at (203) 285-2021.\

Cancellation of Classes

Weather Hotline: (203) 285-2049

Occasionally classes are cancelled due to extreme weather conditions or other emergencies. In such cases the College notifies local radio and TV stations as soon as the decision is made to cancel classes. These stations include: WICC-AM 660, WEZN-FM 99.9, WELI-AM 960, WEBE-FM 107.9 and WKCI-FM 101.3, WTNH Ch.8, WTIC Ch. 3 & 30. In general, it is best to assume that classes will remain in session unless a specific announcement is made to cancel classes and/or close the College. For the most up-to-date information, watch your local television station or listen to one of the radio stations listed for closure updates.

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

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

1. The right to inspect and review the student's education records within 45 days of the day the College receives a request for access. Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The College official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the College official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request amendment of an education record that the student believes is inaccurate. Students may ask an appropriate College official to amend a record that they believe is inaccurate. The student should write to the College official, clearly identify the part of the record he or she wants changed, and specify why he/she believes it is inaccurate. The College will notify the student of the decision. If the College decides not to amend the record as requested by the student, the College will advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

NOTE: FERPA is not intended to provide a process to question substantive judgments that are correctly recorded. For example, the right of challenge does not allow a student to contest a grade in a course because the student believes that a higher grade should have been assigned.

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

FERPA also permits disclosure of education records without consent in connection with, but not limited to:

- To comply with a judicial order or a lawfully issued subpoena;
 - To appropriate parties in a health or safety emergency;
 - To officials of another school, upon request, in which the student seeks or intends to enroll;
 - In connection with a student's request for or receipt of financial aid, as necessary to determine the eligibility, amount or conditions of the financial aid, or to enforce the terms and conditions of the aid;
 - To certain officials of the U.S. Department of Education, the Comptroller General, to state and local educational authorities, in connection with certain state or federally supported education programs;
 - To accrediting organizations to carry out their functions;
 - To organizations conducting certain studies for or on behalf of the College;
 - The results of an institutional disciplinary proceeding against the alleged perpetrator of a crime of violence to the alleged victim of that crime with respect to that crime.
 - Directory information as defined in the policy of the Board of Trustees.
4. The right to refuse to permit the College to release directory information about the student, except to school officials with a legitimate educational interest and others as indicated in paragraph 3 above. To do so, a student exercising this right must notify the Office of Registrar in writing [location to be inserted by each College]. Once filed, this notification becomes a permanent part of the student's record until the student instructs the College, in writing, to remove it.

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

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

Directory Information

The Board of Trustees designated the following as directory information: student names and addresses, dates of attendance, full vs. part-time student status, awards and honors and graduation date. For purposes of access by military recruiters only, telephone listings and, if known, age, level of education and major are also designated as directory information.

Colleges may disclose directory information without prior consent, unless a student has exercised the right to refuse to permit the College to release directory information in accordance with paragraph 4 above.

Uniform Campus Crime Report

Gateway Community College herein complies with the State of Connecticut's Uniform Campus Crime Report, CT General Statute 10a-55a, and the Federally Mandated Clery Act, both of which mandate the annual publication of a Uniform Campus Crime and Clery Annual Security Report, and establishes a process for raising awareness of safety on college campuses. Broader awareness of campus safety issues and procedures at Gateway Community College is the first step toward improving the public safety of the college community. Gateway Community College, in compliance with all applicable State and Federal laws, will notify all current students and employees of the annual Uniform Campus Crime and Clery Annual Security Report availability on the College's website, GatewayCT.edu. A hard copy of the report can be obtained from the Gateway Community College Department of Public Safety.

Information Technology Resources Policy

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

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

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

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

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

Computer Use Policy of Gateway Community College

This Computer Use Policy governs all computer users at Gateway Community College and outlines the acceptable use of its computer resources. The policy has been formulated in accordance with the state of Connecticut, Department of Information Technology acceptable use policy, Connecticut software management policy and Connecticut General Statute 53, sections 451-453 and in accordance with the BOR Acceptable Use Policy, which can be viewed at http://www.ct.edu/files/it/BOR_IT-001.pdf

Violation of this Computer Use Policy may result in a loss of access privileges as well as college disciplinary and/or legal action.

Scope

This policy applies to all users of Gateway Community College's computing equipment.

Objectives

This policy:

- Establishes user responsibilities;
- Defines acceptable use; and
- Defines inappropriate use of computer resources.

User Responsibilities

Computer users must be mindful of the impact of their activities on computing resources, network resources, and other users. The holder of either a network or Banner account is responsible for his/her actions and activity within his/her account. If a violation of the computer use policy is suspected, the College reserves the right to examine any of Gateway Community College's owned or operated computer resources, communication systems, and/or files.

Lab Assistants' Responsibilities

Oversee the College's open labs and uphold the Computer Use Policy
Assist students who are currently enrolled in Gateway classes
Monitor and report to the Information Technology office any activity that appears to be inappropriate

Acceptable Uses

1. Account use, including Banner account use, by the authorized owner for authorized purposes
2. Use of computer resources in a manner that respects the right of others
3. Adhering to quotas for disk space on systems, such as e-mail
4. Use of the network in a socially appropriate manner
5. Communication and exchange of information for professional and academic development
6. Applying for administrative grants or contracts for research and/or instruction
7. Collaboration with peers at other community colleges in support of work-related activities
8. Supporting appropriate institutional communication to the college community

Unacceptable Uses

1. Use of any computer resources for commercial or for profit purposes
2. Deliberately damaging or physically misusing equipment
3. Possession of food or drink in labs or at any library workstation
4. Downloading or distributing any software from the Internet without the prior consent of the Information Technology department. Examples of such downloads include, but are not limited to, screen savers, wallpapers, games, web cams, shareware/freeware programs, and PowerPoint slides
5. Engagement in chat-rooms, instant messaging, or threaded discussions on the Internet, except for legitimate academic purposes
6. Violating federal or state law, including copyright regulations
7. Concealing or misrepresenting your name or affiliation to mask irresponsible or offensive behavior, including using other identities as your own. This is fraud

8. Viewing, downloading, or printing sexually graphic or suggestive materials, including inappropriate text files or files dangerous to the integrity of the local and wide area network. Violation of this clause can be considered grounds for disciplinary action for sexual harassment
9. Installing, deleting, or altering computer software on any computer without proper license and authorization from the Information Technology department
10. Political lobbying
11. Sharing any passwords and/or accounts
12. Malicious use of the network to develop programs that harass other users, infiltrate a computer or computing system, and/or damage Gateway Community College's software
13. Sending hate mail, harassing, making discriminatory remarks, and/or other antisocial communication
14. Deliberately monopolizing computer resources to the exclusion of other users. This includes, but is not limited to, broadcasting unsolicited mailing or other messages, creating unnecessary output or printing, and creating unnecessary traffic using such tools as streaming audio, video, and game-playing on the Internet
15. Altering or manipulating another user's data/files

The Information Technology department periodically monitors computers in all areas of the College. Be aware that e-mail messages are considered public record, and are therefore legally discoverable and subject to record retention..

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APPLICATION AND ADMISSION PROCEDURES

Admissions Office (203) 285-2010

Gateway Community College is dedicated to providing educational opportunities through an open-door admission policy to graduates of an approved secondary school or those who hold a State Equivalency Diploma (GED). Admission is offered on a first-come, first-served basis by program within budgetary limitations, with the exception of Nursing, Radiologic Technologies, Drug and Alcohol Recovery Counselor, and General Motors Automotive programs.

Admissions Procedures

The following steps must be taken to ensure a complete application file:

1. New students are encouraged to apply online for the spring, fall or summer semesters via the Gateway Community College website, GatewayCT.edu. Students may also obtain an application from the Admissions Office at the College Campus, 20 Church Street, New Haven, CT 06510, or from the Gateway website.
2. A copy of a student's high school transcript showing graduation date or a copy of a high school diploma or GED must be sent to the Admissions Office at 20 Church Street, New Haven, CT 06510 or emailed to admissions@gateway.ct.edu or faxed to (203) 285-2260. Please note: if you attended high school under another name, please make sure that name is noted on your diploma or transcript. Upon receipt of a college transcript showing Associate Degree or higher has been conferred, the high school diploma requirement will be waived. Verification of high school or college completion is required prior to registration for all students in a degree or certificate program.
3. All new applicants are required to pay a \$20 non-refundable application fee. Attach a \$20 check or money order, made payable to Gateway Community College, to your application. If you have attended another Connecticut Community College, this fee is waived. Online applicants can pay the fee with a credit card or e-check.
4. Students who attended a college outside of the U.S. and desire that coursework be considered for transfer credit must have their credits first evaluated to U.S. standard by WES or CED. An official transcript of the evaluation must be sent from the evaluating company directly to the Admissions Office for review.
5. After being admitted, all degree or certificate seeking students are required to take placement examinations **in** reading, English, and mathematics. English and mathematics credits earned from a regionally accredited institution of higher education will be reviewed to determine if a student must take the tests. (Students **in** Business Office Technology may be required to take an additional, specialized proficiency examinations.) If test results indicate deficiencies, students will be expected to take an additional course or courses to increase their capability for success in college level work. In lieu of taking placement tests, students may provide evidence - college transcript(s), *SAT scores, ACT Scores, CLEP, Dantes, or Advanced Placement test results. *If providing SAT or ACT scores, they must be brought to the attention of the Director or Associate Director of Admissions for review.
6. New students will be required to verify immunization status. See policy below.

Measels/Mumps/Rubella/Varicella

Section 10a-155 of the Connecticut general statutes will require that each full time or matriculating student provide proof of adequate immunization against Measles, Mumps, Rubella (MMR) and Varicella as recommended by the Advisory Committee for Immunization Practices (ACIP). A copy of the statute is available at: [http://www.cga.ct.gov/current\(Pub/chaP.185b.thm #sec10a-155.htm](http://www.cga.ct.gov/current(Pub/chaP.185b.thm #sec10a-155.htm).

Full Time/Matriculating Students

Matriculating students are defined as those enrolled in a degree seeking program. Part time non-matriculating (Non Degree) students are not required to have MMR and Varicella immunizations although they are recommended to have those vaccines by ACIP. Part-time, non-matriculating students are not eligible for Financial Aid consideration.

Exemptions will be granted only:

- Individuals born in the United States before January 1, 1957 are exempt from supplying MMRV;
- Individuals born in the U.S. prior to January 1, 1980 are exempt from providing Varicella;
- Individuals born in the United States between January 1, 1957 and January 1, 1980 are exempt from supplying Varicella only (**Need proof of MMR**);
- Laboratory confirmation of immunization to such disease (titer test);
- Documentation from a physician stating that the student is medically contraindicated from receiving such vaccine;
- Documentation from the student that the immunization is contrary to his/her religious beliefs. If students claim a religious exemption or medical exemption and there is an outbreak of measles, mumps, rubella or varicella on campus, those students may be excluded from college activities, including classes and exams;
- Documentation from a physician or director of health that the student has had a confirmed case;
- For MMRV, two doses are needed. The doses should be separated by at least 30 days with dose number one given on or after the first birthday.

Any student not showing the necessary proof of immunization will not be allowed to register for classes.

Student Types

New Students - A new student is anyone who has never attended another higher education institution and is attending Gateway for the first time with the intention of obtaining a degree, certificate, or transferring to another institution. Please complete the aforementioned Admissions Procedures Steps 1 - 6.

Transfer Students - A transfer student is anyone who has attended another higher education institution prior to Gateway Admission. Please complete the aforementioned Admissions Procedures Steps 1 - 6.

Transfer applicants must request that the registrar of any college or university previously attended forward official transcripts to the Admissions Office. In addition, an official high school transcript or copy of high school diploma or GED is required. If transfer credit is desired, please notify the Admissions Office. Transfer evaluations will be performed for degree or certificate students only. New students to Gateway Community College who wish to transfer in credits from another college need to complete and submit a "New Student Transfer Evaluation Request Form." An unofficial copy will suffice for advising purposes only. Evaluations will be completed once a student registers.

At all Community Colleges, degree and certificate credit shall be granted only for credit courses completed at all institutions within the Connecticut state system of higher education and at all other collegiate institutions accredited by an agency recognized by the Council for Higher Education Accreditation as either a Regional Accrediting Organization or a Specialized and Professional Accrediting Organization in accordance with the following:

1. Degree and certificate credit shall be granted for all credit courses that are applicable to the objectives of, or equivalent to the course requirements of, the curriculum in which the transferring student enrolls. Credit work that is not applicable or equivalent to curriculum requirements shall be accepted for credit at the discretion of the college. Degree and certificate credit shall also be granted on the basis of performance on examinations in accordance with standards and limits approved by the board of trustees.
2. Degree and certificate credit shall be granted for credit courses completed with a letter grade of "C-minus" or better, or with a grade of "P" (Pass). Such credit courses shall be accepted only for credit, and letter grades assigned by other institutions shall not be recorded or included in computations of student grade point averages.
3. Notwithstanding the number of degree or certificate credits which shall be granted in accordance with the foregoing, the student must complete at least twenty-five percent of the minimum credit requirements for the degree or certificate through coursework at the college awarding the degree or certificate. That is the Residency Requirement of Gateway Community College.
4. When a student seeks transfer credit for technical or specialty courses into a program that is also accredited by a national or regional specialized accrediting agency, such credits must be from a comparably accredited program. In the case of a request for transfer credit for technical or specialty courses from a non-specially accredited program, the college shall provide appropriate means for the validation of the student's competency in the technical specialty course area

International Students -An international student is a student on an F-1 visa or would like to apply for an F-1 (student) visa.

The credentials of an applicant for admission from another country are evaluated in accordance with general admissions requirements. A completed application, official leaving certificates, and detailed transcripts, in English, of the student's

academic record should be sent to the Admissions Office. Applicants who wish to begin undergraduate study must submit all credentials by July 1 for the fall semester and by November 1 for the spring semester. This will allow time for the exchange of official correspondence, and, if the applicant is admitted, will allow time to obtain a passport and/or visa. The I-20 A-B Form, required by the United States Immigration and Naturalization Service, is issued by the College only to students who have been accepted as full-time degree students.

Evidence of the ability to read, write, and speak English well enough to pursue college courses must be submitted to the College. If the applicant's primary language is not English, TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Testing System) scores must be submitted. Information about the test can be obtained at www.ets.org or www.ielts.org. International applicants currently in CT may apply to take the LOEP placement test at Gateway Community College.

The College awards no financial aid (scholarships or loans) to international students, nor does the College make housing available. Applicants must be entirely self-supporting and be able to meet all financial obligations to the College in full and from their own resources. Employment in the United States is not guaranteed, and immigration laws governing employment of international students are very strict. Therefore, a letter or affidavit of support must be submitted from a financial sponsor, who must state his/her name and relationship to the applicant. The sponsor must submit a recent official financial statement **in** an amount calculated by the Admissions office to demonstrate his/ her willingness and ability to meet any financial obligations that are related to the student's studies at Gateway Community College.

Readmit Students -A readmit student is defined as any student whose last semester of attendance at Gateway was over two years ago.

Readmit students are former Gateway Community College students who have withdrawn from the college or have been absent from the college for at least two years (excluding summer and winter intersessions). Please contact the Admissions Office. It is not necessary to pay the \$20 application fee. However, if students attended another college during their absence, they must submit an official transcript from each college if they wish to receive transfer credit consideration.

Other Special Admissions Groups - The College has special agreements with various groups that fall outside the categories mentioned above. These include High School Partnerships, Home School, TAA/WIA, and Senior Citizens. Please contact the Admissions Office for further information (203) 285-2210.

Admissions OF NEBHE Students

The Board of Trustees adopts the following recommendations of the New England Board of Higher Education (NEBHE) for reciprocity among the New England states through the New England regional student program, with the reservation that priorities go to Connecticut students in the event of budget and/or space limitations:

- Nonresident students whose traveling time would be less if attending a Connecticut community college than if attending a similar instate institution are permitted to attend the Connecticut institution at the NEBHE tuition rate, which is fifty percent above the resident tuition rate, pursuant to section 10a-67 of the general statutes, as amended.
- Nonresident students who wish to enroll in a Connecticut Community College degree program which does not exist in their home states are permitted to enroll in such program at the NEBHE tuition rate.

High School Partnership Program

Developed by the Board of Trustees of Connecticut Community Colleges, this program provides the opportunity for a junior or senior to experience college while still in high school. In order for a student to participate, his/her high school must have a partnership contract signed and on file with the college. The tuition and fees for students in this program are paid for by the Board of Trustees and apply toward the General Fund credit classes only. See your High School Guidance Counselor for more information.

Home-Schooled Students

Home-schooled students who have completed their high school program of study may be admitted as degree-seeking or non degree seeking, full or part-time. Home-schooled students, like all new students, will be required to submit an application and required fee, verify graduation, take the College ACCUPLACER academic assessment and per state law, provide documentation that they have been immunized against Measles, Mumps and Rubella and Varicella.

Home-schooled students who do not have a high school diploma may still attend Gateway Community College but only as part time, non-degree seeking students. All home-schooled students must demonstrate sufficient academic ability and complete the ACCUPLACER academic assessment test. Home-schooled students must meet with the Director of Enrollment Management or Associate Director of Admissions.

PAYMENT POLICIES

Bursar's Office: (203) 285-2009

Location: North Building Room N216

**Hours: 8:15 a.m. to 4:15 p.m. Monday, Tuesday, Thursday, and Friday;
8:15 a.m. to 6:45 p.m. Wednesday**

Miscellaneous: Cash, Checks, VISA, MasterCard and Discover Cards accepted at the Bursar's Window. A Drop Box for non cash transactions is located adjacent to the Bursars Office. VISA, MasterCard, and Discover payments are also accepted online at <http://mx.comm.net.edu>.

When to Pay: Full payment is due at registration! Failure to pay may subject your registration to cancelation. While classes are routinely dropped for non-payment without prior notice, students who do not officially drop their courses will be responsible for the charges. Students who register on the web will not receive an additional invoice from the college.

Special Circumstances:

Early Registration: During the Fall and Spring regular academic sessions, you may hold your classes until the Tuition Due Date by paying your nonrefundable fees at the time of registration. If the full balance is not paid by the Tuition Due Date, your registration will be cancelled without notice and the non-refundable fees you paid will be forfeited.

Financial Aid and Loan Students:

- As long as you have authorized financial aid or a loan on your account, you will not be dropped from your courses for non-payment.
- You are strongly advised to carefully monitor the status of your financial aid/loan at <http://mx.commnet.edu>. Please keep in mind that the formula for calculating your authorization amount takes into account the number of credits you are registered for and the authorization amount will be recalculated if you change your course load. Since it is not uncommon for a financial aid student to actually owe money to the college after dropping a course, you are also strongly advised to contact the Financial Aid Office at (203) 285.2030 before doing so.
- You are responsible for paying any portion of your bill that is not covered by your financial aid authorization or loan. Additionally, you will be held immediately responsible for full payment of the total balance due regardless of when the change occurs 1) if your financial aid is not awarded; or 2) if your financial aid authorization amount is lessened for any reason, including reducing your course load; or 3) if your authorization is later rescinded.
- **A FINANCIAL AID/LOAN APPLICATION DOES NOT GUARANTEE THAT YOU ARE ELIGIBLE FOR A FINANCIAL AID AWARD OR LOAN, NOR DOES IT EXEMPT YOU FROM PAYMENT.**

Third Party Voucher Payments: Vouchers are to be submitted to the Bursars Office at the time of registration to ensure that your registration is not dropped for non-payment. You will be immediately responsible for full payment of your account if your written commitment from a third party is not honored.

Past Due Accounts: You may not register for a future semesters until your account is paid in full. The College expects all students to meet their financial obligations prior to the start of each semester. However, if your account should become past due during the semester for any reason (i.e. a financial aid authorization change, late/missed installment plan payment, etc.) your account will be assessed a **\$15 late payment fee** and the College will place a hold on your account that will bar you from registration and transcript services. This hold will remain in effect until your entire past balance is paid in full. The College will send an e-mail notification or an invoice, (or both) to your address on file in the Records Office. In addition your class schedule may be canceled which may not result in any reduction of your charges. If these attempts to collect the debt are unsuccessful, your account will be placed with a collection agency and you may be held liable for the cost of collection.

Checks returned by the bank: Checks that are returned from a bank for any reason must be replaced with cash, money order or bank check within seven days (one week) of the college's receipt of notification by the bank. A fee of \$25 will also be charged to the student's account. In addition your class schedule may be cancelled which may not result in any reduction of your charges.

Tuition Installment Payment Plan: GCC offers a Tuition Installment Payment Plan for students with accounts in good standing who are enrolled in 3 or more credits during the Fall and Spring semesters. Accounts are considered to be in good standing when they are paid in full for prior semesters. Students can enroll online by logging into their MyCommNet account. Please refer to: <http://www.gatewayct.edu/Paying-For-College/Installment-Plan> for detailed enrollment instructions.

The Installment Plan is an inexpensive alternative to a student loan or paying by credit card. Enrolling in a plan costs just \$25 per semester, and allows students to budget the cost of tuition and fees by spreading out the cost over a number of scheduled payments.

You may still owe a balance on your IPLAN even if you have reduced your course load or withdrawn. Therefore, students are strongly advised to contact the Bursar Office first to determine the impact, if any, your schedule change will have on your account balance.

Tuition and Fees - Effective Fall 2018

Tuition and fees are established by the Board of Regents for Higher Education and are subject to change without notice. **Please refer to the <http://www.commnet.edu/Finance/Tuition.asp> for current tuition and fee rates.**

Tuition		2018-2019
Full-time Student (12 credit hours or more per semester)		
	Connecticut Resident	\$1,956.00
	Non-resident	\$5,884.00
	New England Regional Student Program	\$2,934.00
Part-time Student (Per credit hour through 11 hours per semester)		
	Connecticut Resident	\$163.00
	Non-resident	\$489.00
	New England Regional Student Program	\$244.50
Extension Fees (applies to Continuing Education credit programs(all terms), Summer Sessions and Winter Intersessions)		
Full-time Student (12 credit hours or more per semester)		
	Connecticut Resident	\$2,112.00
	Non-resident	\$2,112.00
	New England Regional Student Program	\$2,112.00
Part-time Student (Per credit hour through 11 hours per semester)		
	Connecticut Resident	\$176.00
	Non-resident	\$176.00
	New England Regional Student Program	\$176.00
Other Fees		
Full time Student (12 credit hours or more per semester)		
Student Activity Fee		\$20.00
College Service Fee		
	Connecticut Resident	\$236.00
	Non-resident	\$708.00
	New England Regional Student Program	\$354.00
Part-time Student (Per Semester hour through 11 hours)		
Student Activity Fee		\$10.00
College Service Fee - Connecticut Resident		
	1 Credit	\$81.00
	2 Credits	\$88.00
	3 Credits	\$94.00
	4 Credits	\$99.00
	5 - 11 Credits	Varies ea. add'l credit

College Service Fee - Non-Resident		
	1 Credit	\$243.00
	2 Credits	\$264.00
	3 Credits	\$282.00
	4 Credits	\$297.00
	5 - 11 Credits	Varies ea. add'l credit
College Service Fee - New England Regional Student Program		
	1 Credit	\$121.50
	2 Credits	\$132.00
	3 Credits	\$141.00
	4 Credits	\$148.50
	5 - 11 Credits	Varies ea. add'l credit
Special Fees		
Academic Evaluation (Credit by Exam - per test)		\$15.00
Portfolio Assessment		\$100.00
CLEP Service Fee (Subject to change per CLEP Fee Schedule)		\$15.00
Proctoring Fee/Test (CCC Students/ Non-CCC Students)		\$15.00/\$35.00
CT-CCNP Student Assessment Fee (semester 1-3/ semester 4)		\$82.00/\$262.00
Returned Check Charge		\$25.00
Application Fee		\$20.00
Late Registration Fee		\$5.00
Late Payment Fee		\$15.00
Liability Insurance Fee (charged once per year in the Spring)		\$15.00
Program Enrollment		\$20.00
Installment Plan Enrollment Fee		\$25.00
Replacement Lost ID		\$10.00
Mandatory Usage Fees		
Transportation Fee (per semester)		\$20.00
Materials Fee (per registration in designated courses)		\$51.00
Supplemental Course Fee Level 1 (per registration in designated courses when faculty hours exceed credit hours)		\$102.50
Supplemental Course Fee Level 2 (per registration in designated courses when faculty hours exceed credit hours)		\$205.00
Clinical Program Fee Level 1 (charged each fall and spring to students matriculated in Allied Health and Nursing Programs)		\$487.00
Clinical Program Fee Level 2 (charged each fall & spring to students matriculated in Allied Health and Nursing programs)		\$359.00
Excess Credits Tuition Charge (applies when total registered credits exceed 17 for the semester)		\$100.00

Tuition and Fee Notes

The maximum amount a student will be charged (per term) for Supplemental Level 1 and/or Supplemental Level 2 fees is \$410. The maximum amount a student will be charged per term for Materials Fees is \$102.

Online/Distance Learning courses are charged Connecticut Resident Tuition rates.

No student who has an unpaid account at any state community college may register at that same college or any other state community college.

Tuition and Fee Waivers

Senior Citizen Waivers for Individuals age 62 or Older: Application, Student Activity and College Service Fees are waived. In addition, a waiver of tuition is granted on a space available basis during the fall and spring semesters only when the registration occurs during or after the special registration session, held at the end of the regular registration period. Senior Citizens are responsible for paying all Supplemental and Material fees at the time of registration. No Senior Citizen Waiver for tuition will be granted prior to the special session. Senior Citizen Waivers are not granted for classes offered through the Workforce Development and Continuing Education Division or for special fees. Waivers are requested at the Bursar's Office.

Veterans' Waiver: CGS 27-103 entitles a waiver of tuition for honorably discharged veterans who are Connecticut residents and who served on active duty for at least ninety (90) days during one of the following periods: World War II (12/7/41- 12/31/46), Korean Hostilities (6/27/50-1/31/55), Lebanon Conflict (7/1/1958-11/1/1958), Vietnam Era (2/28/61-7/1/75), Operation Desert Storm (8/2/1990-present), or those engaged **in** combat or a combat support role in four (4) other specific military operations between 1982 and 1990. *Reservists and members of the National Guard who have been activated for 90 days or more can qualify for the tuition waiver.* The waiver applies to tuition (not to fees or for courses offered through the Division of Continuing Education) for credit courses taken in the fall or spring semesters. To be eligible for this waiver, the student must pay all fees and present a copy of his/her DD214 (discharge certificate) to the Bursar's Office **in** accordance with the College's Payment Policies.

National Guard Waiver: Under CGS section 10a-77, tuition is waived for any active member of the Connecticut Army or Air National Guard who is a Connecticut resident, certified by the Adjutant General or his/her designee as a member **in** good standing of the Guard and enrolled **in** a degree or certificate program. If the guard member receives tuition reimbursement from an employer, this waiver will be reduced by the amount of the reimbursement. The waiver applies to tuition (not to fees or for courses offered through the Division of Continuing Education) for credit courses taken in the fall or spring semesters. To be eligible for this waiver, the student must pay all fees and present a copy of the written Waiver from the Adjutant General to the Bursar's Office in accordance with the College's Payment Policies.

Dependent Children of POWs and MIAs: Under CGS section 10a-77, tuition is waived for any dependent children of a person declared by the U.S. Armed Forces as missing in action or a prisoner of war while serving in the Armed Forces after January 1, 1960, who was a resident of Connecticut at his/her time of entry into the Armed Forces or while serving. The waiver applies to tuition (not to fees or for courses offered through the Division of Continuing Education) for credit courses taken in the fall or spring semesters. To be eligible for this waiver, the student must pay all fees and present a proof of eligibility to the Bursar's Office in accordance with the College's Payment Policies.

Refund Policies and Procedures

General Information: Refunds are automatically paid by check to the student at the end of the official Add/Drop period unless the student directs the Bursars Office otherwise. Checks are processed in Hartford and mailed to the permanent mailing address on file at the Records Office. Please verify your address when reducing your course load.

Courses Cancelled by the College: If the College cancels a course, a full refund of all charges (except application fee) will be issued unless the student selects a replacement course. Students who don't select a replacement course, will be sent a refund check via the mail within 45 days.

Return of Title IV Funds: The College maintains a fair and equitable refund policy as mandated by the U.S. Department of Education regulations. These refund and repayment rules apply only to students who withdraw completely and/or otherwise fail to complete the current period of enrollment. Please refer to the appropriate section in this catalog or speak with a Financial Aid Officer for more details.

Armed Service Enlistment: 100% refund of Tuition and Fees will be granted to any student who enters the Armed Services before earning degree credit in any semester, provided that he/she submits, in writing, a notice of withdrawal and a certified copy of enlistment papers.

Tuition and Fee Refunding Rules and Installment Plan Adjustments:

College Service, Student Activity, Installment Plan, Application, and Transportation other fees not listed below are nonrefundable.

Clinical Fees: Are nonrefundable unless a student completely withdraws or is not enrolled in any credit course at the end of the official add/drop period.

Allied Health and Personal Liability Insurance Fees: A curriculum change must be filed prior to the start of the term to be eligible for a refund of Allied Health/Nursing program and Personal Liability Insurance fees.

- **Tuition, Material and Supplemental Fees** The student must officially withdraw either online or in the Records Office according to the schedule below to be eligible for a refund or a reduction of Installment Plan Charges.
- If the student completely drops from classes prior to the first day of the semester, a 100% refund of Tuition, Materials, and Supplemental Fees will be granted.
- If the student completely drops from classes on the 1st day through the 14th calendar day of the semester, a 50% refund of Tuition, Materials, and Supplemental Fees will be granted.
If the student completely or partially withdraws from classes after the first fourteen (14) calendar days of the semester,
- NO refund of Tuition, Laboratory and Studio Course Fees will be granted.
- If the student partially drops from classes on the 1st day through the 14th calendar day of the semester, a refund will be granted in the amount of 50% of the difference in Tuition, Materials, and Supplemental Fees between the original and revised schedules.

Please refer to the refunding table printed in the College Schedule for specific withdrawal deadlines applicable to abbreviated courses

Extension Credit Fees: A 100% refund of extension credit fees for courses offered by the Workforce Development and Continuing Education Division will be granted to students who officially drop up to the business day prior to the first day of class meeting. No refund will be granted once the class has met.

Policy Appeal Procedures: Students are required to officially drop/withdraw prior to submitting an appeal. Appeals will only be considered for the following extraordinary circumstances: severe illness documented by a physician's certificate; documented administrative error by the college; or military transfer documented by a copy of transfer orders. The following circumstances will not be considered: changes in employment situation; inability to transfer course; normal illness; transportation issues; poor decision or change of mind by the student regarding course selection; or dissatisfaction with course content or instructor. All appeals must be submitted in writing to the Refund Appeals Coordinator and include Banner I.D., contact information and appropriate documentation. Appeals must be received within 10 days of the official withdrawal date of the course to be considered. Appeals should be directed to the Refund Appeals Coordinator, Gateway Community College Business Office, 20 Church Street, New Haven, CT 06510 or e-mail gw-student.P.BY.illents@gatewaxct.edu .

FINANCIAL AID

Telephone (203) 285-2030

Gateway Community College is committed to providing access to higher education by minimizing economic barriers. The College provides several options for financial aid, including state and federal grants, scholarships, student loans, and the federal work-study program. Awards may come from one or any combination of the four preceding sources as determined by federal and local eligibility guidelines. Financial need, academic performance, and resources available to the student are all considered in determining final eligibility.

Students must have a high school diploma or a GED, be enrolled in an approved degree or one-year certificate program, and must maintain "satisfactory academic progress" as described in the Academic Policies and Procedures section.

Policies and regulations instituted by Title IV, Student Financial Aid Programs, and Gateway Community College require that a student's academic progress be monitored and measured to determine continuing financial aid eligibility. To maintain eligibility for financial aid, students must sustain Satisfactory Academic Progress (for additional information, please see the Student Handbook).

All financial aid awards are predicated upon available funds and subject to revision by the Financial Aid Office upon change in enrollment status, additional resources, scholarships, and/or lack of completion of necessary information to determine eligibility. All awards are based upon a student's enrollment status at the end of the add/drop period. Financial aid is disbursed twice per academic year: the first disbursement occurs during the fall semester and the second disbursement during the spring semester.

Application Process

All students must file the Free Application for Federal Student Aid (FAFSA) to establish eligibility. Students may complete this form via the web application at <http://www.fafsa.ed.gov> (school code 006981). Upon receipt, the Financial Aid Office may request additional documentation to verify the authenticity of your application. Additional information may be found via email or mycommnet.edu.

Selective Service

All males between ages 18 and 25 must register with the Selective Service System to be eligible for Title IV, Student Financial Aid (<http://www.sss.gov>). Males that do not fit this criteria must stop by the Financial Aid Office, N215.

Types of Financial Aid

Federal Pell Grant Program

The Federal Pell Grant Program provides awards up to \$6,095 and is a need-based grant for low-income undergraduates. Post baccalaureate students may qualify if applicable. Grant amounts are dependent on: the student's expected family contribution (EFC) (see below); the cost of attendance (as determined by the institution); the student's enrollment status (full-time or part-time); and whether the student attends for a full academic year or less. Students may not receive Federal Pell Grant for two or more schools during the same semester/academic year.

Financial need is determined by the U.S. Department of Education using a standard formula, established by Congress, to evaluate the financial information reported on the Free Application for Federal Student Aid (FAFSA) and to determine the family EFC. The fundamental elements in this standard formula are the student's income (and assets if the student is independent), the parents'

income and assets (if the student is dependent), the family's household size, and the number of family members (excluding parents) attending postsecondary institutions. The EFC is the sum of: (1) a percentage of net income (remaining income after subtracting allowances for basic living expenses and taxes) and (2) a percentage of net assets (assets remaining after subtracting an asset protection allowance). Different assessment rates and allowances are used for dependent students, independent students without dependents, and independent students with dependents. After filing a FAFSA, the student receives a Student Aid Report (SAR) via regular mail or email, which notifies the student if he or she is eligible for a Federal Pell Grant, provides the student's EFC, and may request changes to be made to the application for accurate processing.

Federal Supplemental Educational Opportunity Grant

The FSEOG Program provides need-based grants up to \$4,000. Financial Aid administrators at participating institutions have substantial flexibility in determining the amount of FSEOG awards to provide students who are enrolled or accepted for enrollment. Priority is given to those students with "exceptional need" (those with the lowest EFCs at the institution) and those who are also Federal Pell Grant recipients.

Federal Work-Study Program

This program is need based and provides jobs for students who receive financial aid. Its purpose is to provide funds, job experience, and assist students to build their resume to allow employers to hire enrolled students. This part-time employment will be on the College campus. It is a first-come/first-served program. Students must be in good academic standing with a minimum of 6 credits per semester. Students may work a maximum of 15 hours per week while attending classes. If funds are available, eligible students may work a maximum of 25 hours during certain times throughout the academic year. Students interested in this program should contact the Financial Aid Office.

Federal Direct Loan Program

These fixed-rate loans, guaranteed by the federal government, are available to students who apply for financial aid using the FAFSA. The application process must be initiated through the Financial Aid Office. Payment on the principal is not required until 6 months after the student stops attending school, or fall below (six credits) half-time. There are two types:

Subsidized Federal Stafford Loan

Subsidized Stafford Loans are need-based loans. The government will pay the interest on the loan while the student is enrolled at least half-time (6 credits) and during other authorized periods called "deferments". The interest rate on this type of loan is fixed, for more information on loan rates please visit <https://studentaid.ed.gov/sa/types/loans/interest-rates>

Unsubsidized Federal Stafford Loan

Unsubsidized Stafford Loans are available to students who do not qualify for need-base loans, or who qualify for less than the annual maximum of Subsidized Stafford Loan. The government does not pay the interest to the lender; the student can choose to either pay the interest while in school, or have the interest added to the loan principal to be repaid later. The interest rate on this type of loan is fixed, for more information on loan rates please visit <https://studentaid.ed.gov/sa/types/loans/interest-rates>.

Loan Origination Fees

The Department of Education charge loan origination fees, which will be deducted proportionately from each loan disbursement. Revenue from these fees help reduce the government's cost of providing these loans.

Roberta B. Willis Scholarship Program

This scholarship program is a need and merit based award that provides awards up to \$4,650 a year for full-time attendance in a 2-year program of study. CT residents who are a high school senior or graduate with a high school junior year class rank of 20% or better and/or SAT scores of at least 1210 or ACT score of at least 27 would qualify. Also, Connecticut residents who attend a CT public or non-profit private college may also qualify for up to \$4,500 for full-time study in a 2-year program of study.

Gateway Community College Grants

These funds are allocated to the College by the State of Connecticut and are awarded based on financial need and availability of funds. Grants are provided up to \$5,200 for students that are registered for at least six credits minimum.

Connecticut Aid to Public College Students

These funds are allocated to the College by the State of Connecticut and are awarded based on financial need and available funds.

Treatment of Title IV Aid When a Student Withdraws

Gateway Community College offers the following Title IV programs that are referred to when a student withdraws during a semester: Federal Pell Grants, Direct Loans, Direct PLUS Loans, and Federal Supplemental Educational Opportunity Grants (FSEOGs).

Though your aid is posted to your account at the start of each period, you earn the funds as you complete the period. If you withdraw during your payment period or period of enrollment (fall, spring, or summer), the amount of Title IV program assistance that you have earned up to that point is determined by a specific formula. If you received (or Gateway or your parent received on your behalf) less assistance than the amount that you earned, you may be able to receive those additional funds. If you received more assistance than you earned, the excess funds must be returned by the school and/or you.

The amount of assistance that you have earned is determined on a pro rata basis. For example, if you complete 30% of your payment period or period of enrollment, you earned 30% of the assistance you were originally scheduled to receive. Once you have completed more than 60% of the payment period or period of enrollment, you earned all the assistance that you were scheduled to receive for that period.

If you did not receive all of the funds that you earned, you may be due a post-withdrawal disbursement. If your post-withdrawal disbursement includes loan funds, your school must get permission before it can disburse them. You may choose to decline some or all of the loan funds so that you don't incur additional debt. Your school may automatically use all or a portion of your post-withdrawal disbursement of grant funds for tuition, fees, and room and board charges (as contracted with Gateway). Gateway needs your permission to use the post-withdrawal grant disbursement for all other school charges. If you do not give

your permission (some schools ask for this when you enroll), you will be offered the funds. However, it may be in your best interest to allow the school to keep the funds to reduce your debt at the school.

There are some Title IV funds that you were scheduled to receive that cannot be disbursed to you once you withdraw because of other eligibility requirements. For example, if you are a first-time, first-year undergraduate student and you have not completed the first 30 days of your program before you withdraw, you will not receive any Direct Loan funds that you would have received had you remained enrolled past the 30th day.

If you receive (or Gateway or your parent receive on your behalf) excess Title IV program funds that must be returned, Gateway must return a portion of the excess equal to the lesser of:

1. Gateway charges multiplied by the unearned percentage of your funds, or
2. the entire amount of excess funds.

Gateway must return this amount even if it didn't keep this amount of your Title IV program funds.

If Gateway is not required to return all of the excess funds, you must return the remaining amount.

Any loan funds that you must return, you (or your parent for a Direct PLUS Loan) repay in accordance with the terms of the promissory note. That is, you make scheduled payments to the holder of the loan over a period of time.

Any amount of unearned grant funds that you must return is called an overpayment. The maximum amount of a grant overpayment that you must repay is half of the grant funds you received or were scheduled to receive. You do not have to repay a grant overpayment if the original amount of the overpayment is \$50 or less. You must make arrangements with your school or the Department of Education to return the unearned grant funds.

The requirements for Title IV program funds when you withdraw are separate from any refund policy that Gateway may have. Therefore, you may still owe funds to the school to cover unpaid institutional charges. Gateway may also charge you for any Title IV program funds that the school was required to return. If you don't already know Gateway's refund policy, you should ask the Financial Aid Office for a copy. Gateway's Registrar Office can also provide you with the requirements and procedures for officially withdrawing from school.

If you have any questions regarding treatment of your financial aid funds after you withdraw, you may call the Gateway Office of Student Financial Aid at (203) 285-2030.

Order of Return of Student Financial Aid Program Funds

Funds credited to outstanding loan balances for the repayment period of enrollment for which a return of funds is required, must be returned in the following order (not to exceed the original enrollment from each source):

1. Direct Unsubsidized Stafford Loans (other than PLUS loans)
2. Direct Subsidized Stafford Loans
3. Federal Pell Grants for the payment period which a return of funds is required
4. Federal Supplemental Educational Opportunity Grants (FSEOG) for the payment period due which a return of funds is required.

Satisfactory Academic Progress Policy for Student Financial Aid Recipients

A student receiving Federal Title IV financial aid or other financial aid directly administered or certified by the college must maintain satisfactory academic progress towards the completion of a certificate or degree program of study. Satisfactory academic progress for financial aid recipients is measured by using a quantitative and qualitative standard and is an assessment of a student's cumulative academic record at the college.

To maintain Satisfactory Academic Progress (SAP), students must meet the criteria based on attempted credits (see chart below). All attempted credits resulting in either an academic grade or administrative transcript notation will be included in the quantitative calculation. Incomplete courses, course withdrawals, course repetitions, noncredit remedial courses (with appropriate credit equivalency evaluation), and ESL courses will also be included in this assessment. Transfer credits will be counted as both attempted and earned credits in the calculation for determining satisfactory academic progress.

A student must also maintain a cumulative minimum grade point average (qualitative standard) as noted below in order to be making satisfactory academic progress and be eligible to receive financial aid.

Academic Requirements		
<i>Attempted Credits</i>	Certificate Standards <i>Minimum GPA</i>	<i>Minimum% Pace</i>
0 -11.99	0.0	0.00%
12+	2.0	67.00%
Degree Standards		
<i>Attempted Credits</i>	<i>Minimum GPA</i>	<i>Minimum% Pace</i>
0 -11.99	0.0	0.00%
12 - 30.99	1.7	50.00%
31-49.99	2.0	50.00%
50 -59.99	2.0	60.00%
60+	2.0	67.00%

A student’s cumulative academic history will be evaluated at the end of each enrollment period and prior to the subsequent term’s financial aid disbursement. This policy will be used to evaluate all students; regardless of their enrollment level.

Maximum Credit Hours

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

Repeated/Audit Coursework

Financial aid recipients are limited to one repetition of a previously passed course in their program of study. A second repetition of a previously passed course will not be eligible for financial aid payment. Audit courses are not financial aid eligible.

Financial Aid Warning

Any student who fails to meet the minimum satisfactory academic progress standard will be placed on Financial Aid Warning. The Warning period will be the student’s next semester or period of enrollment at the college. The college will communicate the Warning status to the student and inform the student that s/he must meet the academic progress standard by the end of the subsequent enrollment period in order to maintain eligibility to participate in the financial aid programs at the college. Students can access information at my.commnet.edu.

Add/Drop Period

The Financial Aid Office will adjust any monetary award during the add/drop period if credits are adjusted. If you choose to drop a class(es), the financial aid will adjust and there may be a financial penalty. The student will be required to pay any balance to the Bursar’s Office.

Termination

Any student who fails to meet the minimum satisfactory academic progress standard at the end of the Warning period will become ineligible from the financial aid programs at the college. The college will communicate the Termination status to the student and inform the student of the available Reinstatement and Appeal Process.

Reinstatement Policy

A student's financial aid eligibility will be automatically reinstated at such time as the student meets the minimum satisfactory academic progress standard. Reinstatement to the financial aid programs allow students to reapply or reactivate already approved funding (see Appeal Process below).

Financial Aid Probation

Any student who fails to meet the minimum satisfactory academic progress standards at the end of the Warning period will become ineligible from the financial aid programs at the college. Ineligible students have the opportunity to file an appeal regarding their termination from the financial aid programs. Students that have failed the academic progress standard and have been approved with a successful appeal will be considered on Financial Aid Probation.

Appeal Process

A student may request consideration for reinstatement to the financial aid programs through the following Appeal Process:

- If the student feels his/her failure to meet the minimum satisfactory academic progress standard was the result of an unusual or extraordinary situation that affected successful progression, the student may appeal to the Financial Aid Office. Some personal mitigating circumstances could include illness or injury of the student or dependent of the student; a death in the family; or other undue hardship as the result of special circumstances. An appeal form is available in the Financial Aid Office.
- The student must: 1) explain the extenuating circumstances causing the non-compliance; 2) substantiate it with third party documentation, (i.e. letter from the doctor who treated the student); and 3) give a detailed explanation of specifically what has changed that will allow satisfactory progress to be demonstrated at the next evaluation.
- Should an appeal be approved and the student is not mathematically able to return to satisfactory academic progress at the conclusion of subsequent enrollment period, a Financial Aid Administrator will devise and appropriate academic plan for the upcoming semester with the student. For example the terms of an academic plan may be as follows:
 - Register and successfully complete all credits with a minimum term GPA of 2.0 or better.
 - At the end of the semester, grades will be evaluated. If the student has met the required terms of the academic plan, the student may continue to receive financial aid the following semester. If the student fails to meet the terms of the academic plan in any subsequent semester, the student will become ineligible to participate in the financial aid programs until the student is able to once again meet the minimum requirements for academic progress. The student's progress will continue to be monitored at the end of each semester with the same terms in place until the student is in compliance with Connecticut Community Colleges' satisfactory academic progress policy.

Incomplete Grades

Financial aid students must complete all grades of Incomplete (I) prior to the beginning of the subsequent semester or their account will be put on a financial Aid Hold. Eligibility for continued financial aid will be determined only after the receipt of grades.

Withdrawal from School

In general, if a recipient of the Student Financial Aid Assistance program withdraws from a school during a payment period or during a period of enrollment in which the recipient began attendance, the school must calculate the amount of federal funds the student did not earn. Those funds must be returned (see [Return of Title IV Funds](#)).

If the school determines that a student did not begin the withdrawal process or otherwise notify the school of the intent to withdraw due to illness, accident, grievous personal loss, or other circumstances beyond the student's control, the school may determine the appropriate withdrawal date.

If the student registers for classes but never attends, the student is responsible for all charges incurred.

Scholarships

Foundation Scholarships

Scholarships are available through the Gateway Community College Foundation, Inc., which was formed to assist the College **in** expanding its services to students and enhancing academic instruction. The Foundation also helps the College to invest **in** Connecticut's future by providing resources and through advocacy.

The Foundation awards and administers various scholarships in compliance with the policies of its board of directors or at the request of the benefactor. Scholarships are awarded each spring semester to students for use in the following academic year. The GCC Foundation scholarship application is made available online during the spring semester beginning in February.

Students can visit gatewaY.ct.academicworks.com to see the list of scholarships available and sign in to apply. For more information, call (203) 285-2617.

Scholarships are available for all students including program-specific scholarships in the Engineering Technology programs, health care and sciences.

Scholarships Include:

Philomena M. Abell Scholarship	Pfizer Science/Math Scholarship
Alumni Association Scholarship	Melissa Pringle Scholarship
Anthem Blue Cross and Blue Shield Scholarship	Regional Water Authority Scholarship
AT&T Scholarship	Jason Richardson Scholarship
Atluru Family Foundation Scholarship	RnB Enterprises Scholarship
Margaret Bauer Business Scholarship	RWA: Kathryn M. Bevan Memorial Scholarship
Michael Cannella Scholarship	David Servin Scholarship
CASA/SME Scholarship	Shaw's Coca-Cola Scholarship
Annie E. Casey Foundation Scholarship	Charles and Ann Robinson Scholarship
Frederick A. DeLuca Foundation Scholarship	Margaret McAllister Spain Scholarship
Todd Dogolo Scholarship	Donald J. McCarthy, Jr. Scholarship
Richard Fiore Scholarship	Fred W. McKinney Scholarship
First Niagara Scholarship	Michael Murphy Scholarship
Stan Fivekiller Memorial Scholarship	Leah and Milton Nevitt Scholarship
G-MEN Scholarship	Francis S. Noonan Scholarship
Rose Guerrera Scholarship	North Haven Rotary Foundation Scholarship
Hotel & Food Service Management Scholarship	Carmen Parlato Scholarship
Human Services Scholarship	Cheryl Anderson Pegues Scholarship
Ted and Joan Hyatt Scholarship	Petraiuolo Family Scholarship
Marion Pacelli Iovieno Scholarship	Jan Trifiatis Scholarship
Frank Adam Jurczyk Scholarship	Villa Bianca Scholarship
Laptop Scholarship Walmart Scholarship	Walmart Scholarship
Larry Laukhuf Scholarship	Williams Service-Learning Scholarship
Liberal Arts Scholarship	Norman Wuestefeld Scholarship
Liberty Bank Foundation Scholarship	Yale-New Haven Hospital Scholarship
Susan Moore Lincoln Scholarship	Yale University Scholarship
Marie Marinaccio Scholarship	

NewAlliance Foundation, through a generous endowed gift, has established NewAlliance Fellows to be awarded to the two students with the highest GPA accepted into an Allied Health program and into the Nursing program. Awards will cover tuition and fees for the fall and spring semesters following selection.

Pfizer Science and Math Scholarships for students from select New Haven high schools (Hillhouse, Wilbur Cross, and Career) are available for students entering Gateway. These scholarships provide \$3,000 to each recipient to cover educational costs.

Scholarship awards are subject to change.

ACADEMIC POLICIES AND PROCEDURES REGISTRATION

Fall and spring registration dates are established each semester for new and returning students. While every effort will be made to meet the educational needs of each student, registration is conducted on a seat-available basis. Courses listed in the catalog will not necessarily be offered every semester. The College reserves the right to cancel course offerings for budgetary reasons or because of lack of enrollment. Every attempt will be made to notify students if a selected course has been canceled.

The College offers credit and credit-free instruction during its winter intersession, which runs from late December through early January, and during summer sessions. The exact dates of the winter intersession and summer sessions may be found in the appropriate course schedules that are mailed to area residents, distributed through the Registrar's Office, and online at: GatewayCT.edu or [http:// www.online.comnet.edu](http://www.online.comnet.edu) . Courses are open to all Gateway Community College students, students from other colleges, and any interested adults.

Cross-Registration

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

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

Change of Address, Email Address, or Name

If you change your address, your email or your name, please notify the Registrar's Office immediately. It is of the utmost importance that the college have the most up-to-date contact information on record. Failure to keep your information current is likely to result **in** delays **in** receiving grades and other official correspondence from the college. If you are a current student and not employed by the Community College System, name change requests must be submitted in person to the appropriate office at your college accompanied by Official Photo Identification and a Certified Copy of one of the following:

- Probate Court Decree ordering a name change
- Superior Court Order dissolving a marriage and explicitly ordering restoration of the name of a party
- District Court Order associated with an immigrant becoming a U.S. Citizen
- Marriage License.

NOTE: "Certified Copy" refers to an original decree, Order, or License with raised gold seal or other stamp providing indicia of authenticity, including contact information for the issuing authority.

Changing Your Class Schedule

You are urged to seek advice from an academic advisor if you have any questions about changing your classes. Making changes to your course load or schedule without consulting an advisor may slow progress toward your educational goals. However, the permission of an advisor is not required to change sections of the same course. To add or drop a course, or change to another section of the same course, you must complete the Add/Drop procedure. (See ["Add/ Drop Procedure"](#).)

Add/Drop Procedure

Add/Drop forms are available in the Registrar's Office and in the Counseling Center. To add or drop a class you must complete and sign the appropriate form during the Add/Drop period, which is published in the current semester schedule. Please note the following procedures:

- Submit the Add/Drop Form to the Registrar's Office during the specified hours, which are posted.
- If there is a seat in the class that you wish to add, you will be entered into the class.
- The signature of an academic advisor or faculty is required for additional courses, but not for time changes.
- You may not register for a closed course without the written permission of the instructor.
- Drop slips must be submitted to the Registrar's Office during the published time frame and do not require an advisor's signature.
- If you drop a course prior to or during the first fourteen (14) calendar days of a semester, you are entitled to removal from the official class roster and the course will not appear on your official transcript.

Please note: Payment is due when a course is added. If no payment is made, the student will be disenrolled from the course. The add/drop dates are strictly enforced; no add/ drops are accepted after the deadline published in the course schedule.

Changing Your Degree Program

If you wish to change enrollment from one degree program to another (e.g., from General Studies to Liberal Arts), you should obtain a Change of Curriculum form from the Counseling & Student Success Center, Room N213.

To change your degree program, you are required to see a counselor who will explain the procedures for changing your program. (A coordinator's signature is required for several programs; please see the Change of Curriculum form for specifics.) Once signed and approved, the completed Change of Curriculum form must go to the Registrar's Office to be processed. The title of your new program will appear on your transcript. Follow the same procedure if you wish to add a second program of study.

To change from non-degree status to a degree program, a student must provide verification of high school completion and immunization.

Semester Honors

- Full-time students who are matriculated in a certificate or degree program and who successfully complete 12 or more credits of work in a semester with a grade point average of 3.4 or higher shall be recognized by having their names placed on a Dean's List.
- Part-time students who are matriculated in a certificate or degree program are also eligible for such recognition when they have completed 12 or more credits of work with a cumulative grade point average of 3.4 or higher. They may be subsequently recognized at the completion of an additional 12 or more credits of work with a cumulative grade point average of 3.4 or higher, and at successive intervals of 12 credits.
- A course Withdrawal or Incomplete shall make the student ineligible for Dean's List recognition that semester. Upon completion of the Incomplete, the student may be recognized retroactively.
- Students who are in a probationary status are not eligible for Dean's List recognition, even if their cumulative grade point average might otherwise make them eligible.

Graduation Honors

Students with exemplary academic performance shall be recognized at graduation with the following designations:

- Highest Honors for students with 3.9 - 4.0 grade point average
- High Honors for students with 3.7 - 3.89 grade point average
- Honors for students with a 3.4 - 3.69 grade point average

Students with an Incomplete may become eligible retroactively for graduation honors upon completion of the course requirements. Recognition shall appear on the transcript, provided that the student has earned the required grade point average.

Phi Theta Kappa International Honor Society

Gateway Community College has an active chapter of the Phi Theta Kappa Honor Society. Phi Theta Kappa is the honor society of two-year colleges. Students are invited to join the Alpha Xi Theta Chapter, as full members if they have completed at least 12 associate degree credits at Gateway and have a Grade Point Average (GPA) of at least 3.5. Qualified students are inducted into the Honor Society during the Phi Theta Kappa Induction Ceremony held each fall and spring. Alpha Xi Theta also accepts provisional members with less than 12 associate degree credits at Gateway or students with 12 associate degree credits at Gateway and have a Grade Point Average (GPA) of at least 3.3.

Statement on Academic Satisfactory Progress

- The grading system employed by each college should accurately reflect the academic achievement of the student. In order to ensure appropriate use of state resources available for the education of its citizens, each college will develop procedures to monitor satisfactory progress through its warning, probation, and suspension policy.
- This policy shall be applicable to all students enrolled in developmental and/or credit courses, no matter the number of credits for which they are enrolled.
- No course may be repeated for credit more than twice. The highest grade received will be used in calculating the student's academic average. This does not apply to those courses that are designed to be repeated for additional credit.
- Satisfactory completion of fifty percent of the credits attempted (this phrase means actual continued enrollment beyond the add/drop period) will be the minimum standard for goodstanding.

Academic Warning

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

Academic Probation

- Students placed on academic probation will be required to take a reduced course load for one semester.
- College procedures will be included in appropriate publications and communications.

Academic Suspension

A suspended student must wait at least one (1) semester before applying for readmission. After academic suspension, readmitted students who wish to enroll again must comply with the following criteria: (a) receive counseling, (b) acquire a "C" average in courses attempted during given semester in order to show academic progress and (c) be limited to a maximum of two (2) courses until a 2.0 accumulative GPA is achieved. The appeals process is initiated through the Counseling and Student Success Center. If not satisfied with that decision, the student may initiate an appeal to the Dean of Academic Affairs.

Academic Integrity

At Gateway Community College we expect the highest standards of academic honesty. Academic dishonesty is prohibited in accordance with the Board of Regents' Proscribed Conduct Policy in Section 5.2.1 of the Board of Trustees' Policy Manual. This policy prohibits cheating on examinations, unauthorized collaboration on assignments, unauthorized access to examinations or course materials, plagiarism, zero tolerance for threatening, intimidating, and violent behavior, and other proscribed activities. Plagiarism is defined as the use of another's idea(s) or phrase(s) and representing that/those idea(s) as your own, either intentionally or unintentionally. (Excerpted from the Board of Trustees Policy 5.2.1, amended 2/26/90). In addition, at Gateway Community College, unauthorized use of any electronic device to convey information during examinations and all other forms of assessment is considered academic dishonesty.

Academic Standards

A student with a GPA of 2.0 or higher is considered in Good Standing. Only students in Good Standing may register as full time.

To remain eligible for continuation of studies, students must maintain a cumulative grade point average (GPA) equal to or above the minimum stated in the Academic Standards criteria for the number of credits they have completed.

11 or fewer credits with less than 1.5 GPA	Written Warning
12 - 30 credits inclusive with less than 1.7 GPA	Written Notice of Academic Probation - Reduced Course Load
31+ credits with less than 2.0 GPA	Written Notice of Academic Probation - Reduced Course Load
31+ credits with one semester probation earning less than 2.0 GPA	Written Notice of Academic Suspension

Course Load

A full course load will normally consist of four to five courses, 12 credits or more depending upon the student's major and degree of academic preparedness. Students wishing to take more than the normal course load for their major during the second or subsequent semester may, provided they have maintained an average of 3.0 or better during the preceding semester, register for one additional course upon the recommendation and approval in the Counseling and Student Success Center. All appeals regarding course load must be made to the Dean of Student Affairs.

Course Substitution

The substitution of a course requirement with another similar course must receive permission from the appropriate department chairperson, program coordinator or the Dean of Academic Affairs. A Course Substitution Form must be completed with the appropriate department chair or program coordinator’s signature.

Grades

All colleges will use the same system of values for grades awarded. Values to be used for all calculations of grades, averages, and related matters, are as follows:

A	4.0	C	2.0	Temporary Grade: I - Incomplete
A-	3.7	C-	1.7	Administrative Transcript Notations:
B+	3.3	D+	1.3	
B	3.0	D	1.0	AU Audit
B-	2.7	D-	0.7	P Pass
C+	2.3	F	0.0	UF Unearned F (did not attend)

The Grade Point Average (GPA) shall be calculated to two decimal places, based on quality points and the number of credits attempted.

To determine the number of quality points earned in a course, a student’s numerical grade is multiplied by the number of credits associated with the course (semester hours). The total of all quality points earned by a student is then divided by the total number of credits attempted. The result is the student’s GPA. Reports of the final grades for the semester may be obtained online through My Commnet at www.mxcommnet.edu.

Students enrolled in non-credit courses through Corporate and Continuing Education are awarded Continuing Education Units (CEUs) on a Pass/Fail (P/F) basis.

Temporary Grade

I - Incomplete

1. An Incomplete is a temporary grade assigned by the faculty member when coursework is missing and the student agrees to complete the requirements. Although a student may request an Incomplete, the faculty member is not required to honor the request. The faculty member should assign an Incomplete when there are extenuating circumstances such as illness that prevent a student from completing the assigned work on time and the student has completed most of the course requirements and, in the judgment of the faculty member, the student can complete the remaining work within the time limit established by system policy.
2. A faculty member who assigns an Incomplete shall file a system report form that includes:
 - a. a brief description of the requirements to be completed;
 - b. the date by which the coursework must be submitted to the faculty member, which is the end of the tenth week of the next standard semester;
 - c. a statement that the Incomplete will change to a specified letter grade if the work is not completed by the end of the tenth week of the next standard semester.

The faculty member shall keep the original signed form, with copies to the student, the academic dean, the registrar, and such other appropriate parties as the college may identify.

3. All Incompletes must convert to a letter grade by the end of the following semester. If a student submits the required work on time, the faculty member shall calculate a grade to replace the Incomplete and submit it to the registrar by the end of the semester. If a student fails to complete the required work or fails to submit the work by the specified time, or if the faculty member fails to submit a replacement grade, the registrar shall convert the Incomplete to the letter grade specified in the report form, and that letter grade shall be entered on the student transcript.
4. Students with an Incomplete are temporarily ineligible for semester or graduation honors. Upon conversion of the Incomplete to a letter grade, students may retroactively receive semester or graduation honors, and such recognition shall appear on the transcript, provided that the student has earned the required grade point average.

Students in a Allied Health or Nursing program (Diagnostic Medical Sonography, Fitness Specialist, Nuclear Medicine, Radiation Therapy, Radiography) must complete all required course prerequisites before registering for any program specific math, science, and/or Allied Health or Nursing courses.

Administrative Transcript Notations:

“AU” - Audit

An administrative transcript notation for students auditing a course.

Students not wishing credit may audit a course. This status will allow them to participate in class activities without being required to meet the examination requirements of the course. Students may ask to have papers critiqued, but faculty members are not required to grade an auditor's course work. Full tuition and fees are charged for courses audited. A student who wishes to change from credit to audit status must request this within the first four weeks of the course, using such forms and procedures as the college may prescribe. Students auditing a course may not change to credit status.

Audited courses may be repeated in a subsequent semester for credit by re-registering and paying the appropriate tuition and fees. The structure of the course should not be altered in consideration of the number of students auditing the given course.

“P” - Pass

An administrative transcript notation for successful completion of courses taken on a pass/fail basis. Students failing will receive a grade of “F”.

With the permission of the instructor, a student may take an elective course on a Pass/Fail basis. Any student who has satisfactorily completed at least 12 credits may take advantage of the Pass/Fail option. The student must notify the Records Office in writing of this intent no later than one week following the Add period. Upon completion of the course, the student will receive a grade of “P” or “F.” No other grade will be reported. The “Pass” grade will entitle the student to an appropriate number of academic credits toward graduation. A “Pass” will not be computed in the student's quality point average (GPA). Only one academic course may be taken under the Pass/Fail option during a semester.

All clinical courses **in** the Radiologic Technology programs are offered only on a pass/fail basis.

“UF” - Unearned Failure

This notation is awarded to students who were enrolled in a course, did not officially withdraw, but who failed to participate **in** course activities through the end of the term. It is used when, in the judgment of the instructor, completed assignments and/or course activities were insufficient to make normal evaluation of academic performance possible.

"TR" - Transfer

An administrative transcript notation in lieu of grades for courses accepted for credit from other colleges and universities.

"W" - Withdrawal from a course

An administrative transcript notation used to indicate that a student is withdrawn from a course in accordance with the procedures prescribed by the college.

Students who withdraw officially from semester credit courses through the Records Office within the first fourteen calendar days of the fifteen-week semester will be removed from class rosters. Students withdrawing after the first fourteen calendar days but before the end of the tenth week will receive a grade of "W". A student with a grade of "W" will be ineligible for academic honors for that semester.

During the Summer/Winter sessions, students who withdraw prior to the first day of the credit course will receive no grade for the course. Generally, if a student withdraws after the first class and prior to the last date of withdrawal for each Summer/Winter session, the student will receive a grade of "W". Please consult the Records Office. Students are encouraged to carefully read the academic calendars for each Summer/Winter session.

After the above deadlines have passed, withdrawal from a course may be granted and recorded on the student's permanent record as "W" if extenuating circumstances are found to justify the withdrawal.

"W" grades are not computed in the quality point average. If a student stops attending class, however, and fails to officially withdraw from the course, the instructor may issue a grade of "F".

"F" grades are calculated in the quality point average. To be official, all withdrawals must be received and processed by the Records Office.

"*" - Grades with an asterisk "*" (before the Fall 2004) or "****" - Grades with a carrot "****" (starting with the Fall 2004)

These administrative transcript notations indicate the Fresh Start Option has been invoked. Those grades will not be calculated into the student's GPA, but any course in which the student received a grade of C- or above can be used to satisfy graduation requirements.

"#" - Grades with a pound sign "#"

This administrative transcript notation indicates the courses are developmental and do not carry any credit for graduation nor are calculated into the student's GPA.

Instructor-Out Hotline: 866-315-2769

To check if your instructor is going to be absent, you may call the hotline prior to class. If a faculty member is going to be late or cannot meet due to an emergency, he or she should make every effort to inform you. Many faculty members will notify you during the first class sessions about how such situations will be handled. In the event that a faculty member is more than 20 minutes late arriving for class, you may:

- Go to the Dean of Academic Affairs (N321), the Evening Administrator (N104) or the office of the department chair for that academic area for guidance.
- Circulate an attendance sheet with the course number and section for each student to sign and submit it to one of the officials above. You are free to leave if you have received no other directions.

Faculty Office Hours

Faculty members are willing to meet with you to discuss individual concerns or to provide assistance. At the beginning of the semester, each of your instructors will provide you with his or her office hours, office location and phone number. If you want to consult a faculty member, it is best to make and keep a specific appointment. You can, however, stop by the faculty member's office during his or her listed hours.

Faculty Out Hotline

Students can determine if an instructor has cancelled class for any reason by calling the Faculty Out Hotline at (866) 315-2769.

Attendance

By enrolling **in** classes at Gateway Community College, you accept responsibility to take full advantage of your educational opportunity via regular attendance **in** your scheduled classes and laboratories. The college, therefore, does not administer a uniform system of monitoring attendance. For purposes of record keeping, all instructors keep their own attendance records.

At the beginning of each semester, each instructor will delineate clearly the expectations necessary for the successful completion of the course. All students are expected to meet the academic obligations outlined in the syllabus, or to assume the risks incurred by failure to do so.

Enrollment Status

Degree students are those who have satisfied admission requirements and are enrolled in a planned program of study that will result **in** a certificate, Associate in Arts, Associate in Science, or Associate in Applied Science degree. Nondegree students take courses but do not wish to be enrolled **in** a planned program of study leading to a certificate or degree. Any student may apply to a degree program at a later time. For instructions on how to do so, please refer to the regular application procedures.

Full-time students enroll for 12 credits or more. Part-time students enroll for 11 credits or less. Full-time students may take a fifth credit class. Students registering for more than 17 credits must pay a nominal fee of \$100.

Fresh Start

1. Colleges shall have a policy called Fresh Start, which will allow students who have not attended college for a period of two or more years and who have a poor academic record to refresh their Grade Point Average (GPA) and develop a more favorable academic record. Students accepted for enrollment under Fresh Start will meet with a designated college official to determine their academic status for re-entry into the college.
2. All grades previously earned will remain on the student's transcript. The semesters for which Fresh Start is invoked will include a transcript symbol indicating that the policy is in effect. The original GPA will not be included in any subsequent computation of the new GPA. If the Fresh Start option is approved, the student will receive credit for courses with a grade of C-minus or above, including "P" (Pass).
3. The Fresh Start option can be used only once.
4. The Fresh Start option does not apply to any completed degree or certificate.
5. A student must complete a minimum of 15 credits after returning to college under the Fresh Start option to be eligible for a degree or certificate, and for graduation honors.
6. Each college is responsible for developing its own procedures for managing Fresh Start, including where and how the student applies, what forms are used, who approves the application, and how the student's progress is monitored.

Withdrawal from Individual Course(s)

If you wish to withdraw from a course, you should understand the policies outlined below.

- **DO NOT SIMPLY STOP ATTENDING CLASSES.** Students who stop attending classes rather than officially withdrawing from a course may be subject to probation, suspension or dismissal. This has a permanent impact on your official college transcript.
- You are encouraged to speak to an advisor or counselor before withdrawing from a course. To withdraw from a course, obtain a Withdrawal form from the Registrar's Office or the Counseling & Student Success Center. In addition, please note the following policies:
- A student who wishes to withdraw from individual course(s) may do so up to the tenth week of class. After the tenth week, and prior to one week before the last day of classes, withdrawals are permitted only with the signature of the instructor.
- If you withdraw from a course after the ADD/DROP period, you will receive a grade of "W" in each course.

Withdrawal from the College

A student who wishes to withdraw from the College may do so by the last day of classes by contacting the Registrar's Office and completing the withdrawal process. (Deadline date are outlined by the Registrar's Office) A grade of "W" will be given for each course not completed at the time of withdrawal. A student must complete a readmit application if he/ she desires to return to the College after a two-year time period.

Repeating a Course

Student may not enroll in the same course more than three times. Please note that current Financial Aid policies only allow for payment of the same course for two attempts. If a course is repeated, the highest grade received will be used in calculating the student's academic average. This does not apply to courses that are designed to be repeated for additional credit.

Individualized Instruction

Students and instructors may arrange for individualized instruction in a catalog course not offered in a given semester. An Individualized Instruction Permission form shall be completed and signed by the student, the instructor, the Department Chair, and the Dean of Academics. This form, available in the Records Office, may be submitted during registration but no later than the end of the Add/Drop period.

Independent Study

Independent Study provides special opportunities beyond the course offerings of the catalog. To be eligible, a student's cumulative grade point average must be 3.0 or better.

Interested students must fill out an Independent Study form, describing the objective(s), justification of the study, nature of the learning outcomes, learning methodology, and evaluative criteria. After the form has been completed, it must be signed by the instructor and the student. The student must then submit the form to the Office of Dean of Academic Affairs for final approval. The student must also obtain an Add slip from the Registrar's Office or the Counseling & Student Success Center, in order for the study to appear on the student's record. Upon completion of the independent study, a brief written evaluation will be attached to the student's permanent record. This evaluation will be submitted to the Registrar with the grade report.

Students shall be limited to three (3) Independent Studies at GCC. Only one (1) Independent Study may be taken per semester. No Independent Study may begin in the student's first semester.

Technology Statement

Success in personal, academic, and work environments requires the acquisition and use of information and technological literacy skills. The Connecticut Community College system is committed to providing experiences to help you achieve that success. In many of the courses offered at Gateway Community College students may be required to perform some or all of the following technology-focused activities during and/or outside scheduled class time:

- Access course materials (including assignments, readings, audio or video recordings, or tests) using Blackboard and/or the Internet,
- Perform research using the Internet and online databases,
- Complete class assignments in word-processed or other computer-generated format, or through the use of other technology as designated by the instructor,
- Communicate electronically with the instructor or other students in class.
- See your instructor for specific technology requirements

Distance Learning (DL)

Phone#: 203.285.2570

Email: GW-DistanceLearning@gatewayct.edu

Coordinators: Lynn Roller and Don Walker

Associate: Robin De.Jesus

Gateway Community College offers numerous courses utilizing the Blackboard Learning Management system available to Connecticut Community College students. Blackboard allows instructors to post materials, messages, tests, assignments, grades, and to communicate with students online. Various courses delivery methods use Blackboard:

- ONLN: instruction and learning conducted fully online
- OLCR: online instruction with orientation and testing conducted on campus
- HYBR: a blend of on campus and online instruction, reducing the amount of "seat time" in the classroom (40% on campus-60% online)
- Web-Enhanced: traditional on campus class that utilizes online material to enhance the course

Online courses/presentation is similar to a traditional on-campus class. All the elements of the course are maintained; instructor, classmates, syllabus, course material/content, textbooks, lectures, discussions, tests, assignments, due dates/times, and grades. Student can expect to spend the same amount of time on the course material as in a traditional course.

For example, a traditional 3-credit would meet for class on campus for 3 hours per week. Instructors generally expect 1 to 2 hours of out-of-class work for each hour spent in class, for a total of 9 to 12 hours per week. The 3 hours of class time is spent online, these courses are not generally self-paced which means student must adhere to the dates/times outlined on the course syllabus.

Characteristic of a successful online student:

- Highly motivated, organized, independent learners
- Possess good time management skills
- Have good reading, writing, and communication skills
- Be able to perform basic computer literacy skills
 - Keyboarding, web browsing, word processing, email, attaching files, etc.)
- Have regular and reliable access to a computer with internet access

Students automatically receive a system email with helpful introductory information when they register for an ONLN, OLCR, or HYBRID course. Be sure to check your GCC email on a regular basis for important notices.

Please check the GCC Distance Learning web page for support: http://www.gatewaxct.edu/Offices-DePartments/Academic_Affairs/Distance-Learning

Please contact the Distance Learning faculty with any comments, questions, or concerns. Student orientations and guidance is available throughout the semester.

Prior Learning Assessment (PLA)

In addition to earning traditional credit through completion of college courses, students may earn up to 30 credits for knowledge acquired outside the college classroom from such experiences as paid or volunteer work, on-the-job training, vocational training, hobbies or self-initiated study. In general the college awards credit when a student demonstrates competence in areas that are required in the student's program of study. A student can demonstrate competence through the following methods of assessment.

- **Standardized Tests** such as Advanced Placement Exams, given during high school administered by College Board or College Level Examination Program (CLEP), also administered by College Board, enable students to earn college credit in academic disciplines ranging from mathematics to foreign language by achieving sufficient scores on either exam. Test results must be submitted directly to the Admissions Office for review and acceptance of credit. Information about exams and registration procedures is on the College Board website, www.collegeboard.com/cleP. A transcript of each exam must be sent directly to the admissions office for review. Credits earned through this method can be sent directly to other institutions for review upon transfer however, acceptance is at the discretion of the receiving institution.
- **Credit for Previously Evaluated Training** for instance, by the military or professional organizations and associations, can be earned if the program has been previously evaluated. Charter Oak State College and the University of the State of New York have evaluated many training programs offered by public and private noncollegiate organizations in Connecticut and New York. In accordance with Board of Trustees policy, GCC will award credit to students who have successfully completed non-collegiate sponsored instruction and various health training programs including: the Basic Police Training Program conducted by the Municipal Police Training Council; training conducted by the Commission on Fire Prevention and Control and Bureau of the State Fire Marshall; the Pre-service Orientation Program conducted by the Connecticut Department of Corrections; the American Institute of Banking Program of the American Banking Association; and Licensed Practical Nurses are eligible for advanced placement in the Nursing program based on the Connecticut Articulation Model for Nursing Education Mobility. Students should first petition the Admissions Office for direct award of credit. Students can also utilize the PLA Credit for Prior Training program coordinated by Charter Oak

State College by visiting www.CharterOak.edu. Credits earned through previously evaluated training can be submitted to other institutions for review upon transfer however, acceptance is at the discretion of the receiving institution.

- **Assessment by Examination** allows students to earn GCC credit for courses that address GCC graduation requirements. A faculty member chosen by a Department Chair/Division Director and approved by the Dean of Academic Affairs develops and administers the exams. Qualified faculty administer individual tests to determine whether a student will be awarded credit without having taken a course. Contact Career Services at (203) 285-2144 to determine whether an examination has been approved for a course, to obtain the Credit by Examination application or for more information about the process. To apply to take an exam in one or more courses, a student must submit a Credit by Examination form for each course to the chairperson of the department or program coordinator in which the course is offered. The student must state on the form how the relevant knowledge was gained. The department chairperson designates a faculty member who, upon approval by the Academic Dean, administers the exam. The Academic Evaluation Fee is \$15 per test. Credit earned through Assessment by Examination is institutional credit, it can be applied to graduation but is not typically transferred out to other institutions.

- **Assessment by Portfolio** allows students to demonstrate competence in one or more courses in their program of study. The student must compile a portfolio that includes relevant learning experiences, detailed descriptions of skills corresponding to competencies taught in the college courses, and relevant supporting documentation as defined by faculty assigned to oversee the process. The Department Chair and/or Program Coordinator will designate a faculty evaluator approved by the Dean of Academic Affairs. The Portfolio Assessment fee is \$50. Contact the Career Services Office at (203) 285-2144 to obtain more information about the process. Students can also utilize the PLA Portfolio assessment program coordinated by Charter Oak State College by visiting www.CharterOak.edu. Credit earned through portfolio submission is institutional credit, it can be applied to graduation but is not typically transferred out to another institution.

Graduation

Graduation is NOT automatic! The final responsibility for meeting program requirements rests with the student. Students are strongly encouraged to see a counselor to verify their eligibility for graduation PRIOR to the start of their last semester.

1. The Counseling and Student Success Center reviews and evaluates student transcripts for graduation. Students enrolled in degree programs should request an initial transcript evaluation after earning thirty (30) credits. Students enrolled in certificate programs should request an initial transcript evaluation after earning nine (9) credits or completing one-half (1/2) of the requirements.
2. Students should complete a preliminary graduation audit online at the Counseling and Student Success Center. An official graduation audit is then conducted by the Records Office. Student MUST submit a graduation application by the posted dates in order to be audited and awarded a degree.
3. A candidate for graduation will be evaluated under the most appropriate catalog, as follows:
 - A. **For DEGREE STUDENTS - the catalog under which the candidate first enrolled shall be used to determine graduation requirements, except in the following cases:**
 1. If the candidate was readmitted to the College after an absence of four or more consecutive semesters, the catalog under which the candidate was readmitted shall be used.
 2. When the candidate changes programs during attendance, the catalog in use at the time of the last change in program shall be used.
 3. If there has been a change in the General Education requirements of the program, the candidate must fulfill the new requirements prior to graduation.
 4. The Registrar's Office determines that either the catalog of readmission or the current catalog should be used for graduation.
 - B. **For CERTIFICATE STUDENTS - the catalog in force at the time of enrollment shall be used, unless the Registrar determines that either the catalog of readmission or the catalog of graduation should be used.**
4. To graduate, a student must: (1) have a cumulative quality point average of at least 2.0; (2) have the minimum semester hours of credit; and (3) successfully completed the required and elective courses as designated by the curriculum, and (4) fulfilled all financial obligations to the College.

Awarding of Multiple Associate Degrees

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

3. Requests for additional degrees beyond the second require approval from the academic dean. Students who receive approval must then complete all program requirements, including earning a least twenty-five (25) percent of the minimum requirements from the new curriculum at the college through which the degree is to be conferred.
4. Completion of the requirements of an additional program option does not automatically constitute completion of an additional degree.

Transcripts

Students desiring to have official transcripts of grades mailed to other educational institutions must complete a Request on mycommet or a Request of Transcript form in the Records Office. The form may be downloaded from the www.GatewayCT.edu website. **Official transcripts will be mailed directly to other educational institutions.** One to two weeks are necessary to process such requests. Two weeks before and after a semester begins or ends, it will be a minimum of two weeks to process. No official transcripts must be picked up.

Transfer Programs

Gateway is committed to assisting students in obtaining their educational goals. Should those goals include transferring an associate’s degree to a four-year institution, students may transfer to any college or university they choose. Students may have a lot of questions, such as whether their courses will transfer or whether they can change majors. If students have questions or are unsure of where to transfer for their bachelor’s degree, they should meet with an Advisor in the GCC Counseling and Student Success Center or a designated Faculty Advisor to develop a transfer plan.

Transfer Opportunities at Gateway

Connecticut State College and Universities (CSCU) Transfer Ticket Degrees

CSCU’s Transfer Ticket are new degree programs providing pathway for community college students to complete degree programs that transfer to Connecticut State Universities (Central, Eastern, Southern, and Western) and Charter Oak State College without losing any credits or being required to take extra credits in order to complete a bachelor’s degree in that same discipline. You will be able to transfer, apply to competitive admissions majors, and complete your BA/BS degree in the same time and with the same course requirements as students who start at a CSU or COSC.

The Transfer Tickets taking effect in the fall 2017 are:

Accounting	French’
Art	History
Biology	Italian
Business	Management
Business Administration	Marketing
Chemistry	Mathematics
Communication	Physics
Computer Science	Political Science
Criminology	Psychology
Early Childhood Teacher Credential	Social Work
English	Sociology
Exercise Science	Spanish
Finance	Theater

Please visit www.ct.edu/transfer for details

For more information on CSCU Transfer Ticket Degrees

Please contact Dr. Lauren Doninger at ldoninger@gatewayct.edu

Gap Program to University of Connecticut (UCONN)

The Guaranteed Admission Program (GAP) is an agreement between the Connecticut Community College System and the University of Connecticut designed for students who plan to earn a bachelor's degree in either Liberal Arts and Sciences or Agriculture and Natural Resources. To be eligible for the GAP program, students must have earned 16 or fewer credits at Gateway and be enrolled in our Liberal Arts and Science degree program. To find out more about GAP or to sign up for the program, see Dr. Lauren Doninger, Room S124C, (203) 285-2601.

College of Technology (COT) Engineering Pathway

The Engineering Science Pathway program allows community college students to follow an integrated curriculum at Connecticut's public and private colleges and universities, allowing individuals to begin their studies at Gateway Community College and progress directly into a bachelor's degree program at a 4-year university. The curriculum consists of two distinct pathways: engineering and technology. For more information please contact Professor Susan Spencer, Room S401E, (203) 285- 2452. The student may transfer to the following institutions:

- University of Connecticut
- School of Engineering at the University of Hartford
- School of Engineering at the University of New Haven
- School of Engineering at Fairfield University
- School of Technology at Central Connecticut State University
- Charter Oak State College

RN to BSN/MSN Pathway

Students completing their RN program at GCC have many options via system wide articulation agreements. Graduates of the Connecticut Community College Nursing Program (CT-CCNP) have the opportunity to continue their education at a number of baccalaureate and advanced degree programs throughout the state and beyond. For a complete list, visit www.ct.edu/academics/nursing/agreements.

Articulation Agreements:

TEXT FORTHCOMING

WORKFORCE DEVELOPMENT & CONTINUING EDUCATION THE GREAT CENTER

Telephone: (203) 285-2300

The mission of the GREAT Center, Gateway's Resource, Education and Training Center, is to be the educator of choice for a high quality workforce. Our responsive and tiered approach meets the evolving educational and technological needs of students. We provide comprehensive skill development that supports our region's economic advancement.

Business and Industry Services

Skill development and enhancement is the key to growth in new and established businesses in South Central Connecticut. A sample of the training programs available are:

- Professional Development
- Industry Specific Skills
- Computer Training
- Customized On-Site Training

Workforce Development and Certificate Programs

The GREAT Center offers non-credit certificate programs to dislocated workers, those who need updated or additional industry-recognized credentials, and those seeking entry-level skills that lead to employment or higher-level education. Full certificate programs are approved by the regional Workforce Investment Board and meet the criteria for inclusion on the Connecticut Department of Labor's Eligible Training Program List (ETPL). Many have also been approved by the U.S. Department of Veterans Affairs (VA) and the Connecticut Department of Higher Education for G.I. Bill benefits.

Certificate programs include (See funding descriptions below – Y-Yes/Approved, N-No/Not Approved, P-Pending Approval):

Course	Certification	SNAP*	WIOA**
AAPC (Medical Coding)	Industry	y	y
AutoCAD	Industry	y	y
A+ CompTIA Computer Technician	Industry	y	y
Bookkeeping	National	y	y
Business Analyst	National	N	y
Business Professional (Microsoft 16 & Windows 10)	Industry	y	y
CDL	State	N	y
Community Health Worker	Industry	y	y
Customer Service	Industry	y	y
Digital Printing & Production	Industry	y	y
Food Handler, Alcohol and Manager ServSafe	National	y	y
Medical Office Associate	Industry	y	y
Certified Nurse Aide (Patient Care Technician - includes Phlebotomy and EKG)	National	y	y
Patient Navigator	Industry		y
Pharmacy Technician	National	y	y
Developed Manufacturing Certificate	Industry	y	y
Real Estate Principles & Practices	State	N	y
HVAC	State	N	y
Transportation, Distribution, & Logistics, (TDL) Technician Certificate	National	y	y
Web Design	National	y	y

Supplemental Nutrition Assistance Program (SNAP): Federal and state grants administered for employment and training to those eligible. Contact the program coordinator for seat availability, requirements and orientation dates.* Workforce Investment and Opportunities Act (WIOA): Funded programs approved by the Workforce Investment Board and listed as an approved provider on the Eligible Training Provider List (ETPL) through the CT Hires website.** Veteran's Affairs: Funded programs approved by the U.S. Department of Veteran's Affairs and the Connecticut Department of Higher Education for G.I. Bill benefits.***

SNAP, WIOA, and VA Assistance programs are subject to change and based on seat availability. Please refer to the GREAT Center's most current catalog or contact the program coordinator for information.

A non-credit certificate program may be taken in its entirety, or as independent, selected courses. Programs are offered in modules, with rolling start dates and held at various times during the day, evening and weekends to accommodate the needs of all students.

Continuing Education & Enrichment

The GREAT Center's continuing education and enrichment division provides affordable learning opportunities for individuals and groups that are designed for personal development and recreational or leisure activities. Popular programs include:

- Connecticut Basic Boating certification
- Motorcycle Rider courses for beginner and experienced riders
- Sidecar and trike education (S/TEP)/3-Wheels Course
- Microsoft Office Basics

Step Forward

Director: (203) 285-2505

The Step Forward Programs (SFP) offer young adults with various disabilities a two-tiered, comprehensive, transition program designed to enhance self-advocacy, interpersonal skills, financial literacy, study skills and work readiness. The program began in 2005 and has worked with young adults (18-21) from across the State of Connecticut. Students work within a cohort model where they receive individualized attention. The components include:

- **Step Forward I** is a 10-month transition program for young adults (18-21) with mild cognitive disabilities. This non-credit certificate program focuses on workplace readiness and college readiness along with self-advocacy skills. In addition to classroom instruction, students participating within this tier are placed in a community or campus-based work experience.
- **Step Forward II** and High Functioning Autism Spectrum Disorder Program* is a two semester program designed for those students who have successfully completed Step Forward I and are academically and socially qualified to move into an academically focused program at Gateway. Students in year II will focus on the career objectives identified through the first year by engaging in related college coursework and work experience. Students may take up to two, 3-credit classes at Gateway and are required to attend additional non-credit seminars to enhance study, time management, and organizational skills.

***High Functioning Autism Spectrum Disorder Program** is designed for students on the autism spectrum who are academically qualified to enroll in classes at Gateway Community College. The program offers an additional level of support, beyond the federally mandated ADA (disability) services. Students must apply for admission to Gateway Community College and take the placement test to determine appropriate classes. Students requiring academic accommodations must register for disability services.

Services include case management to students in order to monitor student progress by providing academic and disability-related counseling, referrals to appropriate college and community-based resources, and assistance with college procedures including admissions, financial aid, academic advising, registration, and accessing disability services. Students are also required to participate in an unpaid work experience.

Boot Camps – Math and English Readiness

Program Coordinator (203) 285-2203

Gateway offers free prep courses in the subject areas of Math and English. These 'boot camps' are for students wishing to refresh their basic skills and improve their ACCUPLACER scores. Attending a boot camp will provide students with the opportunity to become familiar with the Gateway campus, review their basic Math and English skills, and build confidence. After successfully completing the boot camp, students may retake the ACCUPLACER test and possibly place into a higher level course therefore saving **TIME AND MONEY**. Boot camps are for students who are motivated, hard-working and able to commit to attending all sessions of the program.

LEARNING SUPPORT SERVICES

BOOKSTORE

Telephone: (203) 865-5614

Email: 0809mgr@fhey.follett.com

Website: www.gctc.bkgtr.com

The bookstore carries all course textbooks, other reading materials, art and science supplies, notebooks and school supplies, sundries, snacks, clothing, gifts, and other items of interest. The operating hours of the college bookstore are flexible, thereby providing services to both day and evening students.

CENTER FOR EDUCATIONAL SERVICES

Telephone: (203) 285-2217 or (203) 285-2519

The Center for Educational Services (CES) provides academic support services for the students. The CES provides tutorial assistance and related services to help students become better skilled in selected areas. Tutoring is available in Math, English, ESL (English as Second Language), Sciences and Accounting. Computer assisted tutorial are especially useful for review and practice of basic skills in My MathLab is available for all the students. Tutoring is provided for most courses on a small group basis, as available. All students are welcome in the center and are encouraged to use any of the services. Call to obtain information on office hours. Please keep in mind that budget restrictions limit the resources available each semester and therefore services are most available early in the semester and can quickly become limited.

Tutoring

Students enrolled in courses at the college may receive free tutoring. Tutoring is provided for many entry-level courses at the college on a small group basis, as available.

Placement Testing

The college welcomes students with different levels of academic preparation. The college believes that proper course selection is one of the keys to academic success. All first-time, degree or certified students are required to take a Placement Assessment in Reading, Writing, and Mathematics. Placement Assessments are also available for students who have limited English proficiency. (Please refer to the English as a Second Language course description.) Test results are used to advise students into appropriate courses.

Placement Re-Testing Policy

Students wishing to register for courses beyond the Placement Test recommendation (ACCUPLACER) must get faculty approval from the Math and English Department. The department may elect to administer a local placement assessment. Faculty may then recommend a placement course consistent with the local test results. Students who wish to further challenge the placement outcome may request this from the department chairperson or the dean of the Students in the absence of the department chair. Students may authorize re-testing with ACCUPLACER. Retesting will be schedule at a time allotted by the placement coordinator, which will not displace first-time test takers.

Boot Camp students are exempt from the test retaking policy.

Please note that children are not permitted in the CES.

COLLEGE WRITING CENTER

Coordinator (203) 285-2245

Offering non-evaluative feedback, on any reading or writing assignment across the college-level curriculum, Writing Center tutors devote 45 minutes to working with individual students at any stage of their composition process. Tutors can coach students in narrowing a topic, finding a focus, developing content, organizing ideas, and improving style and correctness; they can also clarify APA and MLA guidelines for properly formatting papers as well as for citing and documenting sources. In collaboration with students, tutors identify, prioritize, and address the issues an assignment's draft presents. Their goal is to enhance a student's re-writing and editing skills and support that student in applying those skills independently before he/she submits the final paper to its ultimate audience, the professor who will grade the essay. The Center opens the second week of each semester; find operating hours on the electronic bulletin boards location around campus. For more information, contact the Writing Center at 203.285.2245.

COMPUTER RESOURCES

Computer-equipped classrooms and laboratories for the college curriculum and workshops are located conveniently throughout the campus in both the North and South buildings. All computers are linked by a high-speed network that provides access to printer, internet and other necessary computer services.

The campus has more than 30 computer classrooms. There are general purpose computer classrooms designed for the college's general curriculum, and program-specific computer classrooms for Computer Science, Allied Health, Nursing, Engineering and Graphic Design programs. We utilize more than 100 industry-standard programs for the curriculum, including Microsoft Office, Adobe CS, Autocad, Keyboarding Pro, Visual Studio, SmartCam, and MultiSim. Macintosh computers are also available on a programmatic basis to assist students. The college also has speciality laptop carts that can be brought into lecture classrooms when needed and laptop carts dedicated to the Science labs.

There are four open computer labs on campus located on the second and third floors in both the North and South buildings. At least one open lab is available when the college is open. Hours may vary by lab.

The student service area features more than 50 self-help kiosks that are designed to assist students in retrieving their campus-related information. These kiosks are located throughout the Student Services corridor and enable students to access their information using the myCommNet portal and their NetID.

The Library features more than 35 computer stations in the Learning Commons area where students can perform their library research. There is also a Library instruction classroom with 32 computers where students can learn how to properly utilize all library-related resources. The Library also houses the student laptop loaner program which has 30 laptops that can be loaned out for on campus student use.

The wireless network is available throughout the campus and allows a student to connect and access the internet using their personal wireless device (laptop, tablet, or smartphone). Just use your NetID and password for connection.

EDUCATIONAL TECHNOLOGIES

Telephone (203) 285-2268

The Office of Educational Technologies provides support to motivate and enable the College to enrich the learning process through technology. The office serves as a campus resource for information on emerging and evolving educational technologies, coordinates comprehensive media services, and assists in the electronic dissemination of information.

The office coordinates and/or provides support for the following:

- Videoconference Center
- College Website
- Audio-Visual Equipment
- Assistance in Multimedia and Video Production
- One-on-one or group instruction on presentation technology and other computer applications

- Campus-wide Electronic Message System
- Faculty/Staff Training
- Student Computer Laboratories

FIRST NIAGARA LIBRARY AND LEARNING COMMONS

Telephone (203) 285-2057

Gateway Community College maintains a full service library which provides a variety of print and electronic resources that support and supplement the curriculum of the college. In addition to the main collection, the library houses special collections, including the African American History Collection, the Early Childhood Education Model Collection and the Small Business Resource Center. The complete listing of the library's collections is available through the online public access catalog. The library also offers group and individual study rooms, collaborative pods (C-pods), laptops for use in the library, graphing calculators, headphones, and wireless Internet access. In addition, the library houses computers with internet access and Office Suite. Professional librarians are always on hand to assist users with their academic needs. Research appointments with a librarian can be made for in-depth assistance lasting up to one hour.

ELECTRONIC RESOURCES

The library homepage provides links to research tools, the online catalog, library information, and more. Research databases containing full-text articles from journals, newspapers and reference books provide academic support in all disciplines. These and other electronic resources may be accessed by Gateway students, faculty or staff on-campus via the library's homepage or off campus 24/7 using your NetID and password. The college library website address is: <http://www.gatewayct.edu/library>

INFORMATION LITERACY

Information literacy is defined as the set of skills needed to find, retrieve, analyze, and use information. Library staff members provide information literacy instruction in every academic discipline. Specialized introductions to specific resources and/or searching techniques for individuals, small groups, or classes may be arranged. Links to library instruction reservation forms may be found under Information for Faculty on the library website.

BORROWING PRIVILEGES

Borrowing privileges are granted to full and part-time faculty, full and part-time staff, alumni, and all students currently enrolled. Public borrowing privileges are granted on request, with certain restrictions. Gateway Community College identification (I.D.) is also your library card. The normal circulation period for books is three weeks. Renewals can be arranged in person, by phone, or online. If a borrower does not return items on time he/she will be billed for the cost of replacement plus a processing fee. If a student fails to comply, this may result in a loss of borrowing privileges, withholding of diploma, denial of transcript requests to other institutions, and refusal of re-registration.

SERVICE DESK

- The Service Desk on the main floor is a central point for many library services, including:
- Self-check-out and Return of all Materials
- Reference and Research Help
- Computer Help
- Reserve Materials
- Interlibrary Loan Services
- Request for Information Literacy Instruction class

Staff will be happy to assist all users with information needs. Questions can be submitted in-person, by phone, email, text, or instant messaging. Come in and browse!

STUDENT SUPPORT SERVICES

STUDENT ENGAGEMENT AND CAREER DEVELOPMENT:

ATHLETICS AND INTRAMURAL SPORTS

Telephone: (203) 285-2213

Gateway Community College is a member of the National Junior College Athletic Association, Region XXI (NJCAA), and abides by its eligibility rules and code of ethics. Inter-collegiate team sports include men's and women's basketball. All intercollegiate student athletes must maintain a minimum of a 2.0 grade point average and carry at least twelve (12) credits per semester as well as abide by all policies stated in the Student Athlete Guidelines. Contact the Director of Athletics by calling (203) 285-2213.

CAREER SERVICES

Telephone: (203) 285-2144

The mission: Career Services exists to educate and empower students and alumni throughout their lifelong career development journey. We provide personalized and innovative services, resources and technology that ultimately prepares students to make optimal use of their knowledge, skills and abilities in order to compete globally for the career they deserve.

We offer individual instruction and consultation on a variety of topics including: career planning, job search strategies, resume writing, interviewing and workplace success. Career Services staff provide classroom instruction along with a variety of workshops and seminars throughout the year. Whether you are an experienced professional or new graduate entering the workforce for the first time, Career Services can assist you in reaching your career goals.

The online job board: MyGateway Job Search <http://gcc-csm.symplicity.com/>.

Career Counseling

Career counseling is available to prospective or current students, including those in the General Studies curriculum, who have not decided on a college program or career direction. Career counseling helps students to identify career possibilities and move toward a decision.

Interest Testing

A student may take, free of charge, written interest inventories and other career tests. The results usually help to identify specific career areas of interest for the student to explore.

Occupational Information

Career Services maintains information on career fields to help students develop their career plans. Information on occupations, colleges across the country, and sources of financial aid can be obtained from the Choices computer system.

Employment Services

An online service, MyGateway Job Search csm, is available on the Career Services page of the College website. This service enables students and graduates to seek employment by searching for job listings and registering their resumes. Job postings also are maintained in notebooks in both Career Services offices. Employers can list full-time, part-time, seasonal job openings, and volunteer opportunities with the Career Services office, visit the College individually, and attend Job Fairs.

Job Search Skills

Career Services offers personal assistance and group workshops related to job search skills including resume writing, interviewing, networking, and job-seeking strategies. A series of over 75 JobShop handouts is available. Students may use computers in the Career Services offices on both campuses to write resumes and letters.

GENDER EQUITY CENTER

Telephone: (203) 285-2412

The Gender Equity Centers offers a safe and welcoming space that indorses a non judgmental and supportive atmosphere. The Gender Equity Center Coordinator is available to talk one on one with students seeking support, assistance, and victim centered counseling for a range of personal issues. We offer support services and referrals related to gender based violence, survivors of sexual violence, intimate partner violence, stalking, acts of bias based on sexual orientation, women's health, sexual orientation and identity.

STUDENT ACTIVITIES

Telephone: (203) 285-2208

As the center of student activity, the Office of Student Activities and Leadership Programs is an integral part of the educational mission of Gateway Community College. By offering a variety of programs and services that meet the needs of the Gateway Community, we create an environment for individuals to interact and learn from one another. We provide opportunities for student, faculty, and staff involvement in campus life and community service.

The Office of Student Activities and Leadership Programs, a student-centered organization, values participatory decision making, self-directed activity, and the open exchange of ideas. Through service to the campus community in student governance and leadership, we foster interactive and developmental experiences in leadership and social responsibility. Furthermore, we enhance the academic experience through an extensive array of cultural, educational, recreational, social, and leadership programs. Student activity fees fund the student activities program within the framework of a yearly budget approved by the Student Government Association.

Student Government Association

Gateway Community College has a Student Government Association (SGA) whose members are elected annually by the student body. The SGA serves to promote good citizenship and harmonious relationships throughout the college and the community. It serves to provide a forum for student representation and to provide orderly direction of college activities. The Student Government Association is responsible for the allocation and distribution of the Student Activity Fund. Any student who meets the necessary academic requirements and pays the student activity fee is eligible for election to the Student Government Association. For more information about the Student Government Association, contact (203) 285-2242 or e-mail gw-sga@gwcc.commnet.edu.

The Campus Activities Board

The Campus Activities Board (CAB) is a sub-committee of the Student Government Association. CAB's purpose is to successfully coordinate, implement, and execute a comprehensive calendar of social, recreational, educational, film, performing arts, service, philanthropic, concert, and cultural events for activity fee paying students at Gateway Community College. For further information call (203) 285-2249 or e-mail the CAB Chair at gw-cab@gwcc.commnet.edu.

Student Organizations

The Student Government Association recognizes numerous student organizations that are formed by special interest groups and advised by a member of the College staff. New student organizations may be formally recognized by the Student Government Association throughout the year. Some of the clubs and organizations that have been formally recognized by the Student Government Association are: Art Club, Armed Forces and Veteran's Club, Black Student Association, Christian Fellowship Club, Computer and Gaming Club, Early Childhood Association, Engineering Club, Financial & Economics Club, Gay Straight Alliance, Gospel Choir, International Student Association, Organization of Latin American Students (OLAS), Meditation Club, Muslim Student Association, Poetry and Music Club, Recreation Club, Science Club, Student Nursing Association, Theater Goers Club and Turkish Student Association.=

Honor Societies

Gateway Community College has an active chapter of the Phi Theta Kappa Honor Society. Phi Theta Kappa is the honor society of two-year colleges. Students are invited to join the Alpha Xi Theta Chapter as full members if they have completed at least 12 associate degree credits at Gateway and have a Grade Point Average (GPA) of at least 3.5. Qualified students are inducted into the Honor Society during the Phi Theta Kappa Induction Ceremony held each fall and spring. Alpha Xi Theta also accepts provisional members with less than 12 associate degree credits at Gateway or students with 12 associate degree credits at Gateway and have a GPA of at least 3.3.

STUDENT DEVELOPMENT

Telephone (203) 285-2033

Student Development supports the education and preparation of students for full participation in civic, cultural, and professional life. Our department strives to create, direct and sustain programs that support the broad educational and developmental needs of our diverse college community to achieve success.

VETERANS' AFFAIRS

Telephone (203) 285-2146

Veterans Administration Benefits

Veterans, members of the Reserves and dependents of veterans who believe that they are eligible for educational benefits from the Veterans Administration may obtain an application for benefits from the Director of Career Services, who is the Veterans Certifying Official for the college. Students who are receiving VA benefits must notify the Certifying Official of their course schedule each semester and of any changes in their course load. Courses must meet requirements of the degree or certificate in which the student is enrolled.

Some non-credit programs are certified for VA benefits; veterans may ask the Certifying Official whether they can receive benefits while attending a specific non-credit program.

To be eligible to receive educational benefits from the Veterans Administration, a student must maintain satisfactory academic progress, as defined by college policies. The Veterans Certifying Official at the college will not certify a student for VA educational benefits who has been suspended because of a failure to maintain satisfactory progress. Eligibility to receive benefits will be reinstated upon readmission.

Connecticut Tuition Waiver

Veterans who meet the requirements listed under "Tuition and Fee Waivers"; including service on active duty for at least 90 days during the periods defined as war-time by state statute, are eligible for a waiver of tuition for general fund courses. The student must present a copy of DD Form 214 to the Payments Office to obtain the waiver. The waiver applies only to credit courses offered in the fall and spring semesters, and eligible veterans must pay all fees.

STUDENT SUCCESS CENTER:**Telephone: (203) 285-2090:**

The Student Success Center provides comprehensive services in an environment conducive to learning by providing the support students need to reach their full potential. The Success Center includes the following departments, programs and services: Academic Advising, New Student Advising and Registration (NSAR) Program, Counseling, and Retention and Basic Needs Services.

ACADEMIC ADVISING:**Telephone: (203) 285-2090:**

Academic advising, based in the teaching and learning mission of higher education, is a series of intentional interactions with a curriculum, a pedagogy, and a set of student learning outcomes. Academic advising synthesizes and contextualizes students' educational experiences within the frameworks of their aspirations, abilities and lives to extend learning beyond campus boundaries and timeframes (NACADA, 2006).

Academic Advising is a key component of your success at Gateway Community College. Seeking academic advising each semester will reduce the likelihood of improper course selection and delays in graduation. Students should seek advisement at the midpoint of each semester for the upcoming semester. When mid-term exams begin seek out advising. The advising session includes an interactive dialogue between advisor and advisee the covers a range of topics such as; educational goals, career goals, academic progress and school-work-family balance. At the conclusion of the session the advisor should recommend a set of courses based on this discussion and create or update your academic plan.

New Students

All new students first time freshman must attend a New Student Advising & Registration (NSAR) session. NSAR is Gateway's program to assist new students in understanding the academic world, and to register for their first semester of courses at the college. Students attending the program will:

- Register for their first semester of courses
- Receive advising to begin their college career
- Understand the nature of college instruction
- Learn how to navigate student services and enrollment
- Learn the electronic self-service tools for advising and registration

Transfer and Re-Admit Students

Students should seek their first semester advising from the Counseling & Student Success Center in N213. To schedule an appointment contact (203) 285-2090. At the advising session students will;

- Meet with a professional staff member to review previous credits taken at Gateway or other institutions (please be sure to bring unofficial transcripts from any other college besides Gateway to receive accurate advising); and,
- Receive academic advising to understand program requirements, develop an academic plan and select classes for the upcoming semester.

Continuing Students

Continuing students have different options for obtaining academic advising, however, the most common places to seek advising are; academic program coordinators, chairs and directors or generalist counselors/advisors. Students who have selected a program major should seek advising from the academic program coordinator or his/her designee. Students who are undecided or exploring several options should seek advising from a professional staff member in the Counseling and Student Success Center in Room N213. To schedule an appointment visit the continuing student advising homepage at: <http://www.gatewayct.edu/continuingadvising>

COUNSELING

Telephone: (203) 285-2090:

Professional Counselors are available to help students obtain the most from their college experience. GCC offers students comprehensive counseling services including: assistance with referrals to community resources, interventions for students in crisis, guidance on managing personal concerns that interfere with educational goals, vocational guidance, assistance with transfer to four-year institutions, and academic counseling. Counselors are available most hours the College is in session by appointment. The Counseling office provides information and activities about transferring and workshops to support academic achievement. To speak to a counselor, please contact us in room N213 or by calling (203) 285-2090.

RETENTION AND SUPPORT SERVICES:

Telephone: (203) 285-2090:

Succeeding in college requires that students address areas both inside and outside the classroom that may impact their learning. The Student Success Center offers the following comprehensive services to promote success Achievement Coaching, Basic Needs (Center for Students and Families) and Early and Academic Alert Counseling.

Achievement Coaching: Individual meetings and workshops assist students in managing college work through the identification of goals and the development of appropriate strategies. The following areas are commonly addressed through the coaching program; goal setting, learning styles, organization, note taking, time management, test taking strategies and test anxiety.

Basic Needs (Center for Student and Families): Students can access support for a variety of services aimed at addressing basic needs. The center provides the following services to students, Mobile Food Pantry, application for public benefits, heating assistance, community referrals and additional services as needed.

Early and Academic Alerts: Professional staff members respond to reports submitted by faculty specific to the student's performance in particular course. Individual meetings and workshops allow the student to explore the areas of concern and establish a plan for success including referrals to programs and services both on and off-campus.

STUDENT ACCESSIBILITY SERVICES

Telephone: (203) 285-2231

Student Disability Specialist: **Ronald Chomicz / email: rchomicz@gatewayct.edu**
Samantha Kusiak / email: skusiak@gatewayct.edu

Gateway Community College is committed to ensuring that all qualified individuals with disabilities have the opportunity to participate in our educational and employment programs and services on an equal basis. College employment and admission policies prohibit discrimination against qualified persons with disabilities.

The Student Accessibility Services office (SAS) facilitates the planning and provision of services for students with disabilities. If a student has sensory, learning, physical, medical or a mental health disability, he/she may be eligible for disability services. Students requesting services are required to provide relevant medical, psycho-educational, or mental health documentation prior to receiving services.

Due to the individualized nature of planning for and providing academic adjustments, it is essential that each eligible student meet with the Disability Specialist to discuss his/her specific needs prior to receiving academic adjustments. A student is required to request academic adjustments through the SAS office for each semester that he/she plans on receiving academic adjustments.

If you are a student who requires the use of the elevator due to a documented disability (i.e. mobility), the SAS Office encourages you to identify yourself to our office even if you do not use any other academic adjustments. By registering with the SAS office we can better assist you in the event of an elevator malfunction.

General Education Competency Courses

Competency Code	Competency Area	Courses
WCI	Written Communication I	<u>ENG* 101</u>
WC II	Written Communication II	<u>ENG* 102</u> , <u>ENG* 200</u>
SP	Social Phenomena/Knowledge/ Understanding	<u>ANT* 105</u> , <u>ECN* 101</u> , <u>ECN* 102</u> , <u>PSY* 111</u> , <u>SOC* 101</u>
QR	Quantitative Reasoning	<u>MAT* 109</u> or higher for GCC graduation <i>TAP Transfer Ticket Pathways: students must take any Math course <u>higher than 137</u></i>
SK	Scientific Knowledge & Understanding	Any course in BIO*, CHE*, EAS*, EVS*, or PHY*
SR	Scientific Reasoning	BIO*105, BIO*115, BIO*121, BIO*122, BIO*211, BIO*212, BIO*213, BIO*235, CHE*111, CHE*121, CHE*122, CHE*220, CHE*231, EAS*110, EVS*114, PHY*109, PHY* 111, PHY* 121, PHY* 122, PHY* 221, PHY* 222
AD	Aesthetic Dimensions	ART*101, ART*102, ENG*221, ENG*222, ENG*231, ENG*232, ENG*245, ENG*246, ENG*271, ENG*272, MUS*101, MUS*141, MUS*150
OC	Oral Communications	BBG* 210, COM* 173, COM* 174, HSE* 212
HK	Historial Knowledge/ Understanding	HIS* 101, HIS* 102, HIS* 201, HIS* 202
CALT	Critical Analysis/Logical Thinking	AUT*226, BES*218, BFN*110, BME*212, DMS*223+, ENG*221, ENG*222, ENG*231, ENG*232, ENG*245, ENG*246, ENG*254, EXS*227, HUM*125, IDS106, IDS 112, NMT*223+, NTR*214+, NUR*201+, PHL*101, PHL*111, PHL*131, RAD*206+, RDT*126+
GENERAL EDUCATION I (Transfer Tickets)	Creativity	ART* 109, ART* 111, ART*131, ART* 141, ART* 176, ENG* 281, MUS* 141, MUS*150
GENERAL EDUCATION II (Transfer Tickets)	Global Knowledge	ANT* 105, ECN* 101, ECN* 102, GEO* 101, HUM* 125, POL* 102

+ Designates Selective Admission Courses

DEGREE & CERTIFICATE PROGRAMS

AA - Associate in Arts

AS - Associate in Science

AAS - Associate in Applied Science

C - Certificate

TITLE	TYPE OF PROGRAM	PAGE
Accounting		
• Accountant's Assistant	C	62
• Bookkeeping	C	62
• Business Administration: Accounting Option	AS	63
• CSCU Pathway Transfer Degree: Business Studies: Accounting	AA	65
Allied Health		
• Health Career Pathways	C	67
Anthropology		
No active programs available.		68
Art & Graphics		
• CSCU Pathway Transfer Degree: Art Studies	AA	68
• Studio Art	AS	71
• Studio Art: Graphic Design Option	AS	73
• Web Design	C	74
Automotive - General (CARS)		
• Automotive Technology: Comprehensive Automotive Repair and Service (CARS)	C	75
• Automotive Technology: Comprehensive Automotive Repair and Service (CARS)	AAS	76
Automotive - General Motors (ASEP)		
• Automotive Technology: General Motors - Automotive Service Education (ASEP)	AAS	78
• Automotive Technology: General Motors	C	80
Automotive - Honda PACT		
• Automotive Technology: Honda PACT	C	82
• Automotive Technology: Honda PACT	AAS	83
Biology		
• CSCU Pathway Transfer Degree: Biology Studies	AA	85
Biomedical Engineering Technology		
• Biomedical Engineering Technology	AS	87
Business - Finance		
• CSCU Pathway Transfer Degree: Business Studies: Finance	AA	89
Business - General		
• Business Administration	C	91
• Business Administration	AS	92
• CSCU Pathway Transfer Degree: Business Studies: Business Administration	AA	93
• CSCU Pathway Transfer Degree: Business Studies: Business	AA	95

Business - Management		
• Business Administration: Management Option	AS	97
• CSCU Pathway Transfer Degree: Business Studies: Management	AA	99
• Management	C	101
• Public Utility Management	AS	102
Business - Marketing		
• Business Administration: Marketing Option, AS	AS	104
• CSCU Pathway Transfer Degree: Business Studies: Marketing	AA	106
Business Office Technology		
• Business Office Technology: Administrative Assistant	C	108
• Business Office Technology: Administrative Assistant Option	AS	109
• Business Office Technology: Customer Service Technology	C	111
• Business Office Technology: Electronic Health Records and Coding Option	AS	112
• Business Office Technology: Legal Administrative Assistant Option	AS	114
• Business Office Technology: Medical Administrative Assistant	C	116
• Business Office Technology: Medical Administrative Assistant Option	AS	117
• Business Office Technology: Office Applications Skills Update	C	119
• Business Office Technology: Paralegal Option	AS	120
Chemistry		
• CSCU Pathway Transfer Degree: Chemistry Studies	AA	121
Clean Water Management		
• Clean Water Management	C	123
Communications		
• CSCU Pathway Transfer Degree: Communication Studies	AA	124
Computer Aided Drafting (CAD)		
• Computer Assisted Drafting	C	126
Computer Engineering Technology		
• Computer Engineering Technology	AS	127
Computer Science		
• Computer Science	C	129
• Computer Science	AS	130
• CSCU Pathway Transfer Degree: Computer Science Studies	AA	132
Computer Science Applications		
No active programs available.		133
Computer Science Technology		
• Computer Science: Data Security Specialist Option	AS	134
• Computer Science: Mobile Application Development Option	AS	136
• Computer Science: Networking Administrator	C	138
• Computer Science: Networking	C	139
• Computer Science: Networking Option	AS	140

Connecticut College of Technology		
• College of Technology: Engineering Science	AS	142
• College of Technology: Technology Studies	AS	144
Criminal Justice		
• CSCU Pathway Transfer Degree: Criminology Studies	AA	147
Culinary Arts		
• Culinary Arts	C	149
• Professional Baker	C	150
Dental Hygiene		
• Pre-Dental Hygiene Transfer Compact: Liberal Arts & Sciences	AA	151
Diagnostic Medical Sonography		
• Diagnostic Imaging and Therapy: Diagnostic Medical Sonography	AS	153
Drafting		
No active programs available.		155
Drug and Alcohol Recovery Counselor		
• Drug and Alcohol Recovery Counselor	C	156
• Drug and Alcohol Recovery Counselor	AS	157
Early Childhood - Special Education		
• Early Childhood Special Education	C	160
• Early Childhood Special Education	AS	161
• Family Support and Respite Care	C	164
• Infant and Toddler Development	C	164
Early Childhood Education		
• CSCU Pathway Transfer Degree: Early Childhood Teacher Credential Studies-ECTC Level A,	AA	165
• Early Childhood Education Career Path	AS	167
• Early Childhood Education	AS	169
• Early Childhood Education: Administration and Leadership	C	174
• Early Childhood Education: Child Development Associate Credential	C	175
• Early Childhood Education: Continued Studies Transfer Path	AS	176
• Teacher Assistant	C	178
Earth Science		
No active programs available.		179
Economics		
No active programs available.		179
Electrical Engineering Technology		
• Electrical Engineering Technology	AS	179
Engineering Science		
No active programs available.		181
Engineering Technology		
• Computer Servicing	C	181
• Electronics Technician	C	182

English		
• CSCU Pathway Transfer Degree: English Studies	AA	182
English as a Second Language		
No active programs available.		185
Entrepreneurial Studies		
• Entrepreneurial Studies	C	185
• Entrepreneurial Studies	AS	186
Environmental Engineering Technology		
No active programs available.		188
Environmental Science		
• Environmental Science and Toxicology	C	188
• Environmental Science and Toxicology	AS	190
Exercise Science		
• CSCU Pathway Transfer Degree: Exercise Science Studies	AA	192
• Exercise Science and Wellness	AS	193
• Fitness Specialist	C	195
Fire Administration		
• Fire Technology and Administration	AS	197
• Firefighter 1 & 2	C	199
First Year Experience		
No active programs available.		199
Foreign Languages		
• CSCU Pathway Transfer Degree: French Studies	AA	200
• CSCU Pathway Transfer Degree: Italian Studies	AA	202
• CSCU Pathway Transfer Degree: Spanish Studies	AA	204
General Studies		
• General Studies	AS	206
Geography		
No active programs available.	AA	207
History		
• CSCU Pathway Transfer Degree: History Studies	AA	208
Hospitality Management		
• Hotel Management	AS	210
• Meetings, Conventions and Special Events Management	C	212
• Restaurant and Food Service Management	AS	213
Human Services		
• CSCU Pathway Transfer Degree: Social Work Studies	AA	215
• Gerontology	C	217
• Human Services Career	AS	217
• Human Services	C	219
• Human Services Transfer	AS	220
• Human Services: Gerontology Option	AS	221
• Therapeutic Recreation	C	222
• Youth Worker	C	223

Interdisciplinary Peace, Collaboration, & Conflict		
• Interdisciplinary Peace, Collaboration, & Conflict	C	224
Liberal Arts and Sciences		
• Liberal Arts and Sciences	AA	225
Manufacturing Engineering Technology		
• Manufacturing Engineering Technology	AS	228
Mathematics		
• CSCU Pathway Transfer Degree: Mathematics Studies	AA	230
Mechanical Engineering Technology		
• Mechanical Engineering Technology	AS	232
• Quality Control	C	234
Music		
No active programs available.		234
Nuclear Medicine Technology		
• Diagnostic Imaging and Therapy: Nuclear Medicine Technology	AS	235
• Nuclear Medicine Technology	C	238
Nursing		
• Nursing	AS	240
Nutrition & Dietetics		
• Nutrition and Dietetics	AS	243
Philosophy		
No active programs available.		245
Physics		
• CSCU Pathway Transfer Degree: Physics Studies	AA	245
Political Science		
• CSCU Pathway Transfer Degree: Political Science Studies	AA	247
Psychology		
• CSCU Pathway Transfer Degree: Psychology Studies	AA	249
Radiation Therapy		
• Diagnostic Imaging and Therapy: Radiation Therapy	AS	251

Radiography		
• Diagnostic Imaging and Therapy: Radiography	AS	254
Radiologic Science Technology		
No active programs available.		257
Railroad Engineering Technology		
• Railroad Engineering Technology	AS	257
• Railroad Engineering Technology: Signaling & Communications Option	AS	260
Retail Management/Fashion Merchandising/Entrepreneurial		
• Retail Management/Fashion Merchandising	C	261
• Retail Management/Fashion Merchandising	AS	262
Science		
• Natural Sciences and Mathematics	AS	263
Sign Language		
No active programs available.		264
Sociology		
• CSCU Pathway Transfer Degree: Sociology Studies	AA	265
Technology		
• Aviation Maintenance Technology	AS	267
• Solar Technology	C	268
Water Management Technology		
• Water Management	C	269

ACCOUNTING

Accountant's Assistant Certificate

This program is for the mature individual who has previous office experience and is seeking additional skills. Upon completion of this program, the Accountant's Assistant can assume "full charge" of a set of books for accounts of small or medium businesses and nonprofit organizations. The Accountant's Assistant performs duties under the supervision and direction of internal and/or public accountants. For more information, call the Business Department Chairperson, Richard Rees, at (203) 285-2178 or e-mail at (rrees@gatewayct.edu).

Program Requirements

- ACC* 113 - Principles of Financial Accounting I 3 credits
- ACC* 117 - Principles of Managerial Accounting 3 credits
- ACC* 125 - Accounting Computer Application I 3 credits
- ACC* 241 - Federal Taxes I 3 credits
- CSA*135 - Spreadsheet Applications (Excel) 3 credits

Total Program Credits: 15

Bookkeeping Certificate

This 30 hour certificate program trains students in a wide variety of office skills and prepares them for immediate entry into the job market. For more information, call the Business Department Chairperson, Richard Rees, at (203) 285-2178 or e-mail at (rrees@gatewayct.edu).

First Semester

- ACC* 100 - Basic Accounting 3 credits or
- ACC* 113 - Principles of Financial Accounting I 3 credits
- BOT* 111 - Keyboarding for Information Processing I 3 credits
- BOT*137- Word Processing Applications (Word) 3 credits
- CSA*135 - Spreadsheet Applications (Excel) 3credits

Total Semester Credits: 12

Second Semester

- ACC* 125 - Accounting Computer Application I 3 credits
- BOT* 220 - Computerized Communication
(Microsoft PowerPoint, e-mail, Internet) 3 credits
- BOT* 251 - Administrative Procedures 3 credits
- CSA* 140 - Database Applications (Access) 3 credits

Total Semester Credits: 12

Total Program Credits: 24 Business

Administration: Accounting Option, AS

The complexity of society requires trained personnel to interpret and manage the fiscal aspects of business and industry. The curriculum of the Business Administration: Accounting Option is designed to be either a transfer program or a career program. Career-oriented students are prepared for entry-level positions in public and private accounting. Students may also consider transferring credit earned in this program toward a Bachelor's degree.

Program Outcomes

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

- Apply generally accepted accounting principles in the recording and reporting of financial information Describe accounting system procedures and techniques
- Analyze and use financial reports for decision-making
- Explain the use of financial information in controlling and evaluating performance
- Communicate effectively using the vocabulary of financial and managerial accounting and economics

Suggested Course Sequence

First Semester

- | | |
|---|-----------------------|
| • ACC* 113 - Principles of Financial Accounting I | 3 credits |
| • BBG* 231 - Business Law I | 3 credits |
| • CSA*135 - Spreadsheet Applications (Excel) | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT*137- Intermediate Algebra | 3 credits (or higher) |

Total Semester Credits: 15

Second Semester

- | | |
|--|--------------|
| • ACC* 117 - Principles of Managerial Accounting | 3 credits |
| • BBG* 210 - Business Communication | 3 credits |
| • BMG* 202 - Principles of Management | 3 credits |
| • ECN* 101 - Macroeconomics | 3 credits |
| or | |
| • ECN* 102 - Microeconomics | 3 credits |
| • BES* 218 - Entrepreneurship | 3 credits or |
| • BFN* 110 - Personal Finance | 3 credits or |
| • IDS 106 - Critical Thinking - Business | 3 credits |

Total Semester Credits: 15

Third Semester

- ACC* 125 - Accounting Computer Application 3 credits
- ECN* 102 - Microeconomics 3 credits
- ENG* 102 - Literature and Composition 3 credits or
- ENG* 200 - Advanced Composition 3 credits
- MAT* 166 - Principles of Business Statistics 3 credits
- Choose one course in BIO*, CHE*, EAS*, EVS*, PHY* (Gen Ed - SK: Scientific Knowledge and Understanding) **3 credits**

Total Semester Credits: 15

Fourth Semester

- ACC* 241 - Federal Taxes I 3 credits
- BBG* 232 - Business Law II 3 credits
- BFN* 201 - Principles of Finance 3 credits
- BMK* 201 - Principles of Marketing 3 credits
- Business (Elective) 3 credits

Total Semester Credits: 15

Total Program Credits: 60-61

CSCU Pathway Transfer Degree: Business Studies: Accounting,A.A.

The Business Studies Associate Degree serves as the single community college degree to all of the State University and Charter Oak State College business majors listed below. You will declare your specific field when you transfer.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Accounting, B.S.
	Finance, B.S.
	Management, B.S.
	Marketing, B.S.
At Eastern Connecticut State University	Accounting, B.S.
	Business Administration, B.S.
	Finance, B.S.
At Southern Connecticut State University	Accounting, B.S.
	Business Administration - Business Economics Concentration, B.S.
	Business Administration - Business Finance Concentration, B.S.
	Business Administration - Management, B.S.
	Marketing, B.S.
At Western Connecticut State University	Accounting, B.S.
	Business Management - Financial Management Option, B.B.A.
	Business Management - Supervisory Management Option, B.B.A.
	Marketing, B.B.A.
At Charter Oak State College	Business Administration, B.A.

First Semester

- ACC* 113 - Principles of Financial Accounting I 3 credits ^{2,3}
- BBG* 231 - Business Law I 3 credits ²
- CSA*135 - Spreadsheet Applications (Excel) 3 credits
- ENG* 101 - Composition 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits

Total Semester Credits: 15-16

Second Semester

- ACC* 117 - Principles of Managerial Accounting 3 credits ^{2,3}
- BBG* 210 - Business Communication 3 credits
(this course may be used to fulfill the Oral Communication requirements - see the fourth semester) ¹
- BMG* 202 - Principles of Management 3 credits ²
- ECN* 101 - Macroeconomics 3 credits ^{1,3}
- Choose one course in Critical Analysis/Logical Thinking 3 credits (Recommended: BES* 218 or BFN* 110)

Total Semester Credits: 15

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- ECN* 102 - Microeconomics 3 credits ^{1,3}
- MAT* 166 - Principles of Business Statistics 3 credits ^{1,3}
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- BFN* 201 - Principles of Finance 3 credits ²
- BMK* 201 - Principles of Marketing 3 credits ²
- MAT*158 - Functions, Graphs, & Matrices 3 credits
- Note: MAT 230 Applied Calculus with a Modeling Approach and MAT 254 Calculus I will also meet this requirement. 1,3
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Oral Communications 3 credits (if you took BBG 210 Business Communication to fulfill this requirement, then take an additional 3 credits. You are recommended to use those credits to take BMG 220 Human Resources Management)

Total Semester Credits: 15

Total Program Credits: 61-62

Notes:

- ¹ Must have a C-or above
- ² Must have a C or above
- ³ Must have a cumulative 2.5 or above
- + A minimum of 2.50 cumulative GPA is required for Central

Total Program Credits: 61-62

ALLIED HEALTH

Health Career Pathways Certificate

The Health Career Pathways Certificate program is designed to assist students in achieving success in health care programs. Students will be provided with the foundation necessary for health care professions. Credits from this program may be applied toward health care program requirements within Connecticut's Community College system. However, completion of this program does not guarantee an automatic acceptance into any health care program. Students are responsible for verifying specific requirements for their program of interest.

For more information on the Health Career Pathways program, please contact Mary Beth Banks, Enrollment Services Assistant at 203.285.2388 or e-mail mbanks@gatewayct.edu.

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

- Identify a variety of career opportunities and roles available in health care professions
- Meet most requirements for entrance into health care programs
- Demonstrate an understanding of the impact of psychological principles and how they relate to the health care field
- Effectively utilize and interpret medical terminology
- Demonstrate critical thinking, logical reasoning and problem solving skills
- Demonstrate competence in written and oral communication
- Use and apply scientific methods

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • BIO* 105 - Introduction to Biology | 4 credits |
| or | |
| • BIO* 121 - General Biology I | 4 credits |
| • ENG* 101 - Composition 3 credits | |
| • HLT* 103 - Investigations in Health Careers | 3 credits |
| • MAT* 137 - Intermediate Algebra 3 credits | |

Total Semester Credits: 13

Second Semester

- | | |
|---------------------------------------|-----------|
| • BIO* 211 - Anatomy and Physiology I | 4 credits |
| • CHE* 111 - Concepts of Chemistry | 4 credits |

Total Semester Credits: 8

Third Semester

- | | |
|--|-----------|
| • BIO* 212 - Anatomy and Physiology II | 4 credits |
| • PSY* 111 - General Psychology I | 3 credits |

Total Semester Credits: 7

Total Program Credits: 28

ANTHROPOLOGY

No active programs available.

ART & GRAPHICS

CSCU Pathway Transfer Degree: Art Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Art, B.A. **
At Eastern Connecticut State University	Visual Arts, B.A. - Art History Concentration #
	Visual Arts, B.A. - Digital Art and Design Concentration ^
	Visual Arts, B.A. - Painting and Drawing Concentration #
	Visual Arts, B.A. - Sculpture Concentration #
	Visual Arts, B.A. - Printmaking Concentration #
At Southern Connecticut State University	Studio Art, B.A. @
	Studio Art, B.S. - Ceramics Concentration +
	Studio Art, B.S. - Graphic Design Concentration +
	Studio Art, B.S. - Jewelry and Metals Concentration +
	Studio Art, B.S. - Painting Concentration +
	Studio Art, B.S. - Photography Concentration +
	Studio Art, B.S. - Printmaking Concentration +
	Studio Art, B.S. - Sculpture Concentration +
At Western Connecticut State University	Art, B.A. %

Here is the recommended course of study for the Art Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances, you will be able to choose the specific course you will take from within a category.

In order to graduate and be guaranteed admission to a State University or to Charter Oak State College, you must earn an overall 2.0 grade point average

**For admission to CCSU's Art Program: All art majors must submit a portfolio of works for consideration by the art faculty. Students whose portfolios do not meet standards will be required to take supplemental courses. No student will be allowed to proceed on to a 300-level (or higher) studio course without a successful portfolio review. Art majors must complete 15 credits in courses at the 300-level or above. Students can choose 18-credits of directed electives OR a minor in another department.

For admission to ECSU's Visual Arts Concentrations in Art History, Painting & Drawing, Sculpture, or Printmaking: These concentrations do not require a portfolio

^ For admission to ECSU's Visual Arts Concentration in Digital Art and Design: Students interested in the digital art and design concentration are required to submit a portfolio for admission to the program after completing the two Digital Art Techniques courses: ART 122 (or CC equivalent) and ART 124. The portfolio will include 10 samples of the student's work (two examples each from Illustrator, InDesign, Photoshop and Dreamweaver and two samples from either Drawing I or 2 -Dimensional Design). Portfolios must be carefully prepared according to guidelines available in the Visual Arts Department office. Portfolios must be submitted and program admission approved before students can enroll in 300-level design courses. Grades of less than 2.0 (C) will not count toward the major.

@ For admission to SCSU Studio Art B.A.: (1) All majors in studio art must earn grades of "C" or higher in courses counted toward the studio art major. (2) Transfer students majoring in the Studio Art B.A. must take at least 50 percent (half) of their studio art credits at Southern. This means only the pathway's 5 minimum required studio courses (ART 111, 121, 122, plus two course from line 35) will count towards the Studio Art B.A.; additional studio art courses will transfer as unrestricted free electives. (3) Transfer students who enter with 60 to 89 credits are required to pass two W-courses.

+ For admission to SCSU's Studio Art B.S. with Concentrations in Ceramics, Graphic Design, Jewelry/Metals, Painting, Photography, Printmaking, or Sculpture: (1) All majors in studio art must earn grades of "C" or higher in 4 courses counted toward the studio art major. (2) Transfer students majoring in Studio Art must take at least 50 percent (half) of their studio art credits at Southern. (3) Transfer students who enter with 60 to 89 credits are required to pass two W-courses

% For admission to WCSU's Art Program: 1. All art majors must submit a portfolio of works for consideration by the art faculty. Students whose portfolios do not meet standards will be required to take supplemental courses. No student will be allowed to proceed on to a 300-level (or higher) studio course without a successful portfolio review. 2. Students must earn a minimum of "C" grade in each Art department course that counts toward the major. Art courses with grades below "C" must be retaken to satisfy this requirement.

Suggested Course Sequence

First Semester

- ART* 111 - Drawing I 3 credits
- ENG* 101 - Composition 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one Unrestricted Elective*

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take a math course that prepares you for the required level of math in your program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Second Semester

- ART* 101 - Art History I 3 credits
- ART* 121 - Two Dimensional Design 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- Choose one course in Quantitative Reasoning 3-4 credits

Total Semester Credits: 15-17

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available on October 1.

- ART* 102 - Art History II 3 credits
- ART* 122 - Three Dimensional Design 3 credits
- Choose one course in Social Phenomena 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Choose one Unrestricted Elective*

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-16

Fourth Semester

- Choose one course in Oral Communication 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Unrestricted Elective 0 - 3 credits *

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take a math course that prepares you for the required level of math in your program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

- Choose 2 or 3 courses with no more than one course from each group below (1 - 6) 6-9 credits
- ART* 109 - Color Theory 3 credits
- or**
- ART* 151 - Painting I 3 credits
- ART* 112 - Drawing II 3 credits
- ART* 131 - Sculpture I 3 credits
- ART* 141 - Photography I 3 credits
- or**
- ART* 142 - Photography II 3 credits
- ART* 167 - Printmaking I 3 credits
- GRA* 151 - Graphic Design I 3 credits
- (this course has a pre-requisite of GRA* 149; this will count as an unrestricted elective)

Total Semester Credits: 15

Total Program Credits: 61

Studio Art, AS

The Studio Art program provides a strong basic foundation in the visual arts along with a background in general education. Furthermore, it prepares students for continued study or for employment by enabling them to build a portfolio of artwork that exhibits their proficiency in Studio Art. For students seeking greater personal and creative fulfillment, this program also promotes art as an avocation. For more information, call Nicholas Halko at (203) 285-2241 or e-mail at (nhalko@gatewayct.edu).

Program Outcomes

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

- Demonstrate skills, techniques, and manipulation of tools and equipment necessary for studio or graphic arts as described in the course syllabi
- Demonstrate an understanding of art and design concepts and problem solving as described in the course syllabi
- Compile a portfolio of work reflecting knowledge, techniques, and creativity gained during a student's course of study
- Demonstrate an understanding of the process of creating a finished work of art or design concept
- Communicate and critique using specific art vocabulary

Suggested Course Sequence

First Semester

- | | |
|-------------------------------------|-----------|
| • ART* 109 - Color Theory | 3 credits |
| • ART* 111 - Drawing I | 3 credits |
| • ART* 121 - Two Dimensional Design | 3 credits |
| • ART* 151 - Painting I | 3 credits |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|---|-----------|
| • ART* 112 - Drawing II | 3 credits |
| • ART* 152 - Painting II | 3 credits |
| • ENG* 102 - Literature and Composition | 3 credits |
| or | |
| • ENG* 200 - Advanced Composition | 3 credits |
| • GRA* 149 - Introduction to Adobe Creative Suite | 3 credits |
| • Choose one course in Social Phenomena (Gen Ed - SP: Social Phenomena/Knowledge/Understanding) 3 credits | |

Total Semester Credits: 15

Third Semester

- ART* 101 - Art History I 3 credits
- ART* 131 - Sculpture I 3 credits
- ART* 141 - Photography I 3 credits
- MAT* 109 - Quantitative Literacy 3 credits (or higher)
- Restricted (Elective): Studio Art (see below) 3 credits

Total Semester Credits: 15

Fourth Semester

- ART* 102 - Art History II 3 credits
- ART* 122 - Three Dimensional Design 3 credits
- Choose one course in Scientific Knowledge
(Gen Ed - SK: Scientific Knowledge & Understanding) 3-4 credits
- Choose one course in CALT
(Gen Ed - CALT: Critical Analysis/Logical Thinking) 3 credits
- Restricted (Elective): Studio Art (see below) 3 credits

Total Semester Credits: 15-16

Total Program Credits: 60-61

- Studio Art Restricted Electives:
- ART* 142 - Photography II 3 credits
- ART* 176 - Digital Video Art I 3 credit

Studio Art: Graphic Design Option, AS

The Studio Art: Graphic Design Option program provides a strong basic foundation in the visual arts along with a background in general education. Furthermore, it prepares students for continued studies or employment by enabling them to build a portfolio of artwork that exhibits a degree of proficiency in graphic design. For students seeking greater personal and creative fulfillment, this program will also promote art as an avocation. For more information, call Nicholas Halko at (203) 285-2241 or e-mail at (nhalko@gatewayct.edu).

Program Outcomes

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

- Demonstrate skills, techniques, and manipulation of tools and equipment necessary for studio or graphic arts as described in the course syllabi
- Demonstrate an understanding of art and design concepts and problem solving as stated in the course syllabi
- Compile a portfolio of work reflecting knowledge, techniques, and creativity gained during a student's course of study
- Demonstrate an understanding of the process of creating a finished work of art or design concept
- Communicate and critique using specific art vocabulary

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • GRA* 149 - Introduction to Adobe Creative Suite | 3 credits |
| • GRA* 151 - Graphic Design I | 3 credits |
| • ART* 111 - Drawing I | 3 credits |
| • ART* 121 - Two Dimensional Design | 3 credits |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|--|--------------|
| • ART* 151 - Painting I | 3 credits |
| • ENG* 102 - Literature and Composition | 3 credits or |
| • ENG* 200 - Advanced Composition | 3 credits |
| • GRA* 252 - Graphic Design II | 3 credits |
| • Graphic Design (Restricted Elective) | 3 credits |
| • Choose one course in Social Phenomena
(Gen Ed - SP: Social Phenomena/Knowledge/Understanding) | 3 credits |

Total Semester Credits: 15

Third Semester

- | | |
|---------------------------------------|-----------------------|
| • ART* 261 - Web Design I | 3 credits |
| • ART* 109 - Color Theory | 3 credits |
| • ART* 122 - Three Dimensional Design | 3 credits |
| • ART* 141 - Photography I | 3 credits |
| • MAT* 109 - Quantitative Literacy | 3 credits (or higher) |

Total Semester Credits: 15

Fourth Semester

- ART* 101 - Art History I 3 credits
- or**
- ART* 102 - Art History II 3 credits
- ART* 131 - Sculpture I 3 credits
- Graphic Design (Restricted Elective) 3 credits
- Choose one course in Scientific Knowledge (Gen Ed - SK: Scientific Knowledge & Understanding) 3-4 credits
- Choose one course in CALT (Gen Ed - CALT: Critical Analysis/Logical Thinking) 3 credits

Total Semester Credits: 15-16

Total Program Credits: 60-61

Restricted Electives Graphic Design:

- ART* 112 - Drawing II 3 credits
- ART* 142 - Photography II 3 credits
- ART* 176 - Digital Video Art I 3 credits
- GRA* 231 - Digital Imaging (Photoshop) 3 credits
- GRA* 237 - Computer Graphics (Adobe Illustrator) 3 credits
- GRA* 241 - Digital Page Design I (InDesign) 3 credits

Web Design Certificate

The Web Design certificate can be used as a stepping stone to the Studio Art/Graphic Design Option degree program. It will prepare the student for transfer onto a Baccalaureate Degree Program at a four year institution. It can also be helpful in gaining employment or to further enhance current skills for those who are already employed. Web Design is becoming more and more necessary in small business and corporate settings and a skilled web designer must be in place to accommodate this need. For more information, call Nicholas Halko at (203) 285-2241 or e-mail at (nhalko@gatewayct.edu).

Learning Outcomes

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

- Create industry-standard web publication
- Recognize typography standards for web publication
- Discern color functions optimized for web publication
- Analyze and structure XHTML code and CSS for web publication
- Recognize current standards for optimizing graphics for electronic distribution
- Utilize Adobe Illustrator and Photoshop to process graphics for web use

Program Requirements

- GRA* 149 - Introduction to Adobe Creative Suite 3 credits
- GRA* 151 - Graphic Design I 3 credits
- GRA* 231 - Digital Imaging (Photoshop) 3 credits
- GRA* 237 - Computer Graphics (Adobe Illustrator) 3 credits
- GRA* 252 - Graphic Design II 3 credits
- GRA* 261 - Web Design I 3 credits

Total Program Credits: 18

AUTOMOTIVE - GENERAL (CARS)

Automotive Technology:

Comprehensive Automotive Repair and Service (CARS) Certificate

The objective of the Comprehensive Automotive Repair and Service (CARS) Certificate is to educate those seeking employment in the field of automotive technology. It will prepare students for entry-level employment as Automotive Technicians. The Automotive Technician field has been in very high demand in the State, and it is growing. The intent of the program is to meet the need for technicians in the college service area. This program furthers the college's mission to "respond to the changing academic, occupational, technological needs" by offering "a broad range of credit (technical and career) programs and courses leading to transfer, employment and lifelong learning." The automotive curriculum is designed to meet all ASE Accredited Training Program requirements for national accreditation.

Program Outcomes

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

- Meet all ASE Accredited Training Program required outcomes for MAST certification
- Demonstrate workplace skills related to the occupation, including but not limited to resume preparation, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics, and teamwork
- Apply knowledge of theory and safety to accomplish certain tasks related to the occupation
- Identify and use appropriate tools, testing, and measurement equipment to accomplish certain tasks related to the occupation
- Use current reference and training materials from accepted industry publications and standards to accomplish specific tasks
- Demonstrate knowledge and understanding of all fundamental automotive concepts as outlined by ASE Accredited Training Program guidelines.

Each student accepted into the program must purchase or possess the tools required for the program, have a valid driver's license, and wear an automotive uniform while attending classes. For more information, call Scott McFarland at (203) 285-2405 or e-mail at (smcfarland@gatewayct.edu).

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • AUT* 132 - Automotive Systems & Shop Practices | 3 credits |
| • AUT* 136 - Steering and Suspension Systems | 3 credits |
| • AUT* 138 - Braking Systems | 3 credits |
| • AUT* 231 - Engine Management Systems | 3 credits |
| • AUT* 233 - Manual Drivetrain Systems | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|---|-----------|
| • AUT* 130 - Power Plant | 3 credits |
| • AUT* 134 - Electrical/Electronic Systems | 3 credits |
| • AUT* 235 - Automatic Drivetrain Systems | 3 credits |
| • AUT* 237 - Climate Control & Restraint Systems | 3 credits |
| • AUT* 238 - Advanced Electrical Diagnosis & Performance Tuning | 3 credits |
| • AUT* 270 - Practicum II | 2 credits |
| or | |
| • AUT* 272 - Practicum III | 3 credits |

Total Semester Credits: 17-18

Summer Semester

- | | |
|--------------------------|-----------|
| • AUT* 170 - Practicum I | 4 credits |
|--------------------------|-----------|

Total Semester Credits: 4

Total Program Credits: 36-37

Automotive Technology: Comprehensive Automotive Repair and Service (CARS), AAS

The objective of the Comprehensive Automotive Repair and Service (CARS) Degree Program is to educate those seeking employment in the field of automotive technology. It will prepare students for entry-level employment as Automotive Technicians. The Automotive Technician field has been in very high demand in the State, and it is growing! The intent of the program is to meet the growing need for technicians in the college service area. This program furthers the college's mission to "respond to the changing academic, occupational, technological needs" by offering "a broad range of credit (technical, career, and academic) programs and courses leading to transfer, employment and lifelong learning." The automotive curriculum is designed to meet all ASE Accredited Training Program requirements for national accreditation. For more information, contact Scott McFarland, Program Coordinator at (203) 285-2405 or e-mail at (smcfarland@gatewayct.edu).

Program Outcomes

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

- Meet all ASE Accredited Training Program required outcomes for MAST certification
- Demonstrate workplace skills related to the occupation, including but not limited to resume preparation, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics, and teamwork
- Apply knowledge of theory and safety to accomplish certain tasks related to the occupation
- Identify and use appropriate tools, testing, and measurement equipment to accomplish certain tasks related to the occupation
- Use current reference and training materials from accepted industry publications and standards to accomplish specific tasks
- Demonstrate knowledge and understanding of all fundamental automotive concepts as outlined by ASE Accredited Training Program requirements.

Suggested Course Sequence

First Semester

- | | |
|--|-----------------------|
| • AUT* 132 - Automotive Systems & Shop Practices | 3 credits |
| • AUT* 136 - Steering and Suspension Systems | 3 credits |
| • AUT* 138 - Braking Systems | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 109 - Quantitative Literacy | 3 credits (or higher) |

Total Semester Credits: 15

Second Semester

- | | |
|--|--------------------|
| • AUT* 130 - Power Plant | 3 credits |
| • AUT* 134 - Electrical/Electronic Systems | 3 credits |
| • Choose one course in CALT
(Gen Ed - CALT: Critical Analysis/Logical Thinking) | 3 credits |
| • Choose one course in AD, HK, OC, SR | 3 credits (Gen Ed) |

Total Semester Credits: 12

Summer Semester

- AUT* 170 - Practicum I 4 credits

Total Semester Credits: 4

Third Semester

- AUT* 231 - Engine Management Systems 3 credits
- AUT* 233 - Manual Drivetrain Systems 3 credits
- AUT* 270 - Practicum II 2 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- Choose one course in Social Phenomena (Gen Ed - SP: Social Phenomena/Knowledge/Understanding) 3 credits

Total Semester Credits: 14

Fourth Semester

- AUT* 235 - Automatic Drivetrain Systems 3 credits
- AUT* 237 - Climate Control & Restraint Systems 3 credits
- AUT* 238 - Advanced Electrical Diagnosis & Performance Tuning 3 credits
- AUT* 272 - Practicum III 3 credits
- Choose one course in Scientific Knowledge (Gen Ed - SK: Scientific Knowledge & Understanding) 3-4 credits

Total Semester Credits: 15-16

Total Program Credits: 60-61

AUTOMOTIVE - GENERAL MOTORS (ASEP)

Automotive Technology:

General Motors - Automotive Service Education (ASEP), AAS

The Automotive Service Education Program (ASEP) was designed by General Motors and Gateway Community College. This unique, cooperative program educates students for a challenging career in a General Motors and AC Delco sponsored automotive repair facilities. Through a special arrangement, students attend classes and labs at the North Haven Campus and then work full-time at a sponsoring GM or AC Delco facility. Students in the ASEP program receive state-of-the-art instruction on General Motors' products. Vehicles, parts, engines, specialized tools, service information, and materials are provided by General Motors Corporation. The automotive curriculum is designed to meet all ASE Accredited Training Program requirements for national accreditation. For more information, contact Daniel Fuller, Program Coordinator at (203) 285-2370 or e-mail at (dfuller@gatewayct.edu).

Program Outcomes

Upon successful completion of all program requirements, the graduate will:

- Meet all ASE Accredited Training Program required outcomes for MAST certification
- Demonstrate workplace skills related to the occupation, including but not limited to resume preparation, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics, and teamwork
- Apply knowledge of theory and safety to accomplish certain tasks related to the occupation
- Identify and use appropriate tools, testing, and measurement equipment to accomplish certain tasks related to the occupation
- Use current reference and training materials from accepted industry publications and standards to accomplish specific tasks
- Receive corporate credit for web based and embedded classroom / laboratory training in the GM Common Training Web Site
- Demonstrate knowledge and understanding of all fundamental automotive concepts as outlined by ASE Accredited Training Program requirements.

Students seeking acceptance into the Automotive Technology (GM-ASEP) A.A.S. degree program will have to apply to the program by April 20 prior to their enrollment in the program. Requirements to apply are:

1. Complete the program application form
2. Complete all developmental mathematics courses (if necessary) or be eligible for MAT* 115
3. Complete all developmental English courses (if necessary) or be eligible for ENG* 101
4. Complete AUT* 112, AUT* 132, or test out of an automotive specification course in accordance to college policy
5. Complete the Automotive Programs' placement exam if required
6. Interview with the GM ASEP Program Coordinator to verify eligibility
7. Have a valid driver's license issued by one of the 50 states in United States that does not have any restrictions that would prohibit the student from operating an automotive on public roads

Selection of students will be completed by June 1 and students will be notified shortly after. Once students are selected for enrollment into the program, they will have until August 20 to find a sponsor for their internships at a GM automotive dealership or AC Delco repair facility to remain in the degree program. Sponsorship of students is a requirement throughout the program to include at the time of graduation from Gateway Community College. Upon completion of the ASEP program, students will receive an Associate in Applied Science degree in Automotive Technology from Gateway Community College. The program offers opportunities for future specialization and advancement to management. This program has been evaluated by the National Institute for Automotive Service Excellence (ASE) and is certified as an ASE Accredited Training Program. Students are encouraged to take the National Institute for Automotive Service Excellence (ASE) exams for each of the eight automotive subject areas for national certification.

Suggested Course Sequence

First Semester

- AUT* 112 - GM Specifications 2 credits
- AUT* 116 - GM Suspension and Steering 3 credits
- AUT* 118 - GM Braking Systems 3 credits
- AUT* 161 - GM Internship 1A 1 credits
- ENG* 101 - Composition 3 credits

Total Semester Credits: 12

Winter Intersession Session

- AUT* 162 - GM Internship 1B 1 credits

Total Semester Credits: 1

Second Semester

- AUT* 110 - GM Engine Repair 3 credits
- AUT* 114 - GM Electrical Systems 3 credits
- AUT* 163 - GM Internship 1C 1 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- MAT* 109 - Quantitative Literacy 3 credits (or higher)

Total Semester Credits: 13

Summer Session

- AUT* 171 - GM Internship 2 4 credits

Total Semester Credits: 4

Third Semester

- AUT* 201 - GM Engine Performance 3 credits
- AUT* 203 - GM Manual Drivetrain 3 credits
- AUT* 261 - GM Internship 3A 1 credits
- Choose one course in Social Phenomena (Gen Ed - SP: Social Phenomena/Knowledge/Understanding) 3 credits
- Choose one course in one of these areas: AD, HK, OC, SR (Gen Ed) 3 credits

Total Semester Credits: 13

Winter Intersession Session

- AUT* 262 - GM Internship 3B 1 credits

Total Semester Credits: 1

Fourth Semester

- AUT* 205 - GM Automatic Drivetrain 3 credits
- AUT* 207 - GM Climate Control and Safety Systems 3 credits
- AUT* 263 - GM Internship 3C 1 credits
- Choose one course in Scientific Knowledge (Gen Ed - SK: Scientific Knowledge and Understanding) 3-4 credits
- Choose one course in CALT (Gen Ed - CALT: Critical Analysis/Logical Thinking) 3 credits

Total Semester Credits: 13-14

Summer Session

- AUT* 271 - GM Internship 4 3 credits

Total Semester Credits: 3

Total Program Credits: 60-61

Automotive Technology: General Motors Certificate

The Automotive Service Certificate was designed by General Motors and Gateway Community College. This unique, cooperative program educates students for an entry level maintenance position in General Motors or AC Delco sponsored automotive repair facilities. Through a special arrangement, students attend classes and labs at the North Haven Campus and then obtain internship experience at a sponsoring GM or AC Delco facility. Students in the GM Certificate program receive instruction on General Motors' products. Vehicles, parts, engines, specialized tools, service information, and materials are provided by General Motors Corporation. For more information, contact Daniel Fuller, Program Coordinator at (203) 285-2370 or e-mail at (dfuller@gatewayct.edu).

Certificate Outcomes

Upon successful completion of all program requirements, the graduate will:

- Meet the industry ASE Alliance training requirements for GM Steering and Suspension, Braking, Engine and Electrical systems as assessed by existing instruments in current course
- Demonstrate application of Critical Analysis & Logical Thinking (CALT) skills through completion of a course that meets the CALT requirements.
- Demonstrate practical application of all above outcomes by successful completion of an in-dealership internship as assessed by existing instruments in current course.

Program entry requirements – Prospective students must obtain sponsorship through a GM dealership or AC Delco affiliated independent service center. Students must meet employment eligibility guidelines for the sponsoring employer. Students must possess a valid CT motor vehicle operator license. Students must purchase required tool set that meets program standards.

Internship requirements – students will be required to successfully complete two internship courses at sponsoring GM dealerships or AC Delco PSC partners. Internships will be tracked and monitored by the program coordinator. Successful internship completion requires that all assigned General Motors Center of Learning training courses be completed with a minimum grade of Pass.

General Education requirements – Students are required to complete a Critical Analysis & Logical Thinking (CALT) course as a program requirement.

Students seeking acceptance into the General Motors Certificate program must:

- Interview with the GM Program Coordinator to determine that all program entry requirements have been met.
- Complete all developmental English courses (if necessary) or be eligible for ENG* 101
- Complete the Automotive Programs' placement exam (if required)
- Have a valid driver's license issued by one of the 50 states in United States that does not have any restrictions that would prohibit the student from operating an automotive on public roads

Suggested Course Sequence

First Semester

- AUT* 112 - GM Specifications 2 credits
- AUT* 116 - GM Suspension and Steering 3 credits
- AUT* 118 - GM Braking Systems 3 credits
- AUT* 161 - GM Internship 1A 1 credits
- or**
- AUT* 162 - GM Internship 1B 1 credits
- or**
- AUT* 163 - GM Internship 1C 1 credits

Total Semester Credits: 9

Second Semester

- AUT* 110 - GM Engine Repair 3 credits
- AUT* 114 - GM Electrical Systems 3 credits
- AUT* 161 - GM Internship 1A 1 credits
- or**
- AUT* 162 - GM Internship 1B 1 credits
- or**
- AUT* 163 - GM Internship 1C 1 credits
- Choose one course in CALT: Critical Analysis/Logical Thinking 3 credits

Total Second Semester Credits: 10

Total Program Credits: 19

AUTOMOTIVE - HONDA PACT

Automotive Technology: Honda PACT Certificate

The mission of the Honda PACT Certificate Program is to educate those seeking employment in the field of automotive technology. It will prepare students for entry-level employment as Honda/Acura Automotive Technicians. The Automotive Technician field has been in very high demand in the State, and it is growing! The intent of the program is to meet the growing need for technicians in the college service area. This program furthers the college's mission to "respond to the changing academic, occupational, technological needs" by offering "a broad range of credit (technical and career) programs and courses leading to transfer, employment and lifelong learning." The automotive curriculum is designed to meet all ASE Accredited Training Program requirements for national accreditation. For more information, contact Scott McFarland, Program Coordinator at (203) 285-2405 or e-mail at (smcfarland@gatewayct.edu).

Program Outcomes

- Meet all ASE Accredited Training Program required outcomes for MAST certification
- Demonstrate workplace skills related to the occupation, including but not limited to resume preparation, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics, and teamwork
- Apply knowledge of theory and safety to accomplish certain tasks related to the occupation
- Identify and use appropriate tools, testing, and measurement equipment to accomplish certain tasks related to the occupation
- Use current reference and training materials from accepted industry publications and standards to accomplish specific tasks
- Receive corporate credit for web based and embedded classroom / laboratory training in the "inTraining" Honda system
- Demonstrate knowledge and understanding of all fundamental automotive concepts as outlined by ASE Accredited Training Program requirements.

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • AUT* 144 - Honda Electrical/Electronic Systems | 4 credits |
| • AUT* 148 - Honda Braking Systems | 4 credits |
| • AUT* 181 - Honda Practicum I | 1 credits |
| • AUT* 243 - Honda Transmission & Drivetrain Systems | 4 credits |
| • AUT* 247 - Honda Climate Control & Restraint Systems | 4 credits |

Total Semester Credits: 17

Second Semester

- | | |
|--|-----------|
| • AUT* 140 - Honda Power Plant | 4 credits |
| • AUT* 146 - Honda Steering and Suspension Systems | 4 credits |
| • AUT* 241 - Honda Engine Management Systems | 3 credits |
| • AUT* 244 - Honda Advanced Electrical Systems | 4 credits |
| • AUT* 281 - Honda Practicum II | 1 credits |

Total Semester Credits: 17

Summer

- | | |
|--|-----------|
| • AUT* 159 - ASE Prep & Shop Practices | 1 credits |
| • AUT* 283 - Honda Practicum III | 2 credits |
| • AUT* 284 - Honda Practicum IV | 1 credits |
| • AUT* 285 - Honda Practicum V | 1 credits |

Total Semester Credits: 5

Total Program Credits: 39

Automotive Technology: Honda PACT, AAS

The mission of the Honda PACT Degree Program is to educate those seeking employment in the field of automotive technology. It will prepare students for entry-level employment as Honda/Acura Automotive Technicians. The Automotive Technician field has been in very high demand in the State, and it is growing. The intent of the program is to meet the growing need for technicians in the college service area. This program furthers the college's mission to "respond to the changing academic, occupational, technological needs" by offering "a broad range of credit (technical, career, academic) programs and courses leading to transfer, employment and lifelong learning." The automotive curriculum is designed to meet all ASE Accredited Training Program requirements for national accreditation. For more information, contact Scott McFarland, Program Coordinator at (203) 285-2405 or e-mail at smcfarland@gatewayct.edu. * Students must be sponsored by a Honda or Acura dealership.

Program Outcomes

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

- Meet all ASE Accredited Training Program required outcomes for MAST certification
- Demonstrate workplace skills related to the occupation, including but not limited to resume preparation, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics, and teamwork
- Apply knowledge of theory and safety to accomplish certain tasks related to the occupation
- Identify and use appropriate tools, testing, and measurement equipment to accomplish certain tasks related to the occupation
- Use current reference and training materials from accepted industry publications and standards to accomplish specific tasks
- Receive corporate credit for web based and embedded classroom / laboratory training in the "inTraining" Honda system
- Demonstrate knowledge and understanding of all fundamental automotive concepts as outlined by ASE Accredited Training Program requirements.

Suggested Course Sequence

First Semester

- | | |
|--|-----------------------|
| • AUT* 144 - Honda Electrical/Electronic Systems | 4 credits |
| • AUT* 148 - Honda Braking Systems | 4 credits |
| • AUT* 181 - Honda Practicum I | 1 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 109 - Quantitative Literacy | 3 credits (or higher) |

Total Semester Credits: 15

Second Semester

- | | |
|--|-----------|
| • AUT* 140 - Honda Power Plant | 4 credits |
| • AUT* 146 - Honda Steering and Suspension Systems | 4 credits |
| • AUT* 281 - Honda Practicum II | 1 credits |
| • Choose one course in CALT
(Gen Ed - CALT: Critical Analysis/Logical Thinking) | 3 credits |
| • Choose one course in: AD, HK, OC, SR (Gen Ed) | 3 credits |

Total Semester Credits: 15

Summer

- AUT* 159 - ASE Prep & Shop Practices 1 credits
- AUT* 283 - Honda Practicum III 2 credits

Total Semester Credits: 3

Third Semester

- AUT* 243 - Honda Transmission & Drivetrain Systems 4 credits
- AUT* 247 - Honda Climate Control & Restraint Systems 4 credits
- AUT* 284 - Honda Practicum IV 1 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- Choose one course in Social Phenomena
(Gen Ed - SP: Social Phenomena/Knowledge/Understanding) 3 credits

Total Semester Credits: 15

Fourth Semester

- AUT* 241 - Honda Engine Management Systems 3 credits
- AUT* 244 - Honda Advanced Electrical Systems 4 credits
- AUT* 285 - Honda Practicum V 1 credits
- Choose one course in Scientific Reasoning
(Gen Ed - SR: Scientific Reasoning) 3-4 credits

Total Semester Credits: 12-13

Total Program Credits: 60-61

BIOLOGY

CSCU Pathway Transfer Degree: Biology Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Biology - General Biology, B.S.
	Biology - Ecology, Biodiversity, and Evolutionary Biology, B.S.
	Biology - Environmental Science, B.S.
At Eastern Connecticut State University	Biology, B.A.
At Southern Connecticut State University	Biology, B.A.
	Biology, B.S.
At Western Connecticut State University	Biology, B.A.
	Ecology, B.A.
At Charter Oak State College	General Studies - Biology Concentration, B.A.

Here is the recommended course of study for the Biology Studies Transfer Degree. If you are studying part time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

First Semester

- BIO* 121 - General Biology I 4 credits
(Note: Requires BIO* 100 or BIO* 105 as a pre-requisite if you did not take high school biology)
- CHE* 121 - General Chemistry I 4 credits
- ENG* 101 - Composition 3 credits
- MAT* 186 - Precalculus 4 credits

Total Semester Credits: 15

Second Semester

- BIO* 122 - General Biology II 4 credits
- CHE* 122 - General Chemistry II 4 credits
- Choose one from the following:
 - MAT* 254
 - Additional General Education I Creativity 3 credits
 - Additional General Education II Global Knowledge 3 credits
- Choose one course in Written Communication II 3 credits

Total Semester Credits: 15

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- PHY* 121 - General Physics I 4 credits
Choose one from the following: BIO* 235 or BIO* 211
- Choose one course in Social Phenomenam 3 credits
- Choose one course in Aesthetic Dimensions 3 credits

Total Semester Credits: 14

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation.

- PHY* 122 - General Physics II 4 credits
- Choose one not already taken from the following:
BIO* 211, BIO* 212, BIO* 235 Credits: 4
- Choose one course in Historical Knowledge
and Understanding 3 credits
- Choose one course in Critical Analysis/
Logical Thinking 3 credits
- Choose one course in Oral Communications 3 credits

Total Semester Credits 17

Total Program Credits 61

BIOMEDICAL ENGINEERING TECHNOLOGY

Biomedical Engineering Technology, AS

The rapid development of biomedical equipment technology, combined with the introduction of increasingly complex and vital biomedical equipment, has created a serious need for well-prepared technicians in hospitals and medical research centers. These technicians must understand this new technology and be capable of maintaining, calibrating, modifying, and adapting this equipment. Gateway's Biomedical Engineering Technology associate degree program will qualify students for these demanding careers.

Program Outcomes

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

- Show mastery of the knowledge, techniques, skills, and modern tools of biomedical engineering technology
- Apply current knowledge and adapt to emerging applications in mathematics, science, engineering, and technology
- Conduct, analyze, and interpret experiments and apply experimental results to improve processes
- Function effectively as part of a team
- Communicate effectively
- Understand professional, ethical, and social responsibilities

Growth in the biotechnology industry offers graduates of this program new opportunities as instrumentation calibration technicians for production, validation, and research equipment and instrumentation. Equipment manufacturers require the services of biomedical engineering technicians to assist in developing, manufacturing, testing, service, and technical sales of biomedical equipment. Graduates of Gateway's program are also capable of dealing with most types of nonmedical electronics. For more information, contact the Program Coordinator, Thomas McGrath, at (203) 285-2378 or e-mail at (tmcgrath@gatewayct.edu).

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • BME* 110 - Biomedical Technology | 2 credits |
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • EET* 110 - Electric Circuits I | 4 credits |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits |
| • CHE* 111 - Concepts of Chemistry | 4 credits |

Total Semester Credits: 16

Second Semester

- | | |
|------------------------------------|-----------|
| • BME* 116 - Physiological Systems | 4 credits |
| • EET* 136 - Electronics I | 4 credits |
| • MAT* 186 - Precalculus | 4 credits |
| • PHY* 121 - General Physics I | 4 credits |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 19

Third Semester

- BME* 210 - Biomedical Instrumentation 4 credits
- EET* 252 - Digital Electronics 4 credits
- MAT* 254 - Calculus I 4 credits
- COM* 173 - Public Speaking 3 credits

Total Semester Credits: 15**Fourth Semester**

- BME* 212 - Biomedical Equipment Design 4 credits
- BME* 214 - Advanced Biomedical Instrumentation 4 credits
- BME* 220 - Biomedical Practicum 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- Choose any course in Gen Ed - SP:
Social Phenomena/Knowledge/Understanding 3 credits

Total Semester Credits: 17**Total Program Credits: 67**

BUSINESS - FINANCE

CSCU Pathway Transfer Degree: Business Studies, A.A.

The Business Studies Associate Degree serves as the single community college degree to all of the State University and Charter Oak State College business majors listed below. You will declare your specific field when you transfer.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Accounting, B.S.
	Finance, B.S.
	Management, B.S.
	Marketing, B.S.
At Eastern Connecticut State University	Accounting, B.S.
	Business Administration, B.S.
	Finance, B.S.
At Southern Connecticut State University	Accounting, B.S.
	Business Administration - Business Economics Concentration, B.S.
	Business Administration - Business Finance Concentration, B.S.
	Business Administration - Management, B.S.
	Marketing, B.S.
At Western Connecticut State University	Accounting, B.S.
	Business Management - Financial Management Option, B.B.A.
	Business Management - Supervisory Management Option, B.B.A.
	Marketing, B.B.A.
At Charter Oak State College	Business Administration, B.A.

First Semester

- ACC* 113 - Principles of Financial Accounting I 3 credits ^{2,3}
- BBG* 231 - Business Law I 3 credits ²
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- ENG* 101 - Composition 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits

Total Semester Credits: 15-16

Second Semester

- ACC* 117 - Principles of Managerial Accounting 3 credits ^{2,3}
- BBG* 210 - Business Communication 3 credits ¹
(this course may be used to fulfill the Oral Communication requirements - see the fourth semester)
- BMG* 202 - Principles of Management 3 credits ²
- ECN* 101 - Macroeconomics 3 credits ^{1,3}
- Choose one course in Critical Analysis/Logical Thinking 3 credits
(Recommended: BES* 218 or BFN* 110)

Total Semester Credits: 15

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- ECN* 102 - Microeconomics 3 credits ^{1,3}
- MAT* 166 - Principles of Business Statistics 3 credits ^{1,3}
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- BFN* 201 - Principles of Finance 3 credits ²
- BMK* 201 - Principles of Marketing 3 credits ²
- MAT* 158 - Functions, Graphs, & Matrices 3 credits
- Note: MAT 230 Applied Calculus with a Modeling Approach and MAT 254 Calculus I will also meet this requirement. ^{1,3}
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Oral Communications 3 credits
(if you took BBG 210 Business Communication to fulfill this requirement, then take an additional 3 credits. You are recommended to use those credits to take BMG 220 Human Resources Management)

Total Semester Credits: 15

Total Program Credits: 61-62

Notes:

- ¹ Must have a C-or above
- ² Must have a C or above
- ³ Must have a cumulative 2.5 or above
- + A minimum of 2.50 cumulative GPA is required for Central

Total Program Credits: 61-62

Notes:

- All courses marked with a 1 must have a C- or above
- All courses marked with a 2 must have a C or above
- The six courses marked with a 3 must have a cumulative 2.5 or above
- A minimum 2.50 cumulative GPA is required for Central Connecticut State University

BUSINESS - GENERAL

Business Administration Certificate

This certificate program upgrades students' business and management skills and/or allows them to obtain credits as prerequisites for higher education programs.

Program Requirements

First Semester

- | | |
|---|-----------|
| • ACC* 113 - Principles of Financial Accounting I | 3 credits |
| • BBG* 231 - Business Law I | 3 credits |
| • BMG* 202 - Principles of Management | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |

Total Semester Credits: 12

Second Semester

- | | |
|--------------------------------------|-----------|
| • BBG* 210 - Business Communication | 3 credits |
| • BMK* 201 - Principles of Marketing | 3 credits |
| • ECN* 101 - Macroeconomics | 3 credits |
| or | |
| • ECN* 102 - Microeconomics | 3 credits |
| • Business (Elective) | 3 credits |

Total Semester Credits: 12

Total Program Credits 24

Business Administration, AS

The complexity of business demands a constant supply of trained managers and administrators. This career program prepares students for managerial and administrative responsibilities. This program includes both the basic concepts of business management and the fundamental tools of management that are common to both the private and public sectors of the economy. For more information, call the Business Department Chairperson, Richard Rees at (203) 285-2178 or e-mail at (rrees@gatewayct.edu).

Program Outcomes

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

- Demonstrate reasoning and analytic skills
- Display the traits and attitudes that promote ongoing success and a strong work ethic
- Work with others, including culturally and intellectually diverse people
- Identify the leadership and motivational traits and qualities necessary to accomplish organizational goals
- Understand the global, economic, ethical, and legal environments of contemporary business.

Suggested Course Sequence

First Semester

- ACC* 113 - Principles of Financial Accounting I 3 credits
- BBG* 231 - Business Law I 3 credits
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- ENG* 101 - Composition 3 credits
- MAT* 137 - Intermediate Algebra 3 credits (or higher)

Total Semester Credits: 15

Second Semester

- ACC* 117 - Principles of Managerial Accounting 3 credits
- BBG* 210 - Business Communication 3 credits
- BMG* 202 - Principles of Management 3 credits
- BES* 218 - Entrepreneurship 3 credits
- or**
- BFN* 110 - Personal Finance 3 credits
- or**
- IDS 106 - Critical Thinking - Business 3 credits
- ECN* 101 - Macroeconomics 3 credits

Total Semester Credits: 15

Third Semester

- ECN* 102 - Microeconomics 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- MAT* 166 - Principles of Business Statistics 3 credits
- Choose one course in BIO*, CHE*, EAS*, EVS*, PHY* (Gen Ed - SK: Scientific Knowledge and Understanding) 3-4 credits
- Business (Elective) 3 credits

Total Semester Credits: 15-16

Fourth Semester

- BFN* 201 - Principles of Finance 3 credits
- BMG* 220 - Human Resources Management 3 credits
- BMK* 201 - Principles of Marketing 3 credits
- Business Electives 6 credits

Total Semester Credits: 15

Total Program Credits: 60-61

CSCU Pathway Transfer Degree: Business Studies: Business Administration, A.A.

CSCU Pathway Transfer Degree: Business Studies, A.A.

The Business Studies Associate Degree serves as the single community college degree to all of the State University and Charter Oak State College business majors listed below. You will declare your specific field when you transfer.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Accounting, B.S.
	Finance, B.S.
	Management, B.S.
	Marketing, B.S.
At Eastern Connecticut State University	Accounting, B.S.
	Business Administration, B.S.
	Finance, B.S.
At Southern Connecticut State University	Accounting, B.S.
	Business Administration - Business Economics Concentration, B.S.
	Business Administration - Business Finance Concentration, B.S.
	Business Administration - Management, B.S.
	Marketing, B.S.
At Western Connecticut State University	Accounting, B.S.
	Business Management - Financial Management Option, B.B.A.
	Business Management - Supervisory Management Option, B.B.A.
	Marketing, B.B.A.
At Charter Oak State College	Business Administration, B.A.

First Semester

- ACC* 113 - Principles of Financial Accounting I 3 credits ^{2,3}
- BBG* 231 - Business Law I 3 credits ²
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- ENG* 101 - Composition 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits

Total Semester Credits: 15-16

Second Semester

- ACC* 117 - Principles of Managerial Accounting 3 credits ^{2,3}
- BBG* 210 - Business Communication 3 credits ¹
(this course may be used to fulfill the Oral Communication requirements - see the fourth semester)
- BMG* 202 - Principles of Management 3 credits ^{2,3}
- ECN* 101 - Macroeconomics 3 credits ^{1,3}
- Choose one course in Critical Analysis/Logical Thinking 3 credits
(Recommended: BES* 218 or BFN* 110)

Total Semester Credits: 15

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- ECN* 102 - Microeconomics 3 credits ^{1,3}
- MAT* 166 - Principles of Business Statistics 3 credits ^{1,3}
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- BFN* 201 - Principles of Finance 3 credits ²
- BMK* 201 - Principles of Marketing 3 credits ²
- MAT* 158 - Functions, Graphs, & Matrices 3 credits
- Note: MAT 230 Applied Calculus with a Modeling Approach and MAT 254 Calculus I will also meet this requirement. ^{1,3}
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Oral Communications 3 credits
- (if you took BBG 210 Business Communication to fulfill this requirement, then take an additional 3 credits. You are recommended to use those credits to take BMG 220 Human Resources Management)

Total Semester Credits: 15

Total Program Credits: 61-62

Notes:

- ¹ Must have a C-or above
- ² Must have a C or above
- ³ Must have a cumulative 2.5 or above

+ A minimum of 2.50 cumulative GPA is required for Central

Total Program Credits: 61-62

CSCU Pathway Transfer Degree: Business Studies: Business, A.A.

CSCU Pathway Transfer Degree: Business Studies, A.A.

The Business Studies Associate Degree serves as the single community college degree to all of the State University and Charter Oak State College business majors listed below. You will declare your specific field when you transfer.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Accounting, B.S.
	Finance, B.S.
	Management, B.S.
	Marketing, B.S.
At Eastern Connecticut State University	Accounting, B.S.
	Business Administration, B.S.
	Finance, B.S.
At Southern Connecticut State University	Accounting, B.S.
	Business Administration - Business Economics Concentration, B.S.
	Business Administration - Business Finance Concentration, B.S.
	Business Administration - Management, B.S.
	Marketing, B.S.
At Western Connecticut State University	Accounting, B.S.
	Business Management - Financial Management Option, B.B.A.
	Business Management - Supervisory Management Option, B.B.A.
	Marketing, B.B.A.
At Charter Oak State College	Business Administration, B.A.

First Semester

- ACC* 113 - Principles of Financial Accounting I 3 credits ^{2,3}
- BBG* 231 - Business Law I 3 credits ²
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- ENG* 101 - Composition 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits

Total Semester Credits: 15-16

Second Semester

- ACC* 117 - Principles of Managerial Accounting 3 credits ^{2,3}
- BBG* 210 - Business Communication 3 credits ¹
(this course may be used to fulfill the Oral Communication requirements - see the fourth semester)
- BMG* 202 - Principles of Management 3 credits ²
- ECN* 101 - Macroeconomics 3 credits ^{1,3}
- Choose one course in Critical Analysis/Logical Thinking 3 credits
(Recommended: BES* 218 or BFN* 110)

Total Semester Credits: 15

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- ECN* 102 - Microeconomics 3 credits ^{1,3}
- MAT* 166 - Principles of Business Statistics 3 credits ^{1,3}
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- BFN* 201 - Principles of Finance 3 credits ²
- BMK* 201 - Principles of Marketing 3 credits ²
- MAT* 158 - Functions, Graphs, & Matrices 3 credits Note: MAT 230 Applied Calculus with a Modeling Approach and MAT 254 Calculus I will also meet this requirement. ^{1,3}
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Oral Communications 3 credits
(if you took BBG 210 Business Communication to fulfill this requirement, then take an additional 3 credits. You are recommended to use those credits to take BMG 220 Human Resources Management)

Total Semester Credits: 15

Total Program Credits: 61-62

Notes:

- ¹ Must have a C-or above
- ² Must have a C or above
- ³ Must have a cumulative 2.5 or above
- + A minimum of 2.50 cumulative GPA is required for Central

Total Program Credits: 61-62

BUSINESS - MANAGEMENT

Business Administration: Management Option, AS

The Business Administration Management Option helps meet the growing need for qualified supervisory and entry-level managers in the Greater New Haven area.

Program Outcomes

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

- Review the historical development of management theories and relate them to current managerial thought
- Use the planning process to accomplish both personal and professional goals
- Describe the staffing processes of recruitment, placement, training, and development for maintaining an effective work force
- Identify the leadership and motivational traits and qualities necessary to accomplish organizational goals
- Analyze the decision-making and problem-solving methods that managers use

Suggested Course Sequence

First Semester

- | | |
|---|-----------------------|
| • BBG* 231 - Business Law I | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 137 - Intermediate Algebra | 3 credits (or higher) |
| • BES* 218 - Entrepreneurship | 3 credits |
| or | |
| • BFN* 110 - Personal Finance | 3 credits |
| or | |
| • IDS 106 - Critical Thinking - Business | 3 credits |

Total Semester Credits: 15-16

Second Semester

- | | |
|---|-------------|
| • ACC* 113 - Principles of Financial Accounting I | 3 credits |
| • BBG* 210 - Business Communication | 3 credits |
| • ECN* 101 - Macroeconomics | 3 credits |
| • ENG* 102 - Literature and Composition | 3 credits |
| or | |
| • ENG* 200 - Advanced Composition | 3 credits |
| • Choose one course in BIO*, CHE*, EAS*, EVS*, PHY*
(SK: Scientific Knowledge and Understanding) | 3-4 credits |

Total Semester Credits: 15-16

Third Semester

- ACC* 117 - Principles of Managerial Accounting 3 credits
- BMG* 202 - Principles of Management 3 credits
- BMK* 201 - Principles of Marketing 3 credits
- ECN* 102 - Microeconomics 3 credits
- MAT* 166 - Principles of Business Statistics 3 credits

Total Semester Credits: 15**Fourth Semester**

- BMG* 210 - Organizational Behavior 3 credits
- BMG* 220 - Human Resources Management 3 credits
- BFN* 201 - Principles of Finance 3 credits
- Business (Elective) 6 credits

Total Semester Credits: 15**Total Program Credits: 60-61**

CSCU Pathway Transfer Degree: Business Studies: Management, A.A.

CSCU Pathway Transfer Degree: Business Studies, A.A.

The Business Studies Associate Degree serves as the single community college degree to all of the State University and Charter Oak State College business majors listed below. You will declare your specific field when you transfer.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University + + A minimum 2.5 cumulative GPA is required at CCSU	Accounting, B.S. Finance, B.S. Management, B.S. Marketing, B.S.
At Eastern Connecticut State University	Accounting, B.S. Business Administration, B.S. Finance, B.S.
At Southern Connecticut State University	Accounting, B.S. Business Administration - Business Economics Concentration, B.S. Business Administration - Business Finance Concentration, B.S. Business Administration - Management, B.S. Marketing, B.S.
At Western Connecticut State University	Accounting, B.S. Business Management - Financial Management Option, B.B.A. Business Management - Supervisory Management Option, B.B.A. Marketing, B.B.A.
At Charter Oak State College	Business Administration, B.A.

First Semester

- ACC* 113 - Principles of Financial Accounting I 3 credits ^{2,3}
- BBG* 231 - Business Law I 3 credits ²
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- ENG* 101 - Composition 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits

Total Semester Credits: 15-16

Second Semester

- ACC* 117 - Principles of Managerial Accounting 3 credits ^{2,3}
- BBG* 210 - Business Communication 3 credits ¹
(this course may be used to fulfill the Oral Communication requirements - see the fourth semester)
- BMG* 202 - Principles of Management 3 credits ²
- ECN* 101 - Macroeconomics 3 credits ^{1,3}
- Choose one course in Critical Analysis/Logical Thinking 3 credits
(Recommended: BES* 218 or BFN* 110)

Total Semester Credits: 15

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- ECN* 102 - Microeconomics 3 credits ^{1,3}
- MAT* 166 - Principles of Business Statistics 3 credits ^{1,3}
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- BFN* 201 - Principles of Finance 3 credits ²
- BMK* 201 - Principles of Marketing 3 credits ²
- MAT* 158 - Functions, Graphs, & Matrices 3 credits
- Note: MAT 230 Applied Calculus with a Modeling Approach and MAT 254 Calculus I will also meet this requirement. ^{1,3}
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Oral Communications 3 credits
(if you took BBG 210 Business Communication to fulfill this requirement, then take an additional 3 credits. You are recommended to use those credits to take BMG 220 Human Resources Management)

Total Semester Credits: 15

Total Program Credits: 61-62

Notes:

- ¹ Must have a C-or above
- ² Must have a C or above
- ³ Must have a cumulative 2.5 or above
- + A minimum of 2.50 cumulative GPA is required for Central

Total Program Credits: 61-62

Management Certificate

The Management Certificate allows the student to focus on the specific skills needed for success in today's workplace. It is designed for those who do not have the time to pursue a degree program but want to improve their managerial skills. Those students interested in continuing their studies will be able to use all credits earned in this program toward a degree in the Business Administration Management Option.

Program Outcomes

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

- Use effective planning processes to accomplish both personal and professional goals
- Use appropriate management skills for workplace decision-making
- Describe the various ways firms are organized and the roles of personnel and organizational systems
- Discuss tools and techniques used in the management control process
- Discuss the role of computers and technology in society and state ways in which businesses use information systems in decision-making

Program Requirements

First Semester

- | | |
|---|-----------|
| • BMG* 202 - Principles of Management | 3 credits |
| • BBG* 231 - Business Law I | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 12

Second Semester

- | | |
|--|-----------|
| • BBG* 210 - Business Communication | 3 credits |
| • BBG* 220 - Human Resource Management | 3 credits |
| • BMG* 210 - Organizational Behavior | 3 credits |
| • Business (Elective) | 3 credits |

Total Semester Credits: 12

Total Program Credits 24

Business/Computer Electives:

- All Business, BOT or CSC courses

Public Utility Management, AS

The Public Utility Management program provides graduates with a wide variety of career options in this fast growing field. The industry offers an array of career tracks for those with a strong technical background as well as graduates with an aptitude in business, marketing, accounting, information technology, data analysis, and office administration. This degree allows the opportunity for a seamless transfer to Southern Connecticut State University (SCSU) where students can earn a Bachelor's Degree in Business Administration with a specialization in Public Utility Management. For more information, please call the Program Coordinator, Wesley Winterbottom at (203) 285-2354 or email WWinterbottom@gatewayct.edu.

Program Outcomes

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

- Describe and manage the operations of public utilities
- Apply effective written and oral communication skills to articulate business opportunities, ideas, and problems, as well as appropriate strategic responses across the economic social, environmental, public and political spheres
- Direct team dynamics of work groups, particularly in relation to the functioning of critical incident response teams
- Develop utility management ideas and translate them into best practices
- Employ and make use of written documents such as regulatory agency methods of analysis, internal standard operating procedures, safety rules, policy manuals, and professional journals
- Analyze and interpret the legal and/or regulatory implications of business and utility management decisions

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • ACC* 113 - Principles of Financial Accounting I | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |
| or | |
| • BBG* 115 - Business Software Applications | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • IDS 106 - Critical Thinking - Business | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|--|-----------|
| • ACC* 117 - Principles of Managerial Accounting | 3 credits |
| • BMG* 110 - Public Utility Management | 3 credits |
| • BMG* 202 - Principles of Management | 3 credits |
| • ECN* 101 - Macroeconomics | 3 credits |
| • MAT* 167 - Principles of Statistics | 3 credits |

Total Semester Credits: 15

Third Semester

- BMG* 216 - Rates and Revenues 3 credits
- BMG* 219 - Asset & Infrastructure Management 3 credits
- ECN* 102 - Microeconomics 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- EVS* 114 - Environmental Science 4 credits

Total Semester Credits: 16

Fourth Semester

- BBG* 210 - Business Communication 3 credits
- BMG* 221 - Customer Relations 3 credits
- BBG* 231 - Business Law I 3 credits
- BBG* 240 - Business Ethics 3 credits
- Restricted (Elective) 3 credits

Total Semester Credits: 15

Total Program Credits: 61

Restricted Electives

- BBG* 294 - Business Internship 3 credits
- BMK* 201 - Principles of Marketing 3 credits
- QUA* 114 - Principles of Quality Control 3 credits

BUSINESS - MARKETING

Business Administration: Marketing Option, AS

In today's global, digitized, and interactive business world, marketing offers a viable opportunity for business students. Marketing is dynamic, challenging, and the driving force in most businesses because it focuses on satisfying needs and wants of consumers. It includes activities that influence the flow of goods through the supply chain including product development and management, packaging, distribution, pricing, advertising, selling, and customer service. Marketing classes integrate theory and practical applications while applying related business knowledge. The program courses may be transferred to bachelor's degree programs.

Program Outcomes

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

- Identify core concepts of marketing and the role of marketing in organization, society and the global economy.
- Describe the legal and ethical environments in which marketing is conducted.
- Demonstrate information literacy through research skills and the use of technology.
- Demonstrate analytical, problem-solving, and decision-making skills applicable to business administration and marketing.
- Apply effective written and oral communication skills to business situations.

Suggested Course Sequence

First Semester

- | | |
|--------------------------------------|-----------|
| • BBG* 231 - Business Law I | 3 credits |
| • BMK* 201 - Principles of Marketing | 3 credits |
| • BBG* 210 - Business Communication | 3 credits |
| • MAT* 137 - Intermediate Algebra | 3 credits |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|---|-----------|
| • ACC* 113 - Principles of Financial Accounting I | 3 credits |
| • BMG* 220 - Human Resources Management | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |
| • ENG* 102 - Literature and Composition | 3 credits |
| or | |
| • ENG* 200 - Advanced Composition | 3 credits |
| • BES* 218 - Entrepreneurship | 3 credits |

Total Semester Credits: 15

Third Semester

- BMK* 241 - Principles of Advertising 3 credits
- MAT* 166 - Principles of Business Statistics 3 credits
- ECN* 101 - Macroeconomics 3 credits
- **or**
- ECN* 102 - Microeconomics 3 credits
- Restricted - Elective (Any BMK* course or HSP* 244) 3 credits
- Business (Elective) 3 credits

Total Semester Credits: 15**Fourth Semester**

- BBG* 294 - Business Internship 3 credits
- BMK* 285 - Current Marketing Topics 3 credits
- Choose one course in BIO*, CHE*, EAS*, EVS*, PHY*
(Gen Ed - SK: Scientific Knowledge and Understanding) 3-4 credits
- Restricted Elective - Business (Any Business course) 3 credits
- Restricted - Elective (Any BMK* course or HSP* 244) 3 credits

Total Semester Credits: 15-16**Total Program Credits: 21**

CSCU Pathway Transfer Degree: Business Studies: Marketing, A.A.

The Business Studies Associate Degree serves as the single community college degree to all of the State University and Charter Oak State College business majors listed below. You will declare your specific field when you transfer.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Accounting, B.S.
	Finance, B.S.
	Management, B.S.
	Marketing, B.S.
At Eastern Connecticut State University	Accounting, B.S.
	Business Administration, B.S.
	Finance, B.S.
At Southern Connecticut State University	Accounting, B.S.
	Business Administration - Business Economics Concentration, B.S.
	Business Administration - Business Finance Concentration, B.S.
	Business Administration - Management, B.S.
	Marketing, B.S.
At Western Connecticut State University	Accounting, B.S.
	Business Management - Financial Management Option, B.B.A.
	Business Management - Supervisory Management Option, B.B.A.
	Marketing, B.B.A.
At Charter Oak State College	Business Administration, B.A.

First Semester

- ACC* 113 - Principles of Financial Accounting I 3 credits ^{2,3}
- BBG* 231 - Business Law I 3 credits ²
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- ENG* 101 - Composition 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits

Total Semester Credits: 15-16

Second Semester

- ACC* 117 - Principles of Managerial Accounting 3 credits ^{2,3}
- BBG* 210 - Business Communication 3 credits ¹
(this course may be used to fulfill the Oral Communication requirements - see the fourth semester)
- BMG* 202 - Principles of Management 3 credits ²
- ECN* 101 - Macroeconomics 3 credits ^{1,3}
- Choose one course in Critical Analysis/Logical Thinking 3 credits
(Recommended: BES* 218 or BFN* 110)

Total Semester Credits: 15

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- ECN* 102 - Microeconomics 3 credits ^{1,3}
- MAT* 166 - Principles of Business Statistics 3 credits ^{1,3}
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- BFN* 201 - Principles of Finance 3 credits ²
- BMK* 201 - Principles of Marketing 3 credits ²
- MAT* 158 - Functions, Graphs, & Matrices 3 credits ^{1,3}
 Note: MAT 230 Applied Calculus with a Modeling Approach and MAT 254 Calculus I will also meet this requirement.
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Oral Communications 3 credits
 (if you took BBG 210 Business Communication to fulfill this requirement, then take an additional 3 credits. You are recommended to use those credits to take BMG 220 Human Resources Management)

Total Semester Credits: 15

Total Program Credits: 61-62

Notes:

- ¹ Must have a C-or above
- ² Must have a C or above
- ³ Must have a cumulative 2.5 or above
- + A minimum of 2.50 cumulative GPA is required for Central

Total Program Credits: 61-62

BUSINESS OFFICE TECHNOLOGY

Business Office Technology: Administrative Assistant Certificate

This is a skills-oriented sequence for students who do not wish to pursue an associate degree option. However, credits earned as part of this certificate program may be applied to the associate degree options in Business Office Technology. This program is tailored to meet individual needs. Students with excellent keyboarding skills may substitute electives for keyboarding courses. Emphasis is placed on the basic administrative and soft skills necessary to be successful in today's global business environment. For more information, call Sandy Kraus, Program Coordinator at (203) 285-2359 or email skraus@gatewayct.edu

Program Outcomes

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

- Demonstrate technical proficiency in office applications software including: word processing, operating system, electronic spreadsheet, database management, integrated office applications and presentation graphics.
- Exhibit verbal, non-verbal and written communication skills.
- Key and format business documents and demonstrate proofreading skills.
- Demonstrate effective use of soft skills including: professionalism, adaptability to change, initiative, confidentiality, positive attitude and human-relations and creativity.
- Practice ethical behavior and incorporate the principles of honesty and integrity.
- Apply critical-thinking strategies and effective decision-making techniques to solve problems.
- Demonstrate self-management skills, including time management and organization.
- Contribute as a productive team member in a culturally and intellectually diverse global environment.

This program provides high quality instruction using state-of-the-art computer technology and current software programs to prepare competent, skilled, and professional office workers who are able to meet the demands of business.

Administrative assistants play vital roles in American business, government, and industry. To prepare for these roles, students may choose from any of the three associate degrees or five certificate options described below. There is always a great demand for administrative assistants. Because college-trained administrative assistants possess a high level of skills, maturity, and a sophisticated attitude, they enter an organization with three advantages: 1) they command a better starting salary, 2) they may work for higher level executives, and 3) they will receive promotions more rapidly than those without a college degree.

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • ACC* 100 - Basic Accounting | 3 credits |
| • BOT* 111 - Keyboarding for Information Processing I | 3 credits |
| • BOT* 137 - Word Processing Applications (Word) | 3 credits |
| • BOT* 251 - Administrative Procedures | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|--|-----------|
| • BBG* 210 - Business Communication | 3 credits |
| • BOT* 112 - Keyboarding for Information Processing II | 3 credits |
| • BOT* 219 - Integrated Microsoft Office | 3 credits |
| • BOT* 279 - BOT Administrative Practicum | 4 credits |
| • BMG* 202 - Principles of Management | 3 credits |
| • Choose one Business Elective | |

Total Semester Credits: 16

Total Program Credits: 31

Students who satisfy the Keyboarding for Information Processing I (BOT* 111) requirement may substitute Computerized Communication (BOT* 220).

Business Office Technology: Administrative Assistant Option, AS

This program provides high quality instruction using state-of-the-art computer technology and current software programs to prepare competent, skilled, and professional office workers who are able to meet the demands of business.

Administrative assistants play vital roles in American business, government, and industry. To prepare for these roles, students may choose from any of the three associate degrees or five certificate options described below. There is always a great demand for administrative assistants. Because college-trained administrative assistants possess a high level of skills, maturity, and a sophisticated attitude, they enter an organization with three advantages: 1) they command a better starting salary, 2) they may work for higher level executives, and 3) they will receive promotions more rapidly than those without a college degree.

Students enrolling in this program who have previous keyboarding instruction should contact a member of the Business Office Technology faculty at (203) 285-2177. Students with no previous keyboarding instruction are advised to take Keyboarding for Information Processing I (BOT* 111) in the summer session in order to follow the fall-spring sequence of courses. Students interested in receiving credit for life experience should contact one of the faculty members in the Business Office Technology Department. For more information, call Sheri Valentin, Program Coordinator at (203) 285-2169 or email svalentin@gatewayct.edu.

Program Outcomes

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

- Demonstrate technical proficiency in office applications software including: word processing, operating system, electronic spreadsheet, database management, integrated office applications and presentation graphics.
- Exhibit verbal, non-verbal and written communication skills.
- Key and format business documents and demonstrate proofreading skills.
- Demonstrate effective use of soft skills including: professionalism, adaptability to change, initiative, confidentiality, positive attitude and human-relations and creativity.
- Practice ethical behavior and incorporate the principles of honesty and integrity.
- Apply critical-thinking strategies and effective decision-making techniques to solve problems.
- Demonstrate self-management skills, including time management and organization.
- Contribute as a productive team member in a culturally and intellectually diverse global environment.

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • BOT* 111 - Keyboarding for Information Processing I | 3 credits |
| • BOT* 220 - Computerized Communication
(Microsoft PowerPoint, e-mail, Internet) | 3 credits |
| • BMG* 202 - Principles of Management | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 15

Second Semester

- BES* 218 - Entrepreneurship 3 credits
- or**
- IDS 106 - Critical Thinking - Business 3 credits
- BOT* 137 - Word Processing Applications (Word) 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- MAT* 109 - Quantitative Literacy 3 credits or higher
- Business (Elective) 3 credits

Total Semester Credits: 15**Third Semester**

- ACC* 100 - Basic Accounting 3 credits
- BOT* 112 - Keyboarding for Information Processing II 3 credits
- BOT* 251 - Administrative Procedures 3 credits
- PSY* 111 - General Psychology I 3 credits
- Choose one course in BIO*, CHE*, EAS*, EVS*, PHY*
(Gen Ed - SK: Scientific Knowledge and Understanding) 3 credits

Total Semester Credits: 15**Fourth Semester**

- BBG* 210 - Business Communication 3 credits
- BBG* 231 - Business Law I 3 credits
- BOT* 219 - Integrated Microsoft Office 3 credits
- BOT* 279 - BOT Administrative Practicum 4 credits
- CSA* 140 - Database Applications (Access) 3 credits

Total Semester Credits: 15**Total Program Credits: 60**

Business Office Technology: Customer Service Technology Certificate

This program prepares students for entry-level customer service representative positions. It provides training in technological and soft skills required for excellence in customer service satisfaction. For more information, call Sheri Valentin, Program Coordinator at (203) 285-2169 or email svalentin@gatewayct.edu.

Program Outcomes

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

- Demonstrate technical proficiency in office applications software including: word processing, operating system, electronic spreadsheet, database management, integrated office applications and presentation graphics.
- Exhibit verbal, non-verbal and written communication skills.
- Key and format business documents and demonstrate proofreading skills.
- Demonstrate effective use of soft skills including: professionalism, adaptability to change, initiative, confidentiality, positive attitude and human-relations and creativity.
- Practice ethical behavior and incorporate the principles of honesty and integrity.
- Apply critical-thinking strategies and effective decision-making techniques to solve problems.
- Demonstrate self-management skills, including time management and organization.
- Contribute as a productive team member in a culturally and intellectually diverse global environment.

This program provides high quality instruction using state-of-the-art computer technology and current software programs to prepare competent, skilled, and professional office workers who are able to meet the demands of business.

Administrative assistants play vital roles in American business, government, and industry. To prepare for these roles, students may choose from any of the three associate degrees or five certificate options described below. There is always a great demand for administrative assistants. Because college-trained administrative assistants possess a high level of skills, maturity, and a sophisticated attitude, they enter an organization with three advantages: 1) they command a better starting salary, 2) they may work for higher level executives, and 3) they will receive promotions more rapidly than those without a college degree.

Students enrolling in this program who have previous keyboarding instruction should contact a member of the Business Office Technology faculty at (203) 285-2177. Students with no previous keyboarding instruction are advised to take Keyboarding for Information Processing I (BOT* 111) in the summer session in order to follow the fall-spring sequence of courses. Students interested in receiving credit for life experience should contact one of the faculty members in the Business Office Technology Department. For more information, call Sheri Valentin, Program Coordinator at (203) 285-2169 or email svalentin@gatewayct.edu.

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • BBG* 210 - Business Communication | 3 credits |
| • BMK* 201 - Principles of Marketing | 3 credits |
| • BOT* 111 - Keyboarding for Information Processing I | 3 credits |
| • BOT* 251 - Administrative Procedures | 3 credits |
| • COM* 173 - Public Speaking | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|--|-----------|
| • BMK* 220 - Sales | 3 credits |
| • BMK* 285 - Current Marketing Topics | 3 credits |
| • BOT* 137 - Word Processing Applications (Word) | 3 credits |
| • COM* 172 - Interpersonal Communication | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |

Total Semester Credits: 15

Total Program Credits: 30

Business Office Technology: Electronic Health Records and Coding Option, AS

This program prepares students for entry-level positions in medical coding and billing. Duties include creating electronic health records and coding accurately. Students will be able to analyze and revise patient data while maintaining the integrity and protecting the privacy of health information. Responsibilities also include performing computer tasks in electronic health records systems and other software applications. This medical office professional will be able to work in a variety of medical environments such as physician practices, hospitals, clinics, and insurance companies. Upon successful completion of this program, individuals will be eligible to take a national exam to become Certified Professional Coders through the American Academy of Professional Coders. For more information, call Sandy Kraus, Program Coordinator at (203) 285-2359 or email skraus@gatewayct.edu.

Program Outcomes

- Apply coding knowledge using coding guidelines from ICD-10, CPT-4, and HCPCS
- Utilize and apply medical terminology in relation to the human body
- Communicate effectively both verbally and in writing with medical professionals and office personnel
- Understand the HIPAA regulations and guidelines that apply to health records and the release of protected health information and patient confidentiality and privacy
- Recognize the importance of healthcare documentation in meeting the legal and ethical requirements as it relates to patient care
- Create and process medical claims, along with the understanding of billing and collection procedures
- Perform computer tasks in Electronic Health Records system and other software applications.

Suggested Course Sequence

First Semester

- BOT* 111 - Keyboarding for Information Processing I 3 credits
- BOT* 220 - Computerized Communication
(Microsoft PowerPoint, e-mail, Internet) 3 credits
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- ENG* 101 - Composition 3 credits
- HIM* 101 - Medical Terminology 3 credits

Total Semester Credits: 15

Second Semester

- BES* 218 - Entrepreneurship 3 credits
- **or**
- IDS 106 - Critical Thinking - Business 3 credits
- BIO* 110 - Principles of the Human Body 3 credits
- **or**
- BIO* 115 - Human Biology 4 credits
- BOT* 137 - Word Processing Applications (Word) 3 credits
- BOT* 181 - Medical Coding I 3 credits
- BOT* 287 - Foundations/Management
of Medical Insurance 3 credits

Total Semester Credits: 15-16

Third Semester

- BOT* 182 - Medical Coding II 3 credits
- BOT* 291 - Electronic Health Records 3 credits (Fall only)
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- MAT* 137 - Intermediate Algebra 3 credits or higher
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 15

Fourth Semester

- BBG* 210 - Business Communication 3 credits
- BMG* 202 - Principles of Management 3 credits
- BOT* 279 - BOT Administrative Practicum 4 credits
- BOT* 282 - Medical Administrative Procedures 3 credits
- CSA* 140 - Database Applications (Access) 3 credits

Total Semester Credits: 16

Total Program Credits: 61-62

Business Office Technology: Legal Administrative Assistant Option, AS

The duties of a legal administrative assistant vary considerably depending on the specialty of the law office. However, all legal administrative assistants should be able to: prepare time sheets indicating the hours an attorney spends on behalf of various clients; prepare clients' fee and disbursement statements; and prepare appropriate documents for real estate, probate, corporate, tax, civil or criminal litigation, and domestic matters. Knowledge of legal terminology is essential for anyone seeking a career as a legal administrative assistant. For more information, call Sandy Kraus, Program Coordinator at (203) 285-2359 or email skraus@gatewayct.edu.

Program Outcomes

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

- Differentiate between the various kinds of law offices, courts, corporate legal departments, law schools, and a wide range of other office settings.
- Exhibit effective verbal and written legal communication skills.
- Demonstrate skills in law office procedures and legal document processing.
- Employ the use of technology appropriate for use in the legal environment.
- Proofread and edit documents accurately.

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • ACC* 100 - Basic Accounting | 3 credits |
| • BBG* 231 - Business Law I | 3 credits |
| • BOT* 111 - Keyboarding for Information Processing I | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |
| • Choose any course in CALT:
Critical Analysis/Logical Thinking | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|--|-----------------------|
| • BBG* 232 - Business Law II | 3 credits |
| • BMG* 210 - Organizational Behavior | 3 credits |
| • BOT* 137 - Word Processing Applications (Word) | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 109 - Quantitative Literacy | 3 credits (or higher) |

Total Semester Credits: 15

Third Semester

- BOT* 112 - Keyboarding for Information Processing II 3 credits
- BOT* 272 - Legal Administrative Procedures 3 credits
- CSA* 140 - Database Applications (Access) 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- Choose any course in SK: Scientific Knowledge and Understanding 3-4 credits

Total Semester Credits: 15-16

Fourth Semester

- BBG* 210 - Business Communication 3 credits
- BOT* 219 - Integrated Microsoft Office 3 credits
- BOT* 271 - Legal Document Production 3 credits
- BOT* 279 - BOT Administrative Practicum 4 credits
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 16

Total Program Credits: 61-62

Students who satisfy the Keyboarding for Information Processing I (BOT* 111) requirement may substitute Computerized Communication (BOT* 220). BOT* 271 and BOT* 272 are offered in odd years only.

Business Office Technology: Medical Administrative Assistant Certificate

The Medical Administrative Assistant Certificate prepares students to work in a medical office or hospital. In addition to regular office duties, a medical administrative assistant performs specialized tasks. Emphasis is placed on medical coding and medical transcription skills. Training is provided using state-of-the-art medical office software. For more information, call Sandy Kraus, Program Coordinator at (203) 285-2359 or email skraus@gatewayct.edu.

Program Outcomes

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

- Demonstrate technical proficiency in office applications software including: word processing, operating system, electronic spreadsheet, database management, integrated office applications and presentation graphics.
- Exhibit verbal, non-verbal and written communication skills.
- Key and format business documents and demonstrate proofreading skills.
- Demonstrate effective use of soft skills including: professionalism, adaptability to change, initiative, confidentiality, positive attitude and human-relations and creativity as well as ethical behavior and principles of honesty and integrity
- Apply critical-thinking strategies and effective decision-making techniques to solve problems.
- Demonstrate self-management skills, including time management and organization.
- Contribute as a productive team member in a culturally and intellectually diverse global environment.

This program provides high quality instruction using state-of-the-art computer technology and current software programs to prepare competent, skilled, and professional office workers who are able to meet the demands of business.

Administrative assistants play vital roles in American business, government, and industry. To prepare for these roles, students may choose from any of the three associate degrees or five certificate options described below. There is always a great demand for administrative assistants. Because college-trained administrative assistants possess a high level of skills, maturity, and a sophisticated attitude, they enter an organization with three advantages: 1) they command a better starting salary, 2) they may work for higher level executives, and 3) they will receive promotions more rapidly than those without a college degree.

Students enrolling in this program who have previous keyboarding instruction should contact a member of the Business Office Technology faculty at (203) 285-2177. Students with no previous keyboarding instruction are advised to take Keyboarding for Information Processing I (BOT* 111) in the summer session in order to follow the fall-spring sequence of courses. Students interested in receiving credit for life experience should contact one of the faculty members in the Business Office Technology Department. For more information, call Sheri Valentin, Program Coordinator at (203) 285-2169 or email svalentin@gatewayct.edu.

Course Requirements

First Semester

- BIO* 110 - Principles of the Human Body 3 credits
- **or**
- BIO* 115 - Human Biology 4 credits
- BOT* 111 - Keyboarding for Information Processing I 3 credits
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- ENG* 101 - Composition 3 credits
- HIM* 101 - Medical Terminology 3 credits

Total Semester Credits: 15-16

Second Semester

- BOT* 137 - Word Processing Applications (Word) 3 credits
- BOT* 181 - Medical Coding I 3 credits
- BOT* 279 - BOT Administrative Practicum 4 credits
- BOT* 282 - Medical Administrative Procedures 3 credits

Total Semester Credits: 13

Third Semester

- BOT* 182 - Medical Coding II 3 credits

Total Semester Credits: 3

Total Program Credits: 31-32

Business Office Technology: Medical Administrative Assistant Option, AS

The duties of a medical administrative assistant will vary among medical office environments such as hospitals, outpatient facilities, urgent or walk-in medical clinics and physician practices. In addition to regular office duties, a medical administrative assistant performs specialized tasks. These tasks include: appointment scheduling, medical record management (paper or electronic health information), billing and accounts payable services/procedures, transcribing medical procedures/treatments, medical coding and completing/processing of insurance claims. Students utilize state of the art medical office software/databases to maintain and to archive accurate patient health and financial documentation in accordance with state and federal regulations. For more information, call Sandy Kraus, Program Coordinator at (203) 285-2359 or email skraus@gatewayct.edu.

Program Outcomes

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

- Demonstrate technical proficiency in office applications software including: word processing, operating system, electronic spreadsheet, database management, integrated office applications and presentation graphics.
- Exhibit verbal, non-verbal and written communication skills.
- Key and format business documents and demonstrate proofreading skills.
- Demonstrate effective use of soft skills including: professionalism, adaptability to change, initiative, confidentiality, positive attitude and human-relations and creativity and practice ethical behavior and the principles of honesty and integrity
- Apply critical-thinking strategies and effective decision-making techniques to solve problems.
- Demonstrate self-management skills, including time management and organization.
- Contribute as a productive team member in a culturally and intellectually diverse global environment.

This program provides high quality instruction using state-of-the-art computer technology and current software programs to prepare competent, skilled, and professional office workers who are able to meet the demands of business.

Administrative assistants play vital roles in American business, government, and industry. To prepare for these roles, students may choose from any of the three associate degrees or five certificate options described below. There is always a great demand for administrative assistants. Because college-trained administrative assistants possess a high level of skills, maturity, and a sophisticated attitude, they enter an organization with three advantages: 1) they command a better starting salary, 2) they may work for higher level executives, and 3) they will receive promotions more rapidly than those without a college degree.

Students enrolling in this program who have previous keyboarding instruction should contact a member of the Business Office Technology faculty at (203) 285-2177. Students with no previous keyboarding instruction are advised to take Keyboarding for Information Processing I (BOT* 111) in the summer session in order to follow the fall-spring sequence of courses. Students interested in receiving credit for life experience should contact one of the faculty members in the Business Office Technology Department. For more information, call Sheri Valentin, Program Coordinator at (203) 285-2169 or email svalentin@gatewayct.edu.

Suggested Course Sequence

First Semester

- BOT* 111 - Keyboarding for Information Processing I 3 credits
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- HIM* 101 - Medical Terminology 3 credits
- ENG* 101 - Composition 3 credits
- MAT* 109 - Quantitative Literacy 3 credits (or higher)

Total Semester Credits: 15

Second Semester

- ACC* 100 - Basic Accounting 3 credits
- BES* 218 - Entrepreneurship 3 credits
- or**
- IDS 106 - Critical Thinking - Business 3 credits
- BOT* 137 - Word Processing Applications (Word) 3 credits
- BOT* 181 - Medical Coding I 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits

Total Semester Credits: 15

Third Semester

- BBG* 210 - Business Communication 3 credits
- BIO* 110 - Principles of the Human Body 3 credits
- or**
- BIO* 115 - Human Biology 4 credits
- BOT* 182 - Medical Coding II 3 credits
- CSA* 140 - Database Applications (Access) 3 credits
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 15-16

Fourth Semester

- BOT* 112 - Keyboarding for Information Processing II 3 credits
- BOT* 219 - Integrated Microsoft Office 3 credits
- BOT* 220 - Computerized Communication
(Microsoft PowerPoint, e-mail, Internet) 3 credits
- BOT* 279 - BOT Administrative Practicum 4 credits
- BOT* 282 - Medical Administrative Procedures 3 credits

Total Semester Credits: 16

Total Program Credits: 61-62

Business Office Technology: Office Applications Skills Update Certificate

Designed for practicing office professionals as well as those returning to the workforce. It provides students with the opportunity to update their computer skills, increase their employability and advance in their careers. Students utilize state of the art software applications in word processing, spreadsheet, database management and presentation software. For more information, call Sandy Kraus, Program Coordinator at (203) 285-2359 or email skraus@gatewayct.edu.

Program Outcomes

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

- Demonstrate technical proficiency in office applications software including: word processing, operating system, electronic spreadsheet, database management, integrated office applications and presentation graphics.
- Exhibit verbal, non-verbal and written communication skills.
- Key and format business documents and demonstrate proofreading skills.
- Demonstrate effective use of soft skills including: professionalism, adaptability to change, initiative, confidentiality, positive attitude and human-relations and creativity.
- Practice ethical behavior and incorporate the principles of honesty and integrity.
- Apply critical-thinking strategies and effective decision-making techniques to solve problems.
- Demonstrate self-management skills, including time management and organization.
- Contribute as a productive team member in a culturally and intellectually diverse global environment.

This program provides high quality instruction using state-of-the-art computer technology and current software programs to prepare competent, skilled, and professional office workers who are able to meet the demands of business.

Administrative assistants play vital roles in American business, government, and industry. To prepare for these roles, students may choose from any of the three associate degrees or five certificate options described below. There is always a great demand for administrative assistants. Because college-trained administrative assistants possess a high level of skills, maturity, and a sophisticated attitude, they enter an organization with three advantages: 1) they command a better starting salary, 2) they may work for higher level executives, and 3) they will receive promotions more rapidly than those without a college degree.

Suggested Course Sequence

- | | |
|---|-----------|
| • BOT* 137 - Word Processing Applications (Word) | 3 credits |
| • BOT* 220 - Computerized Communication
(Microsoft PowerPoint, e-mail, Internet) | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |
| • CSA* 140 - Database Applications (Access) | 3 credits |

Total Program Credits: 12

Business Office Technology: Paralegal Option, A.S.

The Legal Administrative Assistant Paralegal Option is a transfer option geared toward entrance into the University of New Haven's paralegal studies certificate or associate degree program. For more information, please call Sandy Kraus, Program Coordinator at 203.285.2359 or email skraus@gatewayct.edu.

Program Outcomes

Upon successful completion, students should be able to:

- Differentiate between the various kinds of law offices, courses, corporate legal departments, law schools, and a wide range of other office settings.
- Exhibit effective verbal and written legal communication skills.
- Demonstrate skills in law office procedures and legal document production.
- Employ the use of technology appropriate for use in the legal environment.
- Proofread and edit documents accurately.

Suggested Course Sequence

First Semester

- ACC* 113 - Principles of Financial Accounting I 3 credits
- BBG* 231 - Business Law I 3 credits
- CSA* 105 - Introduction to Software Applications 3 credits
- or**
- CSC* 101 - Introduction to Computers 3 credits
- POL* 111 - American Government 3 credits
- Choose any course in CALT:
Critical Analysis/Logical Thinking 3 credits

Total Semester Credits: 15

Second Semester

- BBG* 232 - Business Law II 3 credits
- BMG* 210 - Organizational Behavior 3 credits
- CJS* 101 - Introduction to Criminal Justice 3 credits
- ENG* 101 - Composition 3 credits
- MAT* 137 - Intermediate Algebra 3 credits

Total Semester Credits: 15

Third Semester

- BOT* 272 - Legal Administrative Procedures 3 credits
- CSA* 140 - Database Applications (Access) 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- HIS* 101 - Western Civilization I 3 credits
- Choose one course in SK: Scientific Knowledge and Understanding 3 - 4 credits

Total Semester Credits: 15-16

Fourth Semester

- BBG* 210 - Business Communication 3 credits
- BOT* 219 - Integrated Microsoft Office 3 credits
- BOT* 271 - Legal Document Production 3 credits
- BOT* 279 - BOT Administrative Practicum 4 credits
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 16

Total Program Credits: 61-62

CHEMISTRY

CSCU Pathway Transfer Degree: Chemistry Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Chemistry - General Program, B.S.
	Chemistry - American Chemical Society Certified, B.S.
At Southern Connecticut State University	Chemistry, B.S.
	Chemistry - American Chemical Society Certified, B.S.
At Western Connecticut State University	Chemistry - Non-American Chemical Society Approved, B.A.
	Chemistry - American Chemical Society Approved, B.A.
At Charter Oak State College	General Studies - Chemistry Concentration, B.A.

Here is the recommended course of study for the Chemistry Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

First Semester

- CHE* 121 - General Chemistry I 4 credits
- ENG* 101 - Composition 3 credits
- MAT* 254 - Calculus I 4 credits
- Unrestricted Elective: If you have not taken physics in high school, you should use this elective to take

Total Semester Credits: 14-15

Second Semester

- CHE* 122 - General Chemistry II 4 credits
- MAT* 256 - Calculus II 4 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one course in Aesthetic Dimensions 3 credits

Total Semester Credits: 14

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- CHE* 211 - Organic Chemistry I 4 credits
- PHY* 221 - Calculus-Based Physics I 4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one Unrestricted Elective 3 credits
- **Unrestricted Electives:** You are free to choose any course at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at CCSU, ECSU and WCSU or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field; you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC – but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 14

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation.

- PHY* 222 - Calculus-Based Physics II 4 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Oral Communications 3 credits
- Choose one Unrestricted Elective 0 - 3 credits (if you have taken PHY 110 or MAT 186, you will not need this elective)

Total Semester Credits: 14-17

CLEAN WATER MANAGEMENT

Clean Water Management Certificate

The Clean Water Management Certificate will train students to meet the skill and knowledge specifications required by higher level water pollution control facility operators in one of the more than 100 public and private plants in the state following the guidelines of the CT Department of Environmental Protection (DEP). The program will provide classroom and laboratory-based academic preparation for the Class I, II, III and IV Wastewater Treatment Plant Operator certification examinations administered by the DEP. Specialized wastewater courses may be offered at local municipal wastewater treatment plants. For more information, contact Eric Flynn at (203) 285-2371 or e-mail eflynn@gatewayct.edu.

Learning Outcomes:

- Working knowledge of wastewater treatment operations including preliminary, primary, secondary, tertiary, nutrient removal and disinfection treatment as well as the handling and disposal of sludge/biosolids;
- Working knowledge of the levels of treatment necessary to protect aquatic life and human health in Long Island Sound and other Connecticut surface waters and groundwaters;
- Working knowledge of the laboratory test methods necessary to ensure the proper operation of wastewater treatment plants, protect surface and groundwater quality as well as human health, and meet all state and federal regulatory and permit requirements;
- Knowledge to become eligible to take and pass the Class I, II, III or IV CT DEP Wastewater Treatment Plant Operator Certification Examinations.

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • CWM* 106 - Introduction to Utility Management | 3 credits |
| • CWM* 108 - Chemistry, Biology & Mathematics of Clean Water | 4 credits |
| • CWM* 110 - Clean Water I | 3 credits |
| or | |
| • CWM* 112 - Clean Water II | 3 credits |
| • CWM / ENV / EVS / WMT (Elective) | 3 credits |

Total Semester Credits: 13

Second Semester

- CWM* 112 - Clean Water II 3 credits
- or**
- CWM* 114 - Clean Water III 3 credits
- ENV* 110 - Environmental Regulations 3 credits
- CWM / ENV / EVS / WMT (Elective) 3 credits +
- Biology (Elective) 3 credits ++

Total Semester Credits: 13

Total Program Credits: 26

COMMUNICATIONS

CSCU Pathway Transfer Degree: Communication Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Strategic Communications, B.A.
At Eastern Connecticut State University	Communication, B.S.
At Southern Connecticut State University	Communication - Advertising and Promotions, B.S.
	Communication - Film, Television, and Digital Production, B.S.
	Personal and Professional Communication, B.S.
At Western Connecticut State University	Communication - Communication Studies, B.A.
At Charter Oak State College	General Studies - Communication Concentration, B.A.

Here is the recommended course of study for the Communication Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for more information:

Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- COM* 173 - Public Speaking 3 credits
- ENG* 101 - Composition 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

In order to graduate and be guaranteed admission to a State University or to Charter Oak State College, you must earn an overall 2.0 grade point average.

Total Semester Credits: 15

Second Semester

- COM* 101 - Introduction to Mass Communication 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- Choose one course in Quantitative Reasoning 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-16

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- COM* 121 - Journalism I 3 credits
- or
- COM* 141 - Television Production I 3 credits
- or
- COM* 172 - Interpersonal Communication 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one course in General Education I - Creativity 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- Choose one course in Critical Thinking and Logical Analysis 3 credits
- Choose one course in Oral Communications 3 credits
- Choose one course in General Education II - Global Knowledge 3 credits
- Choose two additional Communications courses 6 credits

Total Semester Credits: 15

Total Program Credits: 60-61

COMPUTER AIDED DRAFTING (CAD)

Computer Assisted Drafting Certificate

This certificate program develops entry-level skills for individuals interested in using Computer Aided Drafting (CAD) to produce detailed architectural or schematic drawings based on rough sketches, specifications, and calculations made by scientists, engineers, and designers. CAD software permits easy modification and preparation of designs. Furthermore, it allows a drafter to view a design from various angles not easily achieved with traditional board approaches. AutoCAD and Solidworks software is used in this program. Every course offered in the Computer Aided Drafting certificate program is offered in the Manufacturing Engineering Technology program. Every graduate of the Manufacturing Engineering Technology program will automatically qualify for a CAD certificate. Students enrolling in this program should plan on spending approximately \$60.00 on drafting equipment. For more information, call the Interim Department Chair, Eric Flynn at (203) 285-2371 or e-mail eflynn@gatewayct.edu.

CAD Program Outcomes

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

- Prepare drawings of machine components through techniques of technical drawing
- Use AutoCad software to develop two-dimensional technical drawings
- Utilize Solidworks and other parametric software to design, develop, and analyze three-dimensional components
- Understand the fundamentals and foundations of manufacturing processes
- Develop an understanding of the principles of algebra and trigonometry.

Program Requirements

First Semester

- | | |
|---|-----------|
| • ARC* 133 - Technical Drafting | 3 credits |
| • CAD* 108 - CAD Introduction | 3 credits |
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • MFG* 102 - Manufacturing Processes | 3 credits |

Total Semester Credits: 12

Second Semester

- | | |
|---|-----------|
| • CAD* 200 - 3D CAD Modeling | 4 credits |
| • CAD* 220 - Parametric Design | 3 credits |
| • CAD* 271 - CAD Solids Mechanical Pro-Engineer | 3 credits |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits |

Total Semester Credits: 13

Total Program Credits: 25

COMPUTER ENGINEERING TECHNOLOGY

Computer Engineering Technology, AS

The Computer Engineering Technology program provides training in hardware configuration, software development, programming applications, and the interfacing of hardware/software and communication systems. Students receive hands-on training on various computer systems, test equipment, and software products.

Program Outcomes

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

- Identify, analyze, and solve technical problems in computer programming, circuitry, hardware/software and communication systems
- Use diagnostic software and testing equipment to troubleshoot problems
- Install and configure computer hardware and software
- Understand programming and assembly languages
- Use CAD technology to design, create, analyze, simulate and evaluate electrical circuits and schematics
- Work cooperatively and productively with others in a laboratory test setting

Graduates of this program possess the skills to troubleshoot, repair, configure, install, and program basic computer systems. The experience and training gained in the Computer Engineering Technology Associate in Science degree program will also prepare students for the national CompTIA Computer Technicians A+ Certification Examination (offsite). For more information, contact Interim Department Chair, Eric Flynn at (203) 285-2371 or e-mail eflynn@gatewayct.edu.

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • CAD* 126 - Electronics Graphics | 3 credits |
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • EET* 110 - Electric Circuits I | 4 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits |

Total Semester Credits: 16

Second Semester

- | | |
|--|-----------|
| • CET* 124 - Structured Programming | 4 credits |
| • EET* 136 - Electronics I | 4 credits |
| • MAT* 186 - Precalculus | 4 credits |
| • Choose one course in Gen Ed - SP: Social Phenomena/
Knowledge/Understanding | 3 credits |

Total Semester Credits: 15

Third Semester

- CET* 126 - Computer Servicing 4 credits
- CET* 210 - Computer Systems Software 4 credits
- CST* 180 - Networking I 4 credits
- COM* 173 - Public Speaking 3 credits
- Choose one course in CALT:
Critical Analysis/Logical Thinking 3-4 credits

Total Semester Credits: 18-19

Fourth Semester

- CET* 270 - Computer Engineering
Technology Practicum 3 credits
- CST* 273 - Security Management Practices 3 credits
- EET* 252 - Digital Electronics 4 credits
- PHY* 121 - General Physics I 4 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits

Total Semester Credits: 17

Total Program Credits: 66-67

COMPUTER SCIENCE

Computer Science Certificate

The Computer Science Certificate program provides students with requisite skills for entry-level positions. The program is especially suited to those who wish to gain more marketable or updated skills. For more information, call Stacy Walker, Program Coordinator, at (203) 285-2462 or email swalker@gatewayct.edu.

Program Outcomes

- Identify the principle components of a computer system and describe their typical characteristics
- Solve problems and develop algorithms using control structure abstractions of sequence, selection, and repetition, following a disciplined approach
- Describe the social responsibilities of the computing professional and the impact of computing on society
- Discuss the organization of the Internet and demonstrate the ability to use various Internet tools
- Describe LAN topologies, protocols, transmission media, and access methods
- Analyze, design, code, test, and debug sophisticated and complex programs in two high-level languages using appropriate software design methodologies and design and query a relational database using Structured Query Language (SQL).

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • CSC* 101 - Introduction to Computers | 3 credits |
| or | |
| • CSA* 105 - Introduction to Software Applications | 3 credits |
| • CSC* 150 - Database Applications
and Design - Using SQL | 4 credits |
| • CST* 133 - Networking Fundamentals I | 4 credits |
| or | |
| • CST* 180 - Networking I | 4 credits |

Total Semester Credits: 14

Second Semester

- | | |
|--|-------------|
| • CSC* 215 - Programming with Object Oriented C++ | 4 credits |
| • CST* 152 - Introduction to Web Page and Design | 4 credits |
| Restricted Elective - Choose any CSC or CST course | 3-4 credits |

Total Semester Credits: 11-12

Total Program Credits: 25-26

Computer Science, AS

Students enrolled in the Computer Science Technology program receive a broad programming background, including training in C++, and any of the following restricted electives: Java, JavaScript, PHP, Python, Visual Basic, SQL and XHTML, microcomputer software packages and networking. Using industry-oriented applications, students have the opportunity to design, write, and test programs in a variety of programming languages. Furthermore, this program introduces networks that allow users to share hardware, software, and information. The Computer Science program allows students to design much of their technical curriculum based on their unique goals. Students may take a broad variety of courses or prepare for such specific technical careers as application programmers, programmer analysts, systems analysts, or systems programmers. For more information, call Stacy Walker, Program Coordinator, at (203)285-2462 or email swalker@gatewayct.edu.

Program Outcomes

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

- Identify the principal components of a computer system and describe their typical characteristics
- Solve problems and develop algorithms using control structure abstractions of sequence, selection, and repetition, following a disciplined approach
- Describe the social responsibilities of the computing professional and the impact of computing on society
- Discuss the organization of the Internet and demonstrate the ability to use various Internet tools
- Describe LAN topologies, protocols, transmission media, and access methods
- Analyze, design, code, test, and debug sophisticated and complex programs in two high-level languages using appropriate software design methodologies and design and query a relational database using Structured Query Language (SQL)

Suggested Course Sequence

First Semester

- CSA* 105 - Introduction to Software Applications 3 credits
- or**
- CSC* 101 - Introduction to Computers 3 credits
- ENG* 101 - Composition 3 credits
- MAT* 115 - Mathematics for Science and Technology 3 credits (or higher)
- Choose one course in (OC: Oral Communication) 3 credits
- Restricted Elective (see below) 3-4 credits

Total Semester Credits: 15-16

Second Semester

- CSC* 215 - Programming with Object Oriented C++ 4 credits
- CST* 180 - Networking I 4 credits
- or**
- CST* 133 - Networking Fundamentals I 4 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- Restricted Elective (see below) 3-4 credits

Total Semester Credits: 14-15

Third Semester

- CSC* 150 - Database Applications and Design - Using SQL 4 credits
- Choose one course in (Gen Ed - SP: Social Phenomena/Knowledge/Understanding) 3 credits
- Choose one course in (Gen Ed - CALT: Critical Analysis/Logical Thinking) 3 credits
- Restricted Electives (see below) 3-4 credits

Total Semester Credits: 16-18

Fourth Semester

- CSA* 296 - CWE - Computer Applications 3 credits
- **or**
- Restricted Elective (see below) 3-4 credits
- CSC* 250 - Systems Analysis and Design 3 credits
- Choose one course in BIO*, CHE*, EAS*, EVS*, PHY* (Gen Ed - SK: Scientific Knowledge & Understanding) 3-4 credits
- Restricted Electives (see below) 6-8 credits

Total Semester Credits: 15-19

Total Program Credits: 60-68

Restricted Electives

- Any CSC* or CST* course 3-4 credits

CSCU Pathway Transfer Degree: Computer Science Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Computer Science, B.S. - Alternative Program
	Computer Science, B.S. - Honors
At Eastern Connecticut State University	Computer Science, B.S.
At Southern Connecticut State University	Computer Science, B.S. - General Program
At Western Connecticut State University	Computer Science, B.S.

Here is the recommended course of study for the Computer Science Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for this program:

- Professor Stacy Walker: SWalker@gatewayct.edu
- Professor Lauren Doninger: LDoninger@gatewayct.edu

First Semester

- CSC* 124 - Programming Logic & Design with Python 3 credits
- ENG* 101 - Composition 3 credits
- MAT* 186 - Precalculus 4 credits
- Choose one course in Scientific Reasoning from the following:
- BIO* 121, CHE* 121, PHY* 221

Total Semester Credits: 14

Second Semester

- CSC* 223 - Introduction to Java Programming 4 credits
- MAT* 254 - Calculus I 4 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Knowledge and Understanding (from list below—you must choose the second course in the sequence you began in the first semester) 4 credits
- BIO* 122, CHE* 122, PHY* 222

Total Semester Credits: 15

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- CSC* 150 - Database Applications and Design - Using SQL 4 credits
- MAT* 256 - Calculus II 4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one course in Aesthetic Dimensions 3 credits

Total Semester Credits: 17

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- CSC* 257 - Web Development with PHP 4 credits
- EET* 252 - Digital Electronics 4 credits
- MAT* 210 - Discrete Mathematics 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Oral Communication 3 credits

Total Semester Credits: 17

Total Program Credits: 63

Computer Science Applications

No active programs available.

COMPUTER SCIENCE TECHNOLOGY

Computer Science: Data Security Specialist Option, AS

The Computer Science: Data Security Specialist will prepare students to be employed as specialists in I.T. data security. This program addresses the security specialist's everyday tasks of configuring, monitoring, and repairing areas with security breach potential. These tasks include data security, Internet security, network security, email security, client and server forensics, and security for databases and database users. Instruction in recognizing and intervening with malware is included as well.

Program Outcomes

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

- Recognize security vulnerabilities for multiple types of networks and apply appropriate security hardware and software to network structures
- Practice the fundamentals of cryptography, data hiding/steganography, and forensics
- Identify malware, internal/external security attacks, and intervention procedures/protocols
- Employ the risk management model to identify forensically corporate threats and asses them in terms of their likelihood and impact
- Analyze the transmission infrastructure and client/server hardware and software that support the Internet
- Devise the framework for a generic security policy manual, identifying the items to be protected, the parties responsible, and a plan for response when a security breach is uncovered

Suggested Course Sequence

First Semester

- CSC* 101 - Introduction to Computers 3 credits
- or**
- CSA* 105 - Introduction to Software Applications 3 credits
- CST* 133 - Networking Fundamentals I 4 credits
- ENG* 101 - Composition 3 credits
- MAT* 175 - College Algebra and Trigonometry 3 credits
- Choose one course in
(Gen Ed - CALT: Critical Analysis/Logical Thinking) 3 credits

Total Semester Credits: 16

Second Semester

- CST* 280 - Network Security 3 credits
- CST* 284 - Malware and Intervention 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- Choose one course in
(Gen Ed - OC: Oral Communications) 3 credits
- Choose any course in BIO*, CHE*, EAS*, EVS*, PHY*
(Gen Ed - SK: Scientific Knowledge & Understanding) 3-4 credits

Total Semester Credits: 15-16

Third Semester

- CST* 285 - Attacks and Counter Measures 3 credits
- CST* 287 - Cryptography Fundamentals 3 credits
- Choose one course in (Gen Ed - SP: Social Phenomena) 3 credits
- Restricted Elective 1 (see below) 3 credits
- Restricted Elective 2 (see below) 3 credits

Total Semester Credits: 15**Fourth Semester**

- CSC* 215 - Programming with Object Oriented C++ 4 credits
- CST* 196 - Protocol Analysis 3 credits
- CST* 289 - Cyber Forensics 3 credits
- Restricted Elective 3 (see below) 4 credits

Total Semester Credits: 14**Total Program Credits: 60-61****Restricted Electives****Restricted Electives 1**

- CSC* 124 - Programming Logic & Design with Python 3 credits
- CSC* 257 - Web Development with PHP 4 credits
- CSC* 262 - Programming Mobile Devices I 3 credits
- CSC* 263 - Programming Mobile Devices II 3 credits
- CST* 152 - Introduction to Web Page and Design 4 credits
- CST* 259 - JavaScript 4 credits

Restricted Electives 2

- CSA* 140 - Database Applications (Access) 3 credits
- CSC* 150 - Database Applications and Design -
Using SQL 4 credits

Restricted Electives 3

- CSC* 110 - Computer Logic and Problem Solving 3 credits
- CSC* 124 - Programming Logic & Design with Python 3 credits
- CSC* 207 - Introduction to Visual Basic I 4 credits
- CSC* 208 - Advanced Visual Basic 4 credits
- CSC* 215 - Programming with Object Oriented C++ 4 credits
- CSC* 223 - Introduction to Java Programming 4 credits
- CSC* 257 - Web Development with PHP 4 credits
- CST* 259 - JavaScript 4 credits

Computer Science: Mobile Application Development Option, AS

The Computer Science Mobile Application Development program will enable students to develop skills in website and native app design, learn relevant programming languages for application development on a variety of smart-devices and learn the policies and practical application of current and emerging standards and technologies across multiple mobile devices For more information, call Stacy Walker, Program Coordinator, at (203) 285-2462 or email swalker@gatewayct.edu.

Program Outcomes

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

- Plan, design, code, test and debug solutions to programming problems using a variety of programming languages
- Gain an understanding of fundamental object-oriented programming concepts and principles, including encapsulation, inheritance, and polymorphism.
- Compare and contrast mobile platforms, their tools, and the development process
- Install software development kits for each mobile item platform
- Demonstrate understanding of the development cycle for mobile devices including building, testing, and deployment
- Create apps for Apple iOS, Google Android, and Microsoft Windows and create cross-platform web applications for mobile devices

Suggested Course Sequence

First Semester

- | | |
|---|-----------------------|
| • CSC* 101 - Introduction to Computers | 3 credits |
| or | |
| • CSA* 105 - Introduction to Software Applications | 3 credits |
| • CSC* 262 - Programming Mobile Devices I | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 115 - Mathematics for Science and Technology | 3 credits (or higher) |

Total Semester Credits: 15

Second Semester

- | | |
|---|-----------|
| • CSC* 215 - Programming with Object Oriented C++ | 4 credits |
| • CSC* 263 - Programming Mobile Devices II | 3 credits |
| • CST* 180 - Networking I | 4 credits |
| or | |
| • CST* 133 - Networking Fundamentals I | 4 credits |
| • ENG* 102 - Literature and Composition | 3 credits |
| or | |
| • ENG* 200 - Advanced Composition | 3 credits |
| • Choose one course in (OC: Oral Communications) | 3 credits |

Total Semester Credits: 17

Third Semester

- CSC* 150 - Database Applications and Design -
Using SQL 4 credits
- Choose one course in
(CALT: Critical Analysis/Logical Thinking) 3 credits
- Choose one course in
(SP: Social Phenomena/Knowledge/Understanding) 3 credits
- Restricted Elective (see below) 3-4 credits

Total Semester Credits: 16-18**Fourth Semester**

- CSA* 296 - CWE - Computer Applications 3 credits
- or**
- Restricted Elective (see below) 3-4 credits
- CSC* 223 - Introduction to Java Programming 4 credits
- CSC* 250 - Systems Analysis and Design 3 credits
- Choose any course in BIO*, CHE*, EAS*, EVS*, PHY*
(SK: Scientific Knowledge & Understanding) 3-4 credits

Total Semester Credits: 12-13**Total Program Credits: 60-63****Restricted Electives**

- Any CSC* or CST* class

Computer Science: Networking Administrator Certificate

The objective of the Computer Science Network Administrator Certificate is to prepare students for an entry-level position in information technology as a Network Administrator. This certificate addresses the network administrator's day to day tasks of installation, equipment setup, hardware and software configuration, and the maintenance of users and groups, and other network resources on a domain network system. Students can be eligible for the CompTIA Network + certificate.

Program Outcomes

- Install, manage, and troubleshoot Client and Server software
- Organize and maintain Windows 2000 Servers and Netware Servers
- Set up and manage user accounts
- Install, configure, and maintain directory services and network printers
- Backup and restore data
- Install and access remote connectivity

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • CSC* 101 - Introduction to Computers | 3 credits |
| • CST* 127 - Server Operating System | 4 credits |
| • CST* 133 - Networking Fundamentals I | 4 credits |

Total Semester Credits: 11

Second Semester

- | | |
|--|-----------|
| • CST* 149 - Computer Network Hardware | 4 credits |
| • CST* 188 - Networking Fundamentals II | 4 credits |
| • CST* 273 - Security Management Practices | 3 credits |

Total Semester Credits: 11

Total Semester Credits: 22

Computer Science: Networking Certificate

The objective of the Computer Science Networking Certificate is to help meet the growing need for qualified networking specialists in the Greater New Haven area. This Certificate will allow students to focus on the specific knowledge, skills and abilities that have been identified and recommended by the computer industry. Upon successful completion, the graduating student will leave Gateway Community College with the ability and knowledge to pass three industry -recognized networking examinations: Certified Cisco Network Engineer; Network+; and Novell Certified Network Administrator. For more information, call Stacy Walker, Program Coordinator, at (203) 285-2462 or email swalker@gatewayct.edu.

Program Outcomes

- Plan and install security
- Describe physical topologies, logical topologies and all terminology used in networked environments
- Identify and describe the functions of each of the layers of the OSI reference model and the TCP/IP network layer protocols
- Describe the different classes of IP addressing and subnetting
- Configure IP addresses
- Describe LAN segmentation using bridges, routers, and switches

First Semester

- | | |
|--|-----------|
| • CSC* 101 - Introduction to Computers | 3 credits |
| or | |
| • CSA* 105 - Introduction to Software Applications | 3 credits |
| • CST* 180 - Networking I | 4 credits |
| • CST* 181 - Networking II | 4 credits |

Total Semester Credits: 11

Second Semester

- CST* 182 - Networking III 4 credits
- CST* 183 - Networking IV 4 credits
- Restricted Electives (see below) 3-4 credits

Total Semester Credits: 11-12

Total Program Credits: 22-23

Restricted Electives

- | | |
|--|-----------|
| • CST* 127 - Server Operating System | 4 credits |
| • CST* 133 - Networking Fundamentals I | 4 credits |
| • CST* 196 - Protocol Analysis | 3 credits |
| • CST* 234 - Network+ | 3 credits |
| • CST* 273 - Security Management Practices | 3 credits |
| • CST* 280 - Network Security | 3 credits |
| • CST* 284 - Malware and Intervention | 3 credits |
| • CST* 285 - Attacks and Counter Measures | 3 credits |
| • CST* 287 - Cryptography Fundamentals | 3 credits |
| • CST* 289 - Cyber Forensics | 3 credits |

Computer Science: Networking Option, A.S.

The Computer Science Networking Option allows students to focus on the specific knowledge, skills, and abilities identified and recommended by the computer network industry. The program will prepare students for the networking field, specifically focusing on certification as a or Network Administrator. It is highly recommended that students consult with the Computer Science program coordinator for specific advising.

Network Administrator Path

This path takes you through the lower levels of networking mainly working with network devices such as switches, routers, server/client computers, server/client operating systems, printers, KVM switches, wireless devices, data backup devices, power backup devices, wire racks, patch panels, wall plates and network wiring. Students completing this path can earn a Gateway Community College certificate as well as be eligible to apply for the CompTIA Network+ certificate.

Program Outcomes

Upon the successful completion of all program requirements and the path chosen, graduates should be able to:

- Install, manage and troubleshoot Client and Server software
- Organize and maintain Windows 2000 Servers and Netware Servers
- Set up and manage user accounts
- Install, configure, and maintain directory services and network printers
- Backup and restore data
- Install and access remote connectivity.

Computer Science: Networking Option (Cisco/Network Admin)

The Computer Science Networking Option allows students to focus on the specific knowledge, skills, and abilities identified and recommended by the computer network industry. The program will prepare students for the networking field, specifically focusing on certifications as Cisco Certified Network Associate (CCNA). It highly recommended that students consult with the Computer Science Program Coordinator, Stacy Walker at (203) 285-2462 or SWalker@gatewayct.edu.

First Semester

- | | |
|---|-----------------------|
| • CSC* 101 - Introduction to Computers | 3 credits |
| • CST* 133 - Networking Fundamentals I | 4 credits |
| or | |
| • CST* 180 - Networking I | 4 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits (or higher) |

Total Semester Credits: 13

Second Semester

- CSC* 215 - Programming with Object Oriented C++ 4 credits
- ENG* 102 - Literature and Composition 3 credits
- ENG* 200 - Advanced Composition 3 credits
- Choose one course in Oral Communication 3 credits
- Restricted Electives (see below) 6 credits

Total Semester Credits: 16

Third Semester

- CSC* 150 - Database Applications and Design - Using SQL 4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Restricted Elective (see below)
- Restricted Elective (see below) 4 credits

Total Semester Credits: 17

Fourth Semester

- CSA* 296 - CWE - Computer Applications 3 credits
- CSC* 250 - Systems Analysis and Design 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Restricted Elective (see below) 4 credits

Total Semester Credits: 14-15

Total Program Credits: 60-61

Restricted Electives

- CST* 127 - Server Operating System 4 credits
- CST* 133 - Networking Fundamentals I 4 credits
- CST* 196 - Protocol Analysis 3 credits
- CST* 234 - Network+ 3 credits
- CST* 273 - Security Management Practices 3 credits
- CST* 280 - Network Security 3 credits
- CST* 284 - Malware and Intervention 3 credits
- CST* 285 - Attacks and Counter Measures 3 credits
- CST* 287 - Cryptography Fundamentals 3 credits
- CST* 289 - Cyber Forensics 3 credits

CONNECTICUT COLLEGE OF TECHNOLOGY

College of Technology: Engineering Science, AS

The Connecticut College of Technology (COT) pathway programs allow community college students to an integrated curriculum at Connecticut's public and private colleges and universities, allowing individuals to begin their studies at Gateway Community College and progress directly into a bachelor's degree program at a 4-year university. The curriculum consists of two distinct pathways: engineering and technology. For more information, please contact the Program Coordinator Susan Spencer at 203.285.2452 or email SSpencer@gatewayct.edu, Office #S401E.

COT - Engineering Science Program Outcomes

- Apply engineering, mathematical, scientific and technological principles and concepts to identify and formulate solutions to engineering problems
- Apply critical-thinking and problem-solving skills to solve engineering problems
- Demonstrate the ability to function on teams
- Recognize the need to engage in life-long learning.

The student may transfer to the following institutions:

- University of Connecticut
- University of Bridgeport
- School of Engineering at the University of Hartford
- School of Engineering at the University of New Haven
- School of Engineering at Fairfield University
- School of Technology at Central Connecticut State University
- Charter Oak State College

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • CHE* 121 - General Chemistry I | 4 credits |
| • EGR* 111 - Introduction to Engineering | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 254 - Calculus I | 4 credits |
| • PSY* 111 - General Psychology I | 3 credits |

Total Semester Credits: 17

Second Semester

- | | |
|---------------------------------------|-------------|
| • CHE* 122 - General Chemistry II | 4 credits |
| • MAT* 256 - Calculus II | 4 credits |
| • PHY* 221 - Calculus-Based Physics I | 4 credits |
| • Restricted Elective (see below) | 3-4 credits |

Total Semester Credits: 15-16

Third Semester

- EGR* 211 - Engineering Statics 3 credits
- HIS* 101 - Western Civilization I 3 credits
- MAT* 268 - Calculus III: Multivariable 4 credits
- PHL* 111 - Ethics 3 credits
- PHY* 222 - Calculus-Based Physics II 4 credits

Total Semester Credits: 17**Fourth Semester**

- EGR* 212 - Engineering Dynamics 3 credits
- ENG* 102 - Literature and Composition 3 credits
- **or**
- ENG* 200 - Advanced Composition 3 credits
- ART* 101 - Art History I 3 credits
- **or**
- ART* 102 - Art History II 3 credits
- **or**
- MUS* 101 - Music History and Appreciation I 3 credits
- MAT* 285 - Differential Equations 3 credits
- Elective 3 credits
- Restricted Elective (see below) 3 credits

Total Semester Credits: 15**Total Program Credits: 64-66****Restricted Electives:**

For more information, contact Susan Spencer, Program Coordinator at (203) 285-2452 or e-mail sspencer@gatewayct.edu.

- ARC* 133 - Technical Drafting 3 credits
- CAD* 108 - CAD Introduction 3 credits
- CET* 110 - DC/AC Circuits 5 credits
- CET* 116 - Computer Applications for Technology 3 credits
- CET* 124 - Structured Programming 4 credits
- ECN* 101 - Macroeconomics 3 credits

College of Technology: Technology Studies, AS

The Connecticut College of Technology (COT) pathway programs allow community college students to an integrated curriculum at Connecticut's public and private colleges and universities, allowing individuals to begin their studies at Gateway Community College and progress directly into a bachelor's degree program at a 4-year university. The curriculum consists of two distinct pathways: engineering and technology. For more information, please contact the Program Coordinator Susan Spencer at 203.285.2452 or email SSpencer@gatewayct.edu, Office #S401E.

COT - Engineering Science Program Outcomes

- Apply mathematical, scientific, and technological principles and concepts to identify and formulate solutions to technical problems
- Apply critical-thinking and problem-solving skills to solve technical problems
- Demonstrate the ability to function on teams
- Recognize the need to engage in life-long learning.

The student may transfer to the following institutions:

- School of Technology at Central Connecticut State University
- Charter Oak State College

Suggested Course Sequence

First Semester

- | | |
|-------------------------------------|-----------|
| • ENG* 101 - Composition | 3 credits |
| • HIS* 101 - Western Civilization I | 3 credits |
| • MAT* 186 - Precalculus | 4 credits |
| • PHY* 121 - General Physics I | 4 credits |
| • PSY* 111 - General Psychology I | 3 credits |

Total Semester Credits: 17

Second Semester

- | | |
|---|-----------|
| • CAD* 108 - CAD Introduction | 3 credits |
| • ECN* 101 - Macroeconomics | 3 credits |
| • ENG* 102 - Literature and Composition | 3 credits |
| • PHY* 122 - General Physics II | 4 credits |
| • MEC* 104 - Mechanics - Statics | 3 credits |

Total Semester Credits: 16

Third Semester

- CHE* 121 - General Chemistry I 4 credits
- COM* 173 - Public Speaking 3 credits
- MAT* 167 - Principles of Statistics 3 credits
- ART* 101 - Art History I 3 credits
- or**
- ART* 102 - Art History II 3 credits
- or**
- MUS* 101 - Music History and Appreciation I 3 credits
- MEC* 265 - Materials Science 4 credits
- Elective 3 credits

Total Semester Credits: 17**Fourth Semester**

- CAD* 200 - 3D CAD Modeling 4 credits
- PHL* 111 - Ethics 3 credits
- GEO*, POL*, or HIS* (Elective) 3 credits
- Restricted Electives (see below) 6 credits

Total Semester Credits: 16**Total Program Credits: 66****Restricted Electives:**

For more information, contact Susan Spencer, Program Coordinator at (203) 285-2452 or e-mail sspencer@gatewayct.edu.

- ARC* 133 - Technical Drafting 3 credits
- BME* 110 - Biomedical Technology 2 credits
- BME* 112 - Biomedical Electrical Circuits 5 credits
- BME* 114 - Biomedical Electronics 5 credits
- BME* 116 - Physiological Systems 4 credits
- BME* 210 - Biomedical Instrumentation 4 credits
- BME* 212 - Biomedical Equipment Design 4 credits
- BME* 214 - Advanced Biomedical Instrumentation 4 credits
- BME* 220 - Biomedical Practicum 3 credits
- CAD* 126 - Electronics Graphics 3 credits
- CET* 110 - DC/AC Circuits 5 credits
- CET* 116 - Computer Applications for Technology 3 credits
- CET* 120 - Computer Electronics 5 credits
- CET* 124 - Structured Programming 4 credits
- CET* 126 - Computer Servicing 4 credits
- CET* 210 - Computer Systems Software 4 credits
- CET* 220 - Digital/Data Communications 4 credits
- CSC* 262 - Programming Mobile Devices I 3 credits
- CSC* 263 - Programming Mobile Devices II 3 credits
- CSC* 101 - Introduction to Computers 3 credits
- CSC* 110 - Computer Logic and Problem Solving 3 credits

- CSC* 124 - Programming Logic & Design with Python 3 credits
- CSC* 150 - Database Applications and Design - Using SQL 4 credits
- CST* 133 - Networking Fundamentals I 4 credits
- CST* 180 - Networking I 4 credits
- CST* 181 - Networking II 4 credits
- CST* 182 - Networking III 4 credits
- CST* 183 - Networking IV 4 credits
- CST* 188 - Networking Fundamentals II 4 credits
- CST* 127 - Server Operating System 4 credits
- EET* 103 - Fundamentals of Electricity 4 credits
- EET* 110 - Electric Circuits I 4 credits
- EET* 114 - Electric Circuits II 4 credits
- EET* 136 - Electronics I 4 credits
- EET* 232 - Electronics II 4 credits
- ENV* 110 - Environmental Regulations 3 credits
- ENV* 230 - Environmental Engineering 3 credits
- ENV* 100 - Introduction to Alternative Energy Systems 3 credits
- MEC* 104 - Mechanics - Statics 3 credits
- MEC* 234 - Electromechanical Controls 4 credits
- MEC* 240 - Fundamentals of Thermodynamics 4 credits
- MEC* 250 - Strength of Materials 3 credits
- MEC* 265 - Materials Science 4 credits
- MEC* 271 - Fluid Mechanics 4 credits
- MEC* 283 - Design of Machines 4 credits
- MFG* 102 - Manufacturing Processes 3 credits
- MFG* 108 - Computer Aided Manufacturing 4 credits
- MFG* 116 - Quality Assurance Organization
and Management 4 credits
- MFG* 204 - Advanced Computer Aided Manufacturing 4 credits
- MFG* 208 - Process Engineering 4 credits
- MFG* 210 - Materials of Engineering 4 credits
- MFG* 216 - Tool Designing 4 credits
- MFG* 228 - Computer Integrated Manufacturing I 4 credits

CRIMINAL JUSTICE

CSCU Pathway Transfer Degree: Criminology Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Criminology, B.A.
At Eastern Connecticut State University	Criminology, B.A.
	Sociology with Criminology Minor, B.A.
At Southern Connecticut State University	Sociology with Criminal Justice Concentration, B.A.
At Western Connecticut State University	Justice and Law Administration with Corrections, Probation, and Offender Rehab Option, B.S.
	Justice and Law Administration with Law Enforcement Option, B.S.
	Justice and Law Administration with Legal Studies Option, B.S.
	Justice and Law Administration with Paralegal Studies Option, B.S.
	Justice and Law Administration with Criminology Option, B.S.
At Charter Oak State College	Criminal Justice, B.A.

Here is the recommended course of study for the Criminology Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for this program:

- Professor Lauren Doninger: LDoninger@gatewayct.edu

First Semester

- CJS* 101 - Introduction to Criminal Justice 3 credits
- ENG* 101 - Composition 3 credits
- MAT* 167 - Principles of Statistics 3 credits
- SOC* 101 - Principles of Sociology 3 credits
- Choose one course in Aesthetic Dimensions 3 credits

Total Semester Credits: 15

Second Semester

- Choose one course from: CJS* 105, CJS* 120 3 credits
- Choose one course from: CJS* 210 (this course is not offered at GCC. In order to complete this degree, you will need to take this course online or at another campus or CJS* 213 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 15-16

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- CJS* 102 - Introduction to Corrections 3 credits
- SOC* 240 - Criminology 3 credits
- Choose one course in Scientific Knowledge and Understanding 3 credits
- Choose one course in General Education I or II 3 credits
- Choose any elective course of your choice 3 credits

Total Semester Credits: 15-16

Fourth Semester

- Choose one course from:
- CJS* 211 - Criminal Law I 3 credits
- SOC* 241 - Juvenile Delinquency 3 credits
- CJS* 220 - Criminal Investigation 3 credits
- CJS* 225 - Forensic Science 3 credits
- CJS* 280 - Victimology 3 credits
- CJS* 294 - Contemporary Issues in Criminal Justice 3 credits

Other courses you may choose that are not currently offered at Gateway:

- CJS* 203, Juvenile Justice
- CJS* 228, Forensic Evidence
- CJS* 298, Special Topics in Criminal Justice

- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Oral Communications 3 credits
- Choose one Unrestricted Elective*

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 15

Total Program Credits: 60-61

CULINARY ARTS

Culinary Arts Certificate

The Culinary Arts Certificate program is the first step toward a career in the food service industry. Full and part-time students obtain a well-rounded education, which combines laboratory, classroom, and work experiences. In addition to academic course work, students prepare and serve a wide variety of meals in Cafe Vincenzo staff, faculty, and the public. Individuals who wish to continue their studies following graduation may transfer courses in this program to similar programs at the baccalaureate level. For more information, please contact Chef Christopher Gentile, Program Coordinator at (203) 285-2432 or cgentile@gatewayct.edu.

Program Learning Outcomes:

- Analyze theory and techniques of food preparation and presentation as well as baking and pastry arts
- Prepare menus incorporating costs, acquisition, and inventory controls
- Summarize basic principles and concepts of the hospitality industry
- Create and cater events
- Prepare basic foods in quantity, including various regional foods and ethnic cuisine
- Evaluate the establishment and maintenance of a safe and sanitary foodservice operation including Hazard Analysis Critical Control Point and State of Connecticut law
- Set-up and operate the 'front of the house'
- Summarize managerial techniques and human resource management practice
- Demonstrate appropriate problem-solving techniques in addressing management problems.

Suggested Course Sequence

First Semester

• HSP* 101 - Principles of Food Preparation	3 credits
• HSP* 103 - Principles of Baking I	3 credits
• HSP* 109 - Food Safety Certification	1 credits
• HSP* 112 - Advanced Food Preparation	4 credits
• HSP* 135 - Service Management	3 credits
• NTR 106 - Culinary Nutrition	2 credits

Total Semester Credits: 16

Second Semester

• HSP* 201 - International Foods	4 credits
• HSP* 210 - Buffet Catering	4 credits
• HSP* 215 - Principles of Baking II	3 credits
• HSP* 296 - Cooperative Education/Work Experience	3 credits

Total Semester Credits: 14

Total Program Credits: 30

Professional Baker Certificate

This certificate is designed to further the education and training for those already working in this field as well as to accommodate individuals entering careers in the field of Pastry Arts. Several credits courses are transferable to the Culinary Arts Certificate. As part of the course requirements, students participate in a work experience opportunity. Individuals who wish to continue their studies following graduation may transfer courses in this program to similar programs at the baccalaureate level. For more information, contact Chef Christopher Gentile at (203) 285-2432 or cgentile@gatewayct.edu.

Program Learning Outcomes:

- Analyze theory and techniques of baking and pastry arts
- Evaluate the establishment and maintenance of a safe and sanitary foodservice operation including Hazard Analysis and Critical Control Point and State of Connecticut law
- Decorate layer cakes with molded and sculpted decorations
- Transfer acquired knowledge to the world of work.

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • HSP* 101 - Principles of Food Preparation | 3 credits |
| • HSP* 103 - Principles of Baking I | 3 credits |
| • HSP* 107 - Icing Artistry I | 3 credits |
| • HSP* 109 - Food Safety Certification | 1 credits |
| • HSP* 215 - Principles of Baking II | 3 credits |

Total Semester Credits: 13

Second Semester

- | | |
|--|-----------|
| • HSP* 216 - Artisan Bread | 3 credits |
| • HSP* 225 - Principles of Baking III | 3 credits |
| • HSP* 296 - Cooperative Education/Work Experience | 3 credits |

Total Semester Credits: 9

Total Program Credits: 22

DENTAL HYGIENE

Pre-Dental Hygiene Transfer Compact: Liberal Arts & Sciences, A.A.

The Gateway Community College Pre-Dental Hygiene Transfer Compact is designed to provide academic opportunities for students who are seeking an Associate of Science or a Bachelor of Science Degree in Dental Hygiene. Students may complete pre-requisite and general education courses at Gateway Community College that will transfer to the University of New Haven's Dental Hygiene Program. Gateway students who complete the Associate in Arts Degree in Liberal Arts & Sciences and have followed the Pre-Dental Hygiene track are eligible to apply for admission to the University of New Haven's Dental Hygiene Program.

After completing the Associate of Science or the Bachelor of Science Degree in Dental Hygiene from the University of New Haven, graduates will be eligible to take both the Dental Hygiene National Board Examination and the Northeast Regional Board Examination in order to apply for the Registered Dental Hygienist (RDH) License. The Program in Dental Hygiene at the University of New Haven is accredited by the Commission on Dental Accreditation of the American Dental Association.

For more information on the Pre-Dental Hygiene Transfer Compact, please contact Mary Beth Banks, Enrollment Services Assistant at 203.285.2388 or e-mail mbanks@gatewayct.edu.

Suggested Course Sequence

First Semester

- BIO* 105 - Introduction to Biology 4 credits
- or**
- BIO* 121 - General Biology I 4 credits
- ENG* 101 - Composition 3 credits
- HIS* 101 - Western Civilization I 3 credits
- or**
- HIS* 102 - Western Civilization II 3 credits
- MAT* 137 - Intermediate Algebra 3 credits (or higher)
- or**
- MAT* 137A - Intermediate Algebra for Advanced Studies 4 credits
- or**
- MAT* 137C - Intermediate Algebra w/Embedded Elementary Algebra 4 credits

Restricted Electives (see below):

- ART* 101 - Art History I 3 credits
- or**
- ART* 102 - Art History II 3 credits
- or**
- MUS* 101 - Music History and Appreciation I 3 credits

Total Semester Credits: 16-17

Second Semester

- BIO* 211 - Anatomy and Physiology I 4 credits
- CHE* 111 - Concepts of Chemistry 4 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- SOC* 101 - Principles of Sociology 3 credits
- Choose one of the following:
FRE* 102, ITA* 102, or SPA* 102 (or higher) 3 credits

Total Semester Credits: 17**Third Semester**

- BIO* 212 - Anatomy and Physiology II 4 credits
- COM* 173 - Public Speaking 3 credits
- DNT* 105 - Introduction to Dental Hygiene I 1 credits
- PHL* 111 - Ethics 3 credits
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 14**Fourth Semester**

- BIO* 235 - Microbiology 4 credits
- DNT* 106 - Introduction to Dental Hygiene II 1 credits
- NTR* 102 - Nutrition I: Principles of Nutrition 3 credits
- PSY* 112 - General Psychology II 3 credits
- Choose one: ECN* 101 or ECN* 102 3 credits

Total Semester Credits: 14**Total Program Credits: 61**

DIAGNOSTIC MEDICAL SONOGRAPHY

Diagnostic Imaging and Therapy: Diagnostic Medical Sonography, AS

The Associate Degree program in Diagnostic Medical Sonography prepares students for employment as an entry-level sonographer in hospitals, clinics, private offices and other facilities where Diagnostic Medical Sonography Imaging is available. The program requires approximately twenty-four months of full-time study. The program is sequential and includes didactic and supervised clinical education for all students. Students are assigned to a variety of clinical practicums while in the program. Students are required to attend all orientation sessions and classes scheduled in the summer.

A description of admissions requirements are available from the Allied Health Division and online at GatewayCT.edu. The associate degree program in Diagnostic Medical Sonography (DMS) provides individuals with the academic and technical skills to perform abdominal, obstetrical, small parts, gynecological, and vascular sonography procedures. Upon completion of the program students will be eligible to apply to take the national registry examination from the American Registry of Radiologic Technologists, and/ or the American Registry of Diagnostic Medical Sonographers (ARDMS). For more information, contact Mary Beth Banks at (203) 285-2388 or e-mail mbanks@gatewayct.edu or the Program Coordinator, Cara Case at (203) 285-2383 or e-mail at ccase@gatewayct.edu

The following pre-requisites must be completed with a grade of C or higher before applying to the Program: BIO* 211, BIO* 212 (within five years prior of application date), PHY* 111, MAT* 175, and ENG* 101.

Mission Statement

The Diagnostic Medical Sonography program at Gateway Community College is committed to educating and preparing competent entry level sonographers who can provide high quality imaging and patient care to members of the community. Furthermore, the program is dedicated to providing tools to support lifelong learning.

Accreditation Expectations

The minimum expectations of the DMS program, as defined by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), are "To prepare competent entry-level general sonographers and vascular technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains." (<https://www.caahep.org/CAAHEP/media/CAAHEP-Documents/DMSStandards.pdf>)

Program Goals and Outcomes

1. Students will demonstrate skills in effective oral and written communication
 - a. Students will apply effective verbal communication skills with classmates, instructors, patients, sonographers, and physicians.
 - b. Students will utilize effective written communication skills with instructors, sonographers, and physicians.
 - c. Students will demonstrate professional and respectful behavior in all interactions.
2. Students will demonstrate skills in critical thinking and problem solving principles and practices of sonography
 - a. Students will evaluate and assess patient requisition in order to perform proper sonographic procedures.
 - b. Students will examine the sonographic and Doppler appearances of iatrogenic, degenerative, inflammatory, traumatic, neoplastic, infectious, obstructive, congenital, metabolic, and immunologic disease practices
 - c. Students will analyze the relationships between various disease processes and hemodynamic states
 - d. Students will explore the various imaging and testing modalities
 - e. Students will examine the effects of pharmacology on disease processes and on sonographic findings

3. Students will demonstrate clinical competence in the practice of sonography
 - a. Student will demonstrate exceptional patient care skills.
 - b. Students will provide a safe environment for patients.
 - c. Students will detect normal anatomy and pathology on sonographic images.
 - d. Students will adhere to the ALARA principle.

4. The program will prepare competent entry-level sonographers.
 - a. Students will maintain high values congruent with the Professional Code of Conduct and the Scope of Practice while adhering to national, institutional and/or departmental standards, and procedures regarding imaging and patient care.

5. Students will achieve personal and professional growth.
 - a. Students will analyze professional publications
 - b. Students will utilize professional web sites.

Program Outcomes

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

- Competently perform entry level sonography exams and tasks
- Evaluate patients and perform quality patient care
- Competently perform entry level sonography exams and tasks
- Evaluate patients and perform quality patient care
- Maintain professional ethics and behaviors as described by the SDMS scope of practice and clinical standards for the Diagnostic Medical Sonographer
- Meet the criteria to apply for certification with the American Registry of Radiologic Technologist (ARRT) and/or the American Registry of Diagnostic Medical Sonographer (ARDMS)
- Be didactically prepared to apply to the American Registry of Diagnostic Medical Sonographers for candidacy to the physics, abdomen/small parts OB/GYN, and vascular examinations.

Pre-Requisites Prior to Admission into the Program:

(All must be completed with a grade of C or better)

- | | |
|---|-----------|
| • BIO* 212 - Anatomy and Physiology II | 4 credits |
| • BIO* 211 - Anatomy and Physiology I | 4 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits |
| • PHY* 111 - Physics for the Life Sciences | 4 credits |

Program Requirements

Summer Session I

- | | |
|---------------------------------------|-----------|
| • DMS* 100 - Principles of Sonography | 4 credits |
|---------------------------------------|-----------|

Total Semester Credits: 4

First Semester

(Practicum at affiliates Tuesday and Thursday)

- DMS* 120 - Abdomen/Small Parts Sonography I 3 credits
- DMS* 121 - Obstetrics and Gynecology Sonography I 3 credits
- DMS* 122 - Clinical Practicum I 2 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits

Total Semester Credits: 11

Second Semester

(Practicum at affiliates Tuesday and Thursday)

- DMS* 123 - Vascular Sonography I 3 credits
- DMS* 124 - Sonographic Physics and Instrumentation I 4 credits
- DMS* 125 - Clinical Practicum II 2 credits
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 12

Summer Session II

Clinical Internship I - (40 hrs./week at affiliates)

- DMS* 220 - Clinical Internship I 4 credits

Total Semester Credits: 4

Third Semester

(Practicum at affiliates Monday, Wednesday, Friday)

- DMS* 221 - Abdomen/Small Parts Sonography II 3 credits
- DMS* 222 - Vascular Sonography II 3 credits
- DMS* 223 - Clinical Practicum III 3 credits

Total Semester Credits: 9

Winter Intersession

Clinical Internship I - (40 hrs./week at affiliates)

- DMS* 224 - Clinical Internship II 1 credits

Total Semester Credits: 1

Fourth Semester

(Practicum at affiliates Monday, Wednesday, Friday)

- DMS* 225 - Obstetrics and Gynecology Sonography II 3 credits
- DMS* 226 - Advanced Sonography Seminar 3 credits
- DMS* 227 - Clinical Practicum IV 3 credits

Total Semester Credits: 9

Total Program Credits: 68

DRAFTING

No active programs available.

DRUG AND ALCOHOL RECOVERY COUNSELOR

Drug and Alcohol Recovery Counselor Certificate

This certificate program prepares students to take the certification exam used by the state of Connecticut (administered by the Connecticut Certification Board) for credentialing as an addiction counselor. This program is ideal for students who are already working in the field of addiction treatment, are receiving credentialed clinical supervision, and would like to be on a fast track for state certification. This program is also beneficial to those who hold advanced degrees (in counseling, social work, or a related field) and who would like to supplement their expertise, effectiveness, and marketability and become eligible for state of Connecticut licensure as an alcohol and drug counselor.

After completing the certificate program, students will have completed all of the substance abuse specific training required to be eligible to sit for the certification exam. Students will have concurrently achieved nearly half of the requirements for an associate degree in Drug and Alcohol Recovery Counseling. Typically, students earn the certificate on their way to completing the associate degree. For more information, contact the Program Coordinator, Cher Shannon, at (203) 285-2321 or e-mail at (cshannon@gatewayct.edu).

Program Learning Outcomes:

Upon completion of the DARC Certificate, graduates will:

- Be prepared for the written Alcohol & Other Drug national examination administered by The Certification Board, Inc.
- Complete the educational hours in the eight required domains in accordance with the CCB and Department of Public Health of Connecticut
- Have acquired the knowledge and skills of an alcohol and drug abuse recovery counselor
- Be fluent in the practice and application of the code of ethics as outlined by the Connecticut Certification Board.

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • DAR* 101 - Public Health Issues: Abuse & Addiction | 3 credits |
| • DAR* 111 - Addiction Counseling I | 3 credits |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 9

Second Semester

- | | |
|--|-----------|
| • DAR* 112 - Group Counseling: Theory & Techniques | 3 credits |
| • DAR* 158 - Biology of Addiction | 3 credits |
| • DAR* 213 - Addiction Counseling II | 3 credits |
| • Restricted (Elective) | 3 credits |

Total Semester Credits: 12

Total Program Credits: 21

Restricted Electives

- | | |
|---|-----------|
| • DAR* 114 - Introduction to Family Systems | 3 credits |
| • DAR* 117 - Substance Abuse Prevention | 3 credits |
| • DAR* 119 - Addiction Counseling in a Correctional Setting | 3 credits |
| • DAR* 212 - Multicultural Addiction Counseling | 3 credits |
| • DAR* 220 - Co-Occurring Disorders Counseling | 3 credits |

Drug and Alcohol Recovery Counselor, AS

Mission Statement

To prepare students to enter the field of alcohol and drug recovery counseling. The program provides students with a strong general education and a solid foundation in: counseling theories and techniques, ethical practice, knowledge of multicultural aspects of working with clients, and critical thinking skills. Students learn how to provide care and treatment to those suffering from substance use disorders. The DARC program seeks to meet the workforce development needs of addiction treatment providers.

The Drug and Alcohol Recovery Counselor (DARC) program educates and trains individuals who seek State of Connecticut certification, employment, job advancement, and increased effectiveness in the field of addictions counseling.

The DARC curriculum provides a balanced program of general education and addiction-specific courses. The combination of courses will challenge students to develop into critical thinkers capable of approaching problems from a variety of viewpoints. The addiction-specific courses are designed to give students a sound foundation in the theories and the science of addiction studies with a disciplined background in: the biopsychosocial disease process of addiction, environmental and familial risk factors, evidence-based treatment models, public health issues, Recovery Model, the counselor code of ethics, and cultural competency. Throughout the DARC program, students are offered a unique combination of traditional classroom work and experiential learning and practice. Students have the opportunity to apply their learning during a two semester (DAR* 251 and DAR* 252 consecutive) internship*.

Students who complete the DARC courses will have met all current Connecticut Certification Board educational training requirements in preparation for becoming a Certified Addiction Counselor and for State of Connecticut credentialing as a drug and alcohol counselor. In addition to the DARC course work, the state of Connecticut requires students to accrue work hours in the field of addiction counseling in order to be eligible to sit for the certification exam (administered by the Connecticut Certification Board).

Acceptance into the Internship (DAR* 251 and DAR* 252) portion of the program is selective and requires a formal application, interview and screening process that is separate from general admission to the College. Completion of DAR* 101, DAR* 111, DAR* 158 and DAR* 212 is required before applying to the Internship. The program courses, DAR* 101, DAR* 111, DAR* 112, DAR* 114, DAR* 117, DAR* 119, DAR* 158, DAR* 212 and DAR* 220 are available to any student who wishes to enroll; however, students are urged to seek guidance from the program coordinator.

*During the Internship year, students are required to carry malpractice liability insurance (the average yearly cost is \$15). Students will be billed separately for this coverage and will be asked to pay the premium at the time of registration.

Professional practice for addiction counselors is based on eight practice dimensions, each of which is necessary for effective performance of the counseling role.

A counselor's success in carrying out a practice dimension depends on his or her ability to attain the competencies underlying that component. Each competency, in turn, depends on its own set of knowledge, skills, and attitudes. For an addiction counselor to be truly effective, he or she should possess the knowledge, skills, and attitudes associated with each competency that are consistent with the counselor's training and professional responsibilities. (Center for Substance Abuse Treatment. Addiction Counseling Competencies: The Knowledge, Skills, and Attitudes of Professional Practice. Technical Assistance Publication (TAP) Series 21. HHS Publication No. (SMA) 15-4171. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2006)

The eight practice dimensions are as follows:

1. Clinical Evaluation
 - a. Screening
 - b. Assessment
2. Treatment Planning
3. Referral
4. Service Coordination
 - a. Implementing the Treatment Plan
 - b. Consulting
 - c. Continuing Assessment and Treatment
5. Counseling
 - a. Individual counseling
 - b. Group counseling
 - c. Counseling Families, Couples, and Significant Others
6. Client, Family, and Community Education
7. Documentation
8. Professional and Ethical Responsibilities

For more information, contact the Program Coordinator, Cher Shannon, at (203) 285-2321 or e-mail at cshannon@gatewayct.edu.

Program Learning Outcomes:

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

- Perform the skills of a recovery counselor in a cross-cultural setting as defined by the Eight Practice Dimensions of an Addiction Counselor
- Practice and apply the code of ethics
- Successfully complete the certification process demonstrating competency in the theoretical sciences of the recovery field
- Apply principles of literacy and information technology to enhance the functions of recovery counseling.

Suggested Course Sequence

First Semester

- DAR* 101 - Public Health Issues: Abuse & Addiction 3 credits
- DAR* 111 - Addiction Counseling I 3 credits
- ENG* 101 - Composition 3 credits
- PHL* 111 - Ethics 3 credits
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 15

Second Semester

- DAR* 112 - Group Counseling: Theory & Techniques 3 credits
- DAR* 158 - Biology of Addiction 3 credits
- DAR* 213 - Addiction Counseling II 3 credits
- PSY* 245 - Abnormal Psychology 3 credits
- COM* 173 - Public Speaking 3 credits

Total Semester Credits: 15

Third Semester

- DAR* 251 - Counseling Internship I 6 credits
- Restricted (Elective) - DARC (see below) 3 Credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- MAT* 109 - Quantitative Literacy 3 credits or higher

Total Semester Credits: 15

Fourth Semester

- DAR* 252 - Counseling Internship II 6 credits
- BIO* 110 - Principles of the Human Body 3 credits
- Choose one course in AD, HK, or SR (Gen Ed) 3-4 Credits
- Open Elective (seek advising from Program Coordinator for the most appropriate options) 3 credits

Total Semester Credits: 15-16

Total Program Credits: 60-61

Admission to the Counseling Internship (DAR* 251 & DAR* 252) is selective, based on a rigorous admission process after successful completion of the DARC core courses with a "C" or better.

Resticted Electives

- DAR* 114 - Introduction to Family Systems 3 credits
- DAR* 117 - Substance Abuse Prevention 3 credits
- DAR* 119 - Addiction Counseling in a Correctional Setting 3 credits
- DAR* 212 - Multicultural Addiction Counseling 3 credits
- DAR* 220 - Co-Occurring Disorders Counseling 3 credits

EARLY CHILDHOOD - SPECIAL EDUCATION

Early Childhood Special Education Certificate

The Early Childhood Special Education Certificate program provides students with both theoretical knowledge and practical skills. Graduates are able to screen and identify the unique needs of preschoolers and their families and define early intervention services needed to address those unique needs. The graduate can describe and plan a flexible, interactive curriculum for preschoolers with disabilities in the regular classroom. This program familiarizes students with laws affecting special education. For more information, call the Early Childhood Special Education Program Coordinator, Dr. Earnestine B. Kirkland, at (203) 285-2189 or e-mail at (ekirkland@gatewayct.edu).

Program Requirements

First Semester

- ECS* 107 - Introduction to Exceptional Children I 3 credits
- ECS* 112 - Introduction to Early Childhood Special Education 3 credits
- PSY* 122 - Child Growth and Development 3 credits
- ENG* 101 - Composition 3 credits

Total Semester Credits: 12

Second Semester

- ECS* 207 - Introduction to Exceptional Children: Seminar II 3 credits
- ECS* 230 - Student Teaching Special Education 6 credits
- PSY* 258 - Behavior Modification 3 credits
- Restricted Elective (see below) 3 credits

Total Semester Credits: 15

Total Program Credits: 27

Restricted Electives

Choose one of the following:

- ECE* 103 - Creative Experiences/Children 3 credits
- ECE* 106 - Music and Movement for Children 3 credits
- ECE* 109 - Science and Math for Children 3 credits
- ECE* 206 - Administration and Supervision of Early Childhood Programs 3 credits
- ECS* 225 - Diagnostic Assessment of Children with Special Needs 3 credits
- ENG* 114 - Children's Literature 3 credits
- SOC* 111 - Child, Family, School and Community 3 credits
- or**
- SPA* 101 - Elementary Spanish I 3 credits

Early Childhood Special Education, AS

The Early Childhood Special Education Associate in Science degree program provides students with both theoretical knowledge and practical skills. Graduates should be able to screen and identify the unique needs of preschoolers and their families and define early intervention services needed to address those unique needs. The graduate will be able to describe and plan a flexible, interactive curriculum for preschoolers with disabilities in the regular classroom. This program will familiarizes students with major laws affecting special education.

The Early Learning Center at the Downtown Campus, along with preschool programs in the Greater New Haven area, offer laboratory facilities to students. One associate degree and one certificate option is available in the Early Childhood Special Education program. Courses taken as part of either program can be transferred to any of Connecticut's participating baccalaureate institutions that offer Early Childhood Education Teacher Certification programs: University of Connecticut's Human Development and Family Relations major and Charter Oak State College's Child Studies concentration. The terms for credit award and student eligibility vary. However, in general, students must meet the following transfer eligibility requirements:

- Be a graduate from a validated associate degree program in Early Childhood Education in Connecticut
- Meet specific admission requirements of the college or university into which transfer is being sought
- Complete all associate degree Early Childhood Special Education courses with a grade of "C" or better and meet the college's or university's requirements for transfer of general education
- Complete all associate degree Early Childhood Education student teaching with a grade of "C" or better in a center accredited by the National Association for the Education of Young Children (NAEYC)
- Furthermore, if a student wishes to transfer into an Early Childhood Education Teacher Certification program, it is strongly recommended that, prior to transfer, he or she demonstrate the following state certification requirements:
 - A score of 1000 or better on the SAT, successful completion of the Praxis I examination, or have initiated the process of taking the Praxis I examination
 - A 2.7 grade point average if seeking admission to a teacher certification education program in Connecticut

For more information, call the Early Childhood Special Education Program Coordinator, Carmelita Valencia-Daye at (203) 285-2172 or e-mail at (CValencia-Daye@gatewayct.edu). For scholarship information, contact CT Charts-a-Course at (800) 832-7784.

Program Outcomes

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

- Know the historical and philosophical bases for ECSE
- Create his or her own philosophy of ECSE and maintain an awareness and sensitiveness to culturally diverse populations
- Identify and explain the laws that mandate services for children with special needs and the eligibility requirements for families of children with special needs
- Identify and explain the following planning plans used in ECSE: the Individualized Family Services Plan (IFSP) and the Individualized Education Plan (IEP)
- Recognize such aspects of exceptionalities as: attention deficit hyperactivity disorder (ADHD), communication disorders, mental retardation, emotional and behavioral disorders, learning disabilities, visual and hearing impairments, physical disabilities, and giftedness
- Understand the rationale and strategies for involving parents and families in the screening, assessment, education programming, and placement of their child
- Participate in student teaching to apply theoretical teaching techniques; plan and write effective curricula, lesson plans, and IEPs that include goals, objectives, and strategies to effect change in children with special needs and plan curricula that are authentic and culturally appropriate.
- Understand the importance of working cooperatively with other staff members, professionals, and parents to form an effective team

Suggested Course Sequence

First Semester

- ECS* 107 - Introduction to Exceptional Children I 3 credits
- ECS* 112 - Introduction to Early Childhood
Special Education 3 credits
- ENG* 101 - Composition 3 credits
- PSY* 111 - General Psychology I 3 credits
- Restricted Elective (see below) 3 credits

Total Semester Credits: 15

Second Semester

- BIO* 105 - Introduction to Biology 4 credits
- or**
- BIO* 110 - Principles of the Human Body 3 credits
- ECS* 207 - Introduction to
Exceptional Children: Seminar II 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- MAT* 137 - Intermediate Algebra 3 credits or higher
- PSY* 122 - Child Growth and Development 3 credits

Total Semester Credits: 15

Third Semester

- ECE* 231 - Early Language and Literacy Development 3 credits
- MAT* 143 - Mathematics for Elementary
Education: Algebra/Number Systems I 3 credits
- PSY* 105 - Group Dynamics 3 credits
- PSY* 258 - Behavior Modification 3 credits
- Choose one course in AD, HK, OC, SR (Gen Ed) 3 credits

Total Semester Credits: 15

Fourth Semester

- ECS* 230 - Student Teaching Special Education 6 credits
- PHL* 101 - Introduction to Philosophy 3 credits
- or**
- PHL* 111 - Ethics 3 credits
- Restricted Elective (see below) 6 credits

Total Semester Credits: 15

Total Program Credits: 60-61

Restricted Electives

- ECE* 103 - Creative Experiences/Children 3 credits
- ECE* 109 - Science and Math for Children 3 credits
- ECS* 121 - First Aid, CPR, and Medication Administration 1 credits
- ECE* 141 - Infant and Toddler Growth and Development 3 credits
- ECE* 142 - Developmental Interventions for Infants and Toddlers at Risk 3 credits
- ECE* 206 - Administration and Supervision of Early Childhood Programs 3 credits
- ECS* 123 - Introduction to Family Support and Respite Care 4 credits
- ENG* 114 - Children's Literature 3 credits
- PSY* 245 - Abnormal Psychology 3 credits
- SOC* 111 - Child, Family, School and Community 3 credits

Family Support and Respite Care Certificate

The Early Childhood Special Education Family Support and Respite Care Certificate will provide students in ECSE and health care providers with another option in Early Childhood Special Education.

Program Outcomes

- Use theoretical knowledge and practical skills to work effectively with and provide respite care for families on a planned or emergency basis, either at home or in the community.

Program Requirements

- ECS* 121 - First Aid, CPR, and Medication Administration 1 credits
- ECS* 123 - Introduction to Family Support and Respite Care 4 credits
- ECS* 107 - Introduction to Exceptional Children I 3 credits
- PSY* 105 - Group Dynamics 3 credits

Total Program Credits: 11

Infant and Toddler Development Certificate

The Early Childhood Special Education Infant and Toddler Development certificate program prepares students to care for and teach infants and toddlers from birth to age three.

Program Outcomes

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

- Use theoretical knowledge and practical skills to work effectively with infants and toddlers in preschool settings or institutions in the Greater New Haven community.

Program Requirements

- ECS* 107 - Introduction to Exceptional Children I 3 credits
- ECE* 141 - Infant and Toddler Growth and Development 3 credits
- ECE* 142 - Developmental Interventions for Infants and Toddlers at Risk 3 credits
- ECS* 230 - Student Teaching Special Education 6 credits
- Electives (See Below) 6-8 credits

Total Program Credits: 27-29

Electives

- ECS* 121 - First Aid, CPR, and Medication Administration 1 credit
- ECS* 123 - Introduction to Family Support and Respite Care 4 credits
- ECE* 180 - CDA Credential Preparation 3 credits
- ECS* 112 - Introduction to Early Childhood Special Education 3 credits
- ECS* 113 - Creative Art/Play for Exceptional Children 3 credits
- ECS* 207 - Introduction to Exceptional Children: Seminar II 3 credits
- ENG* 114 - Children's Literature 3 credits
- PSY* 105 - Group Dynamics 3 credits
- PSY* 122 - Child Growth and Development 3 credits
- PSY* 258 - Behavior Modification 3 credits

EARLY CHILDHOOD EDUCATION

CSCU Pathway Transfer Degree: Early Childhood Teacher Credential Studies-ECTC Level A, A.A.

With this degree, you will be able to transfer to the following majors:

At Eastern Connecticut State University	Bachelor of General Studies with a Concentration in Early Childhood Education - ECTC Level B
At Southern Connecticut State University	Bachelor of Arts in Interdisciplinary Studies with a Concentration in Early Childhood Pedagogy and Curriculum and Child, Family and Community Studies
At Charter Oak State College	Bachelor of General Studies with a Concentration in Child Studies - ECTC Track - Level B

Important Note: Earning the Early Childhood Teacher Credential (ECTC) is not equivalent to earning public school teaching certification and does not qualify you to work in a role where a State Teacher Certification Endorsement is required. Completion of the ECTC validates that you meet the requirements for the role of the teacher in early childhood programs accepting state funds.

Here is the recommended course of study for the Early Childhood Teacher Credential Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances, you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for more information:

- Professor Carmelita Valencia-Daye: CValenciadaye@gatewayct.edu
- Professor Lauren Doninger: LDoninger@gatewayct.edu

First Semester

- ECE* 101 - Introduction to Early Childhood Education 3 credits
- ENG* 101 - Composition 3 credits
- PSY* 111 - General Psychology I 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Oral Communications 3 credits

Total Semester Credits: 15

Second Semester

- ECS* 107 - Introduction to Exceptional Children I 3 credits
- PSY* 122 - Child Growth and Development 3 credits
(must be taken before ECE 210)
- Choose one ECE Course 3 credits
- Choose one course in Quantitative Reasoning 3 credits
- Choose one course in Written Communication II 3 credits

Total Semester Credits: 15

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- ECE* 210 - Observations, Participation and Seminar 3 credits
- ECE* 231 - Early Language and Literacy Development 3 credits
- Choose one ECE course 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits

Total Semester Credits: 15-16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- ECE* 295 - Student Teaching 6 credits
- Choose one ECE course 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Scientific Reasoning 3-4 credits

Total Semester Credits: 15-16

Total Program Credits: 60-61

Early Childhood Education Career Path, AS

Suggested Course Sequence

First Semester

- ECE* 101 - Introduction to Early Childhood Education 3 credits
- ENG* 101 - Composition 3 credits
- PSY* 111 - General Psychology I 3 credits
- PSY* 122 - Child Growth and Development 3 credits
- Choose one course in AD, HK, OC, or SR (Gen Ed) 3 credits

Total Semester Credits: 15

Second Semester

- ECE* 231 - Early Language and Literacy Development 3 credits
- ECS* 107 - Introduction to Exceptional Children I 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- MAT* 109 - Quantitative Literacy 3 credits (or higher)
- ECE Restricted Elective 3 credits (see below)

Total Semester Credits: 15

Third Semester

- ECE* 210 - Observations, Participation and Seminar 3 credits
- PHL* 111 - Ethics 3 credits
- SOC* 111 - Child, Family, School and Community 3 credits
- Choose one course in BIO*, EAS*, EVS* or PHY*
(Gen Ed - SK: Scientific Knowledge & Understanding) 3 credits

Total Semester Credits: 15

Fourth Semester

- ECE* 176 - Health, Safety & Nutrition 3 credits
- ECE* 295 - Student Teaching 6 credits
- ECE Restricted Elective 6 credits (see below)

Total Semester Credits: 15

Total Program Credits: 60

ECE Restricted Electives

- ECE* 103 - Creative Experiences/Children 3 credits
- ECE* 106 - Music and Movement for Children 3 credits
- ECE* 109 - Science and Math for Children 3 credits
- ECE* 110 - Using Computers in ECE 3 credits
- ECE* 141 - Infant and Toddler Growth and Development 3 credits (required for ECTC Infant/Toddler Endorsement)
- ECE* 142 - Developmental Interventions for Infants and Toddlers at Risk 3 credits
- ECE* 180 - CDA Credential Preparation 3 credits
- ECE* 181 - CDA Credential Preparation II 3 credits
- ECE* 206 - Administration and Supervision of Early Childhood Programs 3 credits
- ECE* 212 - Administrative Leadership in Early Childhood Programs 3 credits
- ECE* 213 - Finance for Early Childhood Program 3 credits
- ECE* 241 - Methods and Techniques for Infant/Toddler 3 credits
- ECS* 112 - Introduction to Early Childhood Special Education 3 credits
- ENG* 114 - Children's Literature 3 credits
- PSY* 214 - Advanced Child Growth and Development 3 credits

Early Childhood Education, AS

The Early Childhood Education Program has earned Accreditation from the National Association for the Education of Young Children (NAEYC). An Associate degree and three certificate options are available in the Early Childhood Education program. The Early Childhood Education associate degree program is validated under the Connecticut Early Childhood Education Articulation Plan. Graduates of the associate degree program are eligible for admission as articulation students to any of the state's participating baccalaureate institutions which offer Early Childhood Education Teacher Certification programs; in the University of Connecticut's Human Development and Family Relations major; or in Charter Oak State College's child studies concentration. In addition, any graduate of Gateway Community College Early Childhood Education Program from 2008 on is eligible to apply for the Early Childhood Teacher Credential (ECTC). The ECE program at GCC is an approved degree program for both Infant/Toddler and Preschool endorsements.

The terms for credit award and student eligibility vary under each option. However, in general, students must meet the following eligibility requirements:

- Be a graduate from a validated associate degree program in Early Childhood Education in Connecticut
- Meet specific admissions requirements of the college or university into which transfer is being sought
- Complete all Early Childhood Education associate degree courses with a grade of "C" or better and meet the college's or university's requirements for transfer of general education
- Complete all Early Childhood Education associate degree student teaching with a grade of "C" or better in a center accredited by the National Association for the Education of Young Children (NAEYC)
- Furthermore, if a student is seeking to transfer into an Early Childhood Education Teacher Certification program, it is strongly recommended that, prior to transfer, she or he possess the following state certification requirements:
 - A score of 1,100 or better on the SAT (test date on or after April 1, 1995), or the passing of Praxis Core Academic Skills Test
 - A 2.7 grade point average if seeking admission to a teacher certification education program in Connecticut.

For more information, email the Early Childhood Education Program Coordinator, Carmelita Valencia-Daye at CValencia-Daye@gatewayct.edu. For scholarship information, contact the Connecticut Office of Early Childhood/CT Charts a Course website <http://ctcharts.org> or call 1 800 832-7784.

Program Outcomes

"The 2010 National Association for the Education of Young Children (NAEYC) Standards for Initial and Advanced Early Childhood Professional Preparation Programs describe what early childhood professionals are expected to know and do". These Standards provide the basis for the Early Childhood Education Program at Gateway Community College. Upon successful completion of the program requirements, students are prepared to:

Standard 1: Promoting Child Development and Learning

Students prepared in early childhood degree programs are grounded in a child development knowledge base. They use their understanding of a) young children's characteristics and needs, and b) multiple interacting influences on children's development and learning, to c) create environments that are healthy, respectful, supportive, and challenging for each child.

Standard 2: Building Family and Community Relationships

Students prepared in early childhood degree programs understand that successful early childhood education depends upon partnerships with children's families and communities. They a) know about, understand, and value the importance and complex characteristics of children's families and communities. They use this understanding to b) create respectful, reciprocal relationships that support and empower families, and c) to involve all families in their children's development and learning.

Standard 3: Observing, Documenting, and Assessing to Support Young Children and Families

Students prepared in early childhood degree programs understand that child observation, documentation, and other forms of assessment are central to the practice of all early childhood professionals. They a) know about and understand the goals, benefits, and uses of assessment. They b) know about and use systematic observations, documentation, and other effective assessment strategies c) in a responsible way, d) in partnership with families and other professionals, to positively influence the development of every child.

Standard 4: Using Developmentally Effective Approaches

Students prepared in early childhood degree programs understand that teaching and learning with young children is a complex enterprise, and its details vary depending on children's ages, characteristics, and the settings within which teaching and learning occur. They a) understand and use positive relationships and supportive interactions as the foundation for their work with young children and families. Candidates b, c) know, understand, and use a wide array of developmentally appropriate approaches, instructional strategies, and tools to connect with children and families and d) positively influence each child's development and learning.

Standard 5: Using Content Knowledge to Build Meaningful Curriculum

Students prepared in early childhood degree programs a) use their knowledge of academic disciplines to design, implement, and evaluate experiences that promote positive development and learning for each and every young child. Candidates understand the importance of developmental domains and academic (or content) disciplines in early childhood curriculum. They b) know the essential concepts, inquiry tools, and structure of content areas, including academic subjects, and can identify resources to deepen their understanding. Candidates c) use their own knowledge and other resources to design, implement, and evaluate meaningful, challenging curriculum that promotes comprehensive developmental and learning outcomes for every young child.

Standard 6: Becoming a Professional

Students prepared in early childhood degree programs a) identify and conduct themselves as members of the early childhood profession. They b) know and use ethical guidelines and other professional standards related to early childhood practice. They c) are continuous, collaborative learners who demonstrate knowledgeable, reflective and critical perspectives on their work, making informed decisions that d) integrate knowledge from a variety of sources. They are e) informed advocates for sound educational practices and policies.

Standard 7: Early Childhood Field Experiences

Students have field experiences and clinical practice in a) at least two of the three early childhood age groups (birth – age 3, 3 through 5, 5 through 8 years) and in b) the variety of settings that offer early education (early school grades, child care centers and homes, Head Start programs).

In addition, "the Supportive Skills support associate degree students' ability to gain competence in relation to the core standards. With these skills, students are better able to make use of learning opportunities provided by the program and progress in a career as an early childhood professional."

SUPPORTIVE SKILL 1: Self-assessment and self-advocacy

SUPPORTIVE SKILL 2: Mastering and applying foundational concepts from general education

SUPPORTIVE SKILL 3: Written and verbal skills

SUPPORTIVE SKILL 4: Making connections between prior knowledge/ experience and new learning

SUPPORTIVE SKILL 5: Identifying and using professional resources

Conceptual Framework of the Early Childhood Education Program at Gateway Community College**Vision Statement**

The vision of the Early Childhood Program at Gateway Community College is to prepare well qualified teachers who understand how children learn; can plan and implement developmentally and individually appropriate learning experiences that are aligned to standards and are based on knowledge of individual children (typical and atypical) from diverse cultural backgrounds, and can plan within and across disciplines, taking into account the family, the community and curricular goals and objectives.

Mission Statement

The mission of the Early Childhood Education Program is to provide a comprehensive curriculum that enables students to seek employment in the field of Early Education and Care, working with children from diverse backgrounds; to transfer to a baccalaureate program to continue their training in Early Childhood Education; or to increase their skills in working with young children.

Program Philosophy

The early childhood education program at Gateway Community College adopts a philosophy that includes a perspective about how learning occurs and how the teaching act influences learning. The program's philosophy stresses the importance of preparing dedicated and skilled professionals to work in the learning community knowing diverse theories not limited to the views of Piaget, Dewey, Vygotsky, Erickson and Montessori.

The program recognizes the responsibility of the teacher to deal with each student as an individual, value diversity, and recognize that the student's behavior is a direct reflection of his or her life experiences.

In keeping with the Institution's and program's mission, the Early Childhood Education program holds the following principles and strives to foster them in its students:

- When active engagement accompanies learning opportunities, learning is at its best.
- When content is connected to the real world, learning is facilitated.
- Critical thinking, reflection, and problem solving are prized and encouraged.
- Multiple measures of assessment provide a well-rounded insight of the learner's construction of knowledge.
- Knowing and understanding the families of children and the communities in which they live is key to enhancing a child's development and learning and paramount to involving families and communities.
- Cultural diversity of the family and the developmental diversity of the child must be understood and appreciated.
- Utilization of multiple learning modalities addresses a variety of learning styles.

The Early Childhood Program offers a Child Development Associate Preparation Certificate, a one-year Teacher Assistant Certificate, an Administration and Leadership Certificate and an Associate Degree with an option of Continued Studies (transfer) or Early Childhood (career).

Preparing adult learners to work in diverse and multicultural setting and have the skills to implement developmentally appropriate teaching practices is a principal component of the program. The program requires a sequence of observation and teaching practices to prepare students who understand child development and can effectively work with children.

In keeping with the College's mission the early childhood courses and programs are widely accessible to students, many of whom are working full-time, via a variety of delivery systems. Flexibility of course offerings and responding to the needs of the early childhood workforce are primary. The program continually seeks opportunities to provide students with tuition free courses by responding to alternative funding opportunities and forming alliances with local and statewide agencies.

Course delivery formats include (1) traditional classroom format, (2) on-line courses (3) accelerated courses in one week to five week formats, (4) an accelerated degree such as a plan developed to offer the complete degree on a part-time basis over a 36 month period and the fast track offering of certificates that students could complete within 11 weeks. The Child Development Preparation Certificate is offered on-line. To enhance student's success in course work, Learning Communities, collaboration between the Early Childhood faculty member and the developmental Reading and English, faculty member are being developed.

Professional Commitments

The Early Childhood Program has a strong commitment to diversity and reflects as much as possible the culture and language of the students and community that it serves. Additionally, faculty members have formed collaboration with the Learning Disabilities Specialist in order to incorporate students with special needs into the program. Frequent offering of courses at the worksite enhance accessibility for students. Responding to the needs of the workforce is paramount.

Community Connections

Community responsiveness is a key component of the program. Outreach into the community is evidenced by the creation of the Early Learning Center and the Accreditation Facilitation Project that assists centers with NAEYC Accreditation and expands the availability of high quality field placements for observation and student teaching. The Early Learning Center, a 60 child NAEYC Accredited community early care and education facility, is an on site laboratory school that serves as a model of best practices and is a field placement site for observation students and student teachers.

Suggested Course Sequence

First Semester

- ECE* 101 - Introduction to Early Childhood Education 3 credits
- ENG* 101 - Composition 3 credits
- PSY* 111 - General Psychology I 3 credits
- PSY* 122 - Child Growth and Development 3 credits
- Choose one course in AD, HK, OC, or SK

Total Semester Credits: 15

Second Semester

- ECE* 231 - Early Language and Literacy Development 3 credits
- ECS* 107 - Introduction to Exceptional Children I 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- MAT* 109 - Quantitative Literacy 3 credits (or higher)
- ECE Restricted Electives 3 credits see below

Total Semester Credits: 15

Third Semester

- ECE* 210 - Observations, Participation and Seminar 3 credits
- PHL* 111 - Ethics 3 credits
- SOC* 111 - Child, Family, School and Community 3 credits
- Choose one course in Scientific Knowledge
- ECE Restricted Elective 3 credits (see below)

Total Semester Credits: 15

Fourth Semester

- ECE* 176 - Health, Safety & Nutrition 3 credits
- ECE* 295 - Student Teaching 6 credits
- ECE Restricted Elective 6 credits (see below)

Total Semester Credits: 15

ECE Restricted Electives

- ECE* 103 - Creative Experiences/Children 3 credits
- ECE* 106 - Music and Movement for Children 3 credits
- ECE* 109 - Science and Math for Children 3 credits
- ECE* 110 - Using Computers in ECE 3 credits
- ECE* 141 - Infant and Toddler Growth and Development 3 credits (required for ECTC Infant/Toddler Endorsement)
- ECE* 142 - Developmental Interventions for Infants and Toddlers at Risk 3 credits
- ECE* 180 - CDA Credential Preparation 3 credits
- ECE* 181 - CDA Credential Preparation II 3 credits
- ECE* 206 - Administration and Supervision of Early Childhood Programs 3 credits
- ECE* 212 - Administrative Leadership in Early Childhood Programs 3 credits
- ECE* 213 - Finance for Early Childhood Program 3 credits
- ECE* 241 - Methods and Techniques for Infant/Toddler 3 credits
- ECS* 112 - Introduction to Early Childhood Special Education 3 credits
- ENG* 114 - Children's Literature 3 credits
- PSY* 214 - Advanced Child Growth and Development 3 credits

Early Childhood Education: Administration and Leadership Certificate

Provides specialized college-level course work in administration, leadership, and management to parallel the competency and training requirements needed to obtain the Connecticut Director’s Credential (CDC) which is issued through Charter Oak State College to applicants who have successfully met requirements necessary to obtain the credential at a specific level.

Program Outcomes

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

- Plan and implement developmentally appropriate care and education programs for children and families
- Develop and maintain an effective organization and physical facility
- Plan and implement effective administrative systems to carry out program goals, mission, and objectives; and have legal knowledge necessary for effective management
- Effectively administer a program or personnel management and staff development
- Foster positive community relations and influence child care policy that affects the program
- Apply financial management tools.

Program Requirements

- | | |
|---|-----------|
| • BMG* 220 - Human Resources Management | 3 credits |
| • ECE* 206 - Administration and Supervision of Early Childhood Programs | 3 credits |
| • ECE* 212 - Administrative Leadership in Early Childhood Programs | 3 credits |
| • ECE* 213 - Finance for Early Childhood Program | 3 credits |
| • SOC* 111 - Child, Family, School and Community | 3 credits |

Total Program Credits: 15

Early Childhood Education: Child Development Associate Credential Certificate

The Child Development Associate Credential (CDA) is a national credentialing program that focuses on the skills of early care and education professionals; it is a performance-based assessment of childcare staff, home visitor, and family child care provider. The Child Development Associate Credential is designed for individuals who wish to obtain a Child Development Associate (CDA) through the Council for Early Childhood Professional Recognition Credentialing Process.

Gateway Community College offers the courses that will provide students with the required 120 clock hours of education for the credentialing process. Credits earned as part of this program can be applied to the Early Childhood Education Teacher Assistant certificate and degree programs.

Program Outcomes

Upon successful completion of the certificate program requirements, students will be eligible to apply to the Council for Early Childhood Professional Recognition who awards the CDA Credential. With a CDA Credential, students will be more likely to find employment in an accredited and/or state funded child care center. However, in addition to the courses, there are other requirements that need to be fulfilled in order to obtain a CDA Credential.

Program Requirements

- PSY* 122 - Child Growth and Development 3 credits
- ECE* 101 - Introduction to Early Childhood Education 3 credits
- ECE* 180 - CDA Credential Preparation 3 credits

Total Program Credits: 9

For more information, email the Early Childhood Education Program Coordinator, Carmelita Valencia-Daye at cvalencia-Daye@gatewayct.edu. For scholarship information, contact the Connecticut Office of Early Childhood/Connecticut Charters-A-Course, visit the website at <http://ctcharts.org> or call (800) 832-7784.

The New Credentialing process for the Child Development Associate (CDA) Credential as of June 2013 is as follows:

Step 1: Any time before application:

- Minimum of high school diploma/GED or enrolled in a high school career and technical education program.
- 120 hours of education in 8 subject areas

Step 2: Within three years before application

- 480 hours experience

Step 3: Within six months before application

Requirements:

- Professional Portfolio (PP) completed by the Candidate
- Family questionnaires (FQ) gathered by the Candidate

Step 4: Application

- Candidate sends to the Council: Application and Fee
- Candidate receives approval that application is complete and fee has been processed

Step 5: Within 6 months of Council approval and completed application

- Verification Visit conducted by CDA Professional Development specialist
- Candidate takes CDA Exam at a local PearsonVUE testing center

Step 6: After Verification Visit and CDA Exam

- Professional Development Specialist sends Verification Visit scores to the Council online
- PearsonVUE sends exam scores to the Council online

Council awards or denies Credential

For more information, visit <http://www.cdacouncil.org>

Early Childhood Education: Continued Studies Transfer Path, AS

This path is designed for students who plan to transfer to a four year institution for further study towards the ECE Teacher Certification. It also prepares you with the appropriate academics and practicum necessary for a career in Early Childhood. Since the amount of transfer credit varies from one institution to another, students are advised to consult the catalog from the four year colleges under consideration.

Program Outcomes

"The 2010 National Association for the Education of Young Children (NAEYC) Standards for Initial and Advanced Early Childhood Professional Preparation Programs describe what early childhood professionals are expected to know and do". These Standards provide the basis for the Early Childhood Education Program at Gateway Community College. Upon successful completion of the program requirements, students are prepared to:

Standard 1: Promoting Child Development and Learning

Students prepared in early childhood degree programs are grounded in a child development knowledge base. They use their understanding of a) young children's characteristics and needs, and b) multiple interacting influences on children's development and learning, to c) create environments that are healthy, respectful, supportive, and challenging for each child.

Standard 2: Building Family and Community Relationships

Students prepared in early childhood degree programs understand that successful early childhood education depends upon partnerships with children's families and communities. They a) know about, understand, and value the importance and complex characteristics of children's families and communities. They use this understanding to b) create respectful, reciprocal relationships that support and empower families, and c) to involve all families in their children's development and learning.

Standard 3: Observing, Documenting, and Assessing to Support Young Children and Families

Students prepared in early childhood degree programs understand that child observation, documentation, and other forms of assessment are central to the practice of all early childhood professionals. They a) know about and understand the goals, benefits, and uses of assessment. They b) know about and use systematic observations, documentation, and other effective assessment strategies c) in a responsible way, d) in partnership with families and other professionals, to positively influence the development of every child.

Standard 4: Using Developmentally Effective Approaches

Students prepared in early childhood degree programs understand that teaching and learning with young children is a complex enterprise, and its details vary depending on children's ages, characteristics, and the settings within which teaching and learning occur. They a) understand and use positive relationships and supportive interactions as the foundation for their work with young children and families. Candidates b, c) know, understand, and use a wide array of developmentally appropriate approaches, instructional strategies, and tools to connect with children and families and d) positively influence each child's development and learning.

Standard 5: Using Content Knowledge to Build Meaningful Curriculum

Students prepared in early childhood degree programs a) use their knowledge of academic disciplines to design, implement, and evaluate experiences that promote positive development and learning for each and every young child. Candidates understand the importance of developmental domains and academic (or content) disciplines in early childhood curriculum. They b) know the essential concepts, inquiry tools, and structure of content areas, including academic subjects, and can identify resources to deepen their understanding. Candidates c) use their own knowledge and other resources to design, implement, and evaluate meaningful, challenging curriculum that promotes comprehensive developmental and learning outcomes for every young child.

Standard 6: Becoming a Professional

Students prepared in early childhood degree programs a) identify and conduct themselves as members of the early childhood profession. They b) know and use ethical guidelines and other professional standards related to early childhood practice. They c) are continuous, collaborative learners who demonstrate knowledgeable, reflective and critical perspectives on their work, making informed decisions that d) integrate knowledge from a variety of sources. They are e) informed advocates for sound educational practices and policies.

Standard 7: Early Childhood Field Experiences

Students have field experiences and clinical practice in a) at least two of the three early childhood age groups (birth – age 3, 3 through 5, 5 through 8 years) and in b) the variety of settings that offer early education (early school grades, child care centers and homes, Head Start programs).

In addition, “the Supportive Skills support associate degree students’ ability to gain competence in relation to the core standards. With these skills, students are better able to make use of learning opportunities provided by the program and progress in a career as an early childhood professional.”

SUPPORTIVE SKILL 1: Self-assessment and self-advocacy

SUPPORTIVE SKILL 2: Mastering and applying foundational concepts from general education

SUPPORTIVE SKILL 3: Written and verbal skills

SUPPORTIVE SKILL 4: Making connections between prior knowledge/ experience and new learning

SUPPORTIVE SKILL 5: Identifying and using professional resources

Suggested Course Sequence

First Semester

- ENG* 101 - Composition 3 credits
- PSY* 111 - General Psychology I 3 credits
- PSY* 122 - Child Growth and Development 3 credits
- ECE* 101 - Introduction to Early Childhood Education 3 credits
- Choose one course in AD, HK, OC, or SR (Gen Ed) 3 credits

Total Semester Credits: 15

Second Semester

- ECE* 231 - Early Language and Literacy Development 3 credits
- Open (Elective) 3 credits
- ECS* 107 - Introduction to Exceptional Children I 3 credits
- ENG* 102 - Literature and Composition 3 credits or
- ENG* 200 - Advanced Composition 3 credits
- MAT* 109 - Quantitative Literacy 3 credits (or higher)

Total Semester Credits: 15

Third Semester

- PHL* 111 - Ethics 3 credits
- Choose one course in BIO*, CHE*, EAS*, EVS*, PHY* (Gen Ed - SK: Scientific Knowledge and Understanding) 3-4 credits
- HIS* 201 - U.S. History I 3 credits
- ECE* 210 - Observations, Participation and Seminar 3 credits
- SOC* 111 - Child, Family, School and Community 3 credits

Total Semester Credits: 15-16

Fourth Semester

- ECE* 295 - Student Teaching 6 credits
- Open (Electives) 3 credits

Total Semester Credits: 15

Total Program Credits: 60-61

Teacher Assistant Certificate

This program prepares students to be assistant teachers and teacher aides in the early education and care profession. The program also provides training for individuals already employed in a preschool situation who desire to improve their knowledge and competency in working with children.

Students who complete this program are qualified to assist teachers in all aspects of professional childcare and to guide and supervise individual and group activities. Graduates may also transfer into the Early Childhood Education program leading to the Associate in Science degree. For more information, e-mail the Program Coordinator, Carmelita Valencia-Daye, at CValencia-Daye@gatewayct.edu.

Suggested Course Sequence

First Semester

- ECE* 101 - Introduction to Early Childhood Education 3 credits
- ECS* 107 - Introduction to Exceptional Children I 3 credits
- ENG* 101 - Composition 3 credits
- PSY* 122 - Child Growth and Development 3 credits
- SOC* 111 - Child, Family, School and Community 3 credits

Total Semester Credits: 15

Second Semester

- ECE* 210 - Observations, Participation and Seminar 3 credits
- ECE Restricted electives (see below) 9 credits

Total Semester Credits: 12

Total Program Credits: 30

ECE Restricted Electives

- ECE* 103 - Creative Experiences/Children 3 credits
- ECE* 106 - Music and Movement for Children 3 credits
- ECE* 109 - Science and Math for Children 3 credits
- ECE* 110 - Using Computers in ECE 3 credits
- ECE* 141 - Infant and Toddler Growth and Development 3 credits
- ECE* 176 - Health, Safety & Nutrition 3 credits
- ECE* 180 - CDA Credential Preparation 3 credits
- ECE* 181 - CDA Credential Preparation II 3 credits
- ECE* 205 - Creative Activities and Media 3 credits
- ECE* 206 - Administration and Supervision of Early Childhood Programs 3 credits
- ECS* 112 - Introduction to Early Childhood Special Education 3 credits
- ENG* 114 - Children's Literature 3 credits

EARTH SCIENCE

No active programs available.

ECONOMICS

No active programs available.

ELECTRICAL ENGINEERING TECHNOLOGY

Electrical Engineering Technology, AS

The Electrical Engineering Technology program focuses on a variety of electrical and electronic devices, circuits, signal, systems, and related applications that are integral parts of our modern, high-tech society. Students in this program receive theoretical and practical instruction to analyze, construct, test, and troubleshoot a wide variety of electrical, electronic, digital, microprocessor, microcontroller, motor and communication circuits.

Exceptional instructors guide students in the proper selection, set-up, and use of instrumentation for design, testing, and measurement. Course projects utilize advanced software to model, construct, and analyze electrical and electronic devices, circuits, and systems to validate physical results. Senior-level students complete an internship program.

Program Outcomes

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

- Analyze and understand the behavior of components (resistors, capacitors, inductors, diodes, etc. that comprise numerous analog and digital circuits.
- Professionally use test instrumentation to measure circuit characteristics and present system data
- Present high-quality written and oral reports of technical procedures performed in the laboratory
- Work cooperatively and productively with others in a laboratory test setting
- Utilize fundamental computer software applications alongside advanced circuit-modeling software to supplement theoretical and real-world results
- Use and read vendor catalogs, data sheets, instruction manuals, and electrical drawings

The extensive instruction and hands-on training received as part of the Electrical Engineering Technology program make each graduate a valuable and desired contributor in Connecticut's wide-ranging, high-tech industries. The EET program also provides graduates with excellent opportunities for further education and professional advancement. Gateway's Electrical Engineering Technology program maintains the highest educational and technical standards. For more information, call Interim Department Chair Eric Flynn, at (203) 285-2371 or e-mail (eflynn@gatewayct.edu).

Suggested Course Sequence

First Semester

- CET* 116 - Computer Applications for Technology 3 credits
- CAD* 124 - CAD: Electrical 1 credits
- EET* 110 - Electric Circuits I 4 credits
- ENG* 101 - Composition 3 credits
- MAT* 175 - College Algebra and Trigonometry 3 credits
- Choose one course in CALT: Critical Analysis/Logical Thinking 3-4 credits

Total Semester Credits: 17-18

Second Semester

- EET* 114 - Electric Circuits II 4 credits
- EET* 136 - Electronics I 4 credits
- MAT* 186 - Precalculus 4 credits
- PHY* 121 - General Physics I 4 credits
- COM* 173 - Public Speaking 3 credits

Total Semester Credits: 19

Third Semester

- EET* 232 - Electronics II 4 credits
- EET* 252 - Digital Electronics 4 credits
- EET* 262 - Electrical Machinery and Control 4 credits
- MAT* 254 - Calculus I 4 credits

Total Semester Credits: 16

Fourth Semester

- EET* 256 - Microprocessors 4 credits
- EET* 272 - Electronic Communications 4 credits
- EET* 296 - EET Internship 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- Choose one course in (Gen Ed - SP: Social Phenomena/Knowledge/Understanding) 3 credits

Total Semester Credits: 17

Total Program Credits: 68-70

ENGINEERING SCIENCE

No active programs available.

ENGINEERING TECHNOLOGY

Computer Servicing Certificate

The Computer Servicing Certificate Program is designed for students seeking entry level technical skills for the information technology (IT) industry. The Program consists of three courses. Each course focuses on specific skills in computer applications, computer system hardware and PC operating systems. Successful mastery of the material should prepare the student for CompTIA's A+ Certification exams (www.comptia.org). A+ Certification is an internationally recognized standard in the IT field. Students who desire to continue their education can use the Computer Servicing Certificate Program as a stepping stone to more advanced studies in the Computer Engineering Technology Program at Gateway Community College. For more information, contact Interim Department Chair Eric Flynn at (203) 285-2371 or e-mail eflynn@gatewayct.edu.

Program Outcomes

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

- Use industry-standard computer applications such as word processing, spreadsheets, presentation software, email and internet access to effectively communicate and research topics in computer servicing
- Demonstrate safety and standards in the workplace
- Install, configure and upgrade computer hardware and software
- Use diagnostic software and test equipment to troubleshoot problems
- Recognize the need for continuous learning

Suggested Course Sequence

- | | |
|---|-----------|
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • CET* 126 - Computer Servicing | 4 credits |
| • CET* 210 - Computer Systems Software | 4 credits |
| • CST* 180 - Networking I | 4 credits |

Total Semester Credits: 15

Electronics Technician Certificate

The Electronics Technician Certificate program is designed for students who are interested in pursuing immediate employment in the electronics industry, while allowing for advanced educational opportunities. Students will acquire a solid electrical and electronics background along with industrial skills to work with hand tools and electronic instrumentation in conjunction with electrical, electronic, and digital circuits. They will also use the latest CAD software to design and simulate electronic circuits. For more information, call Interim Department Chair Eric Flynn, at (203) 285-2371 or e-mail eflynn@gatewayct.edu.

Program Outcomes

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

- Understand the operation of a variety of devices and components used in electrical, electronic and digital circuits along with their respective applications
- Use Electronic CAD software to draw and simulate electrical and electronic circuit operations
- Demonstrate the role and function of the necessary tools require in the construction of electrical and electronic circuits and systems
- Construct electrical, electronic and digital circuits from industry-derived schematics
- Operate various instrumentation devices for testing and measuring circuit parameters within electronic circuits and systems
- Work cooperatively and productively with others in a laboratory setting

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • EET* 110 - Electric Circuits I | 4 credits |
| • CAD* 126 - Electronics Graphics | 3 credits |

Total Semester Credits: 10

Second Semester

- | | |
|--|-----------|
| • EET* 136 - Electronics I | 4 credits |
| • EET* 252 - Digital Electronics | 4 credits |
| • Technical (Elective) (Consult technical advisor) | 4 credits |

Total Semester Credits: 12

Total Program Credits: 22

ENGLISH

CSCU Pathway Transfer Degree: English Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	English, B.A.
At Eastern Connecticut State University	English, B.A.
At Southern Connecticut State University	English, B.A.
At Western Connecticut State University	English/Literature, B.A.
At Charter Oak State College	English, B.A.

Here is the recommended course of study for the English Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for this program:

- Professor Alex Boateng, ABoateng@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- ENG* 101 - Composition 3 credits
- Choose one course in Quantitative Reasoning 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Choose two Unrestricted Electives* 6 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Second Semester

- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose two Unrestricted Electives* 6 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-16

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- Choose one course from: ENG* 221 or ENG* 231
- Choose one from: ENG* 245, ENG* 246, or ENG* 254
- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one General Education I: Creativity course 3 credits

Total Semester Credits: 15-16

Fourth Semester

Depending on the course you selected in semester 3, choose one from:

- ENG* 222, ENG* 232 (if you selected ENG 221 in the 3rd semester, then you must take ENG 232; if you selected ENG 231 in the 3rd semester, then you must take ENG 222) 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Oral Communication 3 credits
- Choose one course in General Education II: Global Knowledge 3 credits

Total Semester Credits: 15

Total Program Credits: 60-61

ENGLISH AS A SECOND LANGUAGE

No active programs available.

ENTREPRENEURIAL STUDIES

Entrepreneurial Studies Certificate

The certificate program is designed to prepare prospective entrepreneurs in the fundamentals of starting and managing their own businesses and to launch new ventures. For entrepreneurs who already have an established business, the program will help them strengthen their business and managerial skills. Students may complete the program in two semesters. Students should check with their advisor during the scheduling process to make sure courses are taken in proper sequence and any prerequisites have been met. Students will be able to apply the credits earned towards an AS degree in Entrepreneurial Studies. For more information, contact the Program Coordinator, Rose Luglio, at 203.285.2198 or rluglio@gatewayct.edu.

Suggested Course Sequence

First Semester

- | | |
|--------------------------------------|-----------|
| • BES* 218 - Entrepreneurship | 3 credits |
| • BMK* 201 - Principles of Marketing | 3 credits |
| • Business (Electives) | 6 credits |

Total Semester Credits: 12

Second Semester

- | | |
|---|-----------|
| • BES* 219 - Management and Growth – Small Business | 3 credits |
| • BES* 239 - Business Plan | 3 credits |
| or | |
| • BES* 295 - Launch a Business | 3 credits |
| • Business (Elective) | 3 credits |

Total Semester Credits: 9

Total Program Credits: 21

Entrepreneurial Studies, AS

Small businesses are vital to the growth of our economy and will create the majority of new jobs. This career program prepares students to be entrepreneurs and to start up new businesses, expand existing businesses, or apply entrepreneurial skills in a corporate setting. It also develops small business management skills to operate small businesses. This program will provide an opportunity to develop entrepreneurial skills with an understanding of marketing, accounting, business law, and management as they relate to business ownership. Practical training is provided through internships in small business settings. The program courses may be transferred to bachelor's degree programs. For more information, call the Program Coordinator, Rose Luglio, at (203) 285-2198 or e-mail at (rluglio@gatewayct.edu).

Entrepreneurial Studies Program Outcomes

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

- Identify core concepts of entrepreneurship and small business management and their impact on society and the global economy.
- Describe the legal and ethical environments for entrepreneurs and small businesses
- Demonstrate analytical, problem-solving, and decision-making skills applicable to entrepreneurship and small business management.
- Demonstrate information literacy through research skills and the use of technology.
- Apply effective written and oral communication skills to business situations.

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • BBG* 231 - Business Law I | 3 credits |
| • BES* 218 - Entrepreneurship | 3 credits |
| • BMK* 201 - Principles of Marketing | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |
| or | |
| • CSC* 101 - Introduction to Computers | 3 credits |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|---|--------------|
| • BBG* 210 - Business Communication | 3 credits |
| • BES* 219 - Management and Growth – Small Business | 3 credits |
| • ECN* 101 - Macroeconomics | 3 credits or |
| • ECN* 102 - Microeconomics | 3 credits |
| • MAT* 109 - Quantitative Literacy | 3 credits |
| • ENG* 102 - Literature and Composition | 3 credits or |
| • ENG* 200 - Advanced Composition | 3 credits |

Total Semester Credits: 15

Third Semester

- ACC* 100 - Basic Accounting 3 credits
- or**
- ACC* 113 - Principles of Financial Accounting I 3 credits
- BMK* 215 - Principles of eBusiness 3 credits
- Business (Electives) 9 credits

Total Program Credits: 15**Fourth Semester**

- BBG* 294 - Business Internship 3 credits
- BES* 239 - Business Plan 3 credits
- or**
- BES* 295 - Launch a Business 3 credits
- BMG* 220 - Human Resources Management 3 credits
- Business (Elective) 3 credits
- Choose one course in: BIO*, CHE*, EAS*, EVS*, PHY*
(Gen Ed - SK: Scientific Knowledge & Understanding) 3-4 credits

Total Semester Credits: 15-16**Total Program Credits: 60-61**

ENVIRONMENTAL ENGINEERING TECHNOLOGY

No active programs available.

ENVIRONMENTAL SCIENCE

Environmental Science and Toxicology Certificate

The Environmental Science and Toxicology certificate prepares students for entry-level technician positions in the fields of environmental science, toxicology, and forensic science or to continue their studies beyond the certificate to receive a two- or four-year degree.

Program Outcomes

Upon completion of this certificate program, graduates should be able to:

- Know federal, state, and local laws, regulations, and standards affecting environmental science operations
- Apply chemistry, biology, physics, and mathematics to environmental science, toxicology, and forensic science
- Take and analyze for pollutants and toxins air, water, and soil samples in the field and in the laboratory
- Identify career options in the environmental science, toxicology, and forensic science fields
- Explain the basic concepts of public health and occupational health and safety

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • BIO* 121 - General Biology I | 4 credits |
| • CHE* 121 - General Chemistry I | 4 credits |
| • EVS* 114 - Environmental Science | 4 credits |
| • MAT* 137A - Intermediate Algebra for
Advanced Studies | 4 credits |

Total Semester Credits: 16

Second Semester

- | | |
|--|-------------|
| • CHE* 122 - General Chemistry II | 4 credits |
| • CHE* 220 - Biochemistry | 4 credits |
| • EVS* 200 - Toxicology | 3 credits |
| • Choose one Restricted Elective (see below) | 3-4 credits |

Total Semester Credits: 14-15

Total Program Credits: 30-31

Restricted Electives

- BIO* 121 - General Biology I 4 credits
- BIO* 122 - General Biology II 4 credits
- BIO* 235 - Microbiology 4 credits
- CHE* 211 - Organic Chemistry I 4 credits
- CHE* 212 - Organic Chemistry II 4 credits
- EAS* 102 - Earth Science 3 credits
- EAS* 106 - Natural Disasters 3 credits
- EAS* 14
- MAT* 186 - Precalculus 4 credits
- MAT* 254 - Calculus I 4 credits
- MAT* 256 - Calculus II 4 credits
- PHY* 122 - General Physics II 4 credits
- PHY* 221 - Calculus-Based Physics I 4 credits
- PHY* 222 - Calculus-Based Physics II 4 credits
- POL* 208 - American Public Policy 3 credits
- WMT* 101 - Water Treatment and Distribution 6 credits
- WMT* 102 - Special Topics in Water Treatment 3 credits
- WMT* 103 - Special Topics in Water Distribution 3 credits
- WMT* 105 - Water Utility Management 3 credits

Environmental Science and Toxicology, AS

The Environmental Science and Toxicology program offers students a broad educational approach to the many careers available to them in the environmental field. The above average growth in the number of businesses in the environmental science and toxicology fields has resulted in a high demand for qualified environmental science technicians and environmental technology technicians in areas as field services, laboratory services, regulatory, fish, wildlife and natural resource management, information management systems (including Geographic Information Systems), pollution prevention, remediation, safety and health, solid and hazardous waste, water and wastewater, air pollution, and public health protection, as well as alternative and renewable energy. For additional information, please contact Department Chairperson, R.E.Tremblay at rtremblay@gatewayct.edu or Counselor John Mullane at (203) 285-2095 or e-mail at (jmullane@gatewayct.edu).

Program Outcomes

Upon completion of this certificate program, graduates should be able to:

- Understand contemporary environmental issues in the social sciences, humanities, and natural sciences
- Know federal, state, and local laws, regulations, and standards affecting environmental science, toxicology, and forensic science operations
- Apply concepts of chemistry, biology, physics, and mathematics to environmental science, toxicology, and forensic science
- Acquire and analyze air, water, and soil samples for pollutants in the field and laboratory
- Summarize the basic concepts of public health and occupational health and safety
- Use computers for data processing, information management, and research in environmental science, toxicology, and forensic science
- Understand and apply basic concepts of effective oral and written communication and documentation

This program can be used to meet the recently upgraded requirements for wastewater treatment plant operator licensure by the CT Department of Health Services. Students interested in transferring to a four-year institution may do so through this program. Arrangements for transfer should be made before registering for the freshman year. For information, call Math/Science department chair, R.E. Tremblay at (203) 285-2185 or e-mail at (rtremblay@gatewayct.edu) or Counselor John Mullane at (203) 285-2095 or e-mail at (jmullane@gatewayct.edu).

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • EVS* 114 - Environmental Science | 4 credits |
| • MAT* 137A - Intermediate Algebra for
Advanced Studies | 4 credits |
| or | |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits |
| • Choose one course in Social Phenomena (Gen Ed -
SP: Social Phenomena/Knowledge/Understanding) | 3 credits |

Total Semester Credits: 16-17

Second Semester

- BIO* 121 - General Biology I 4 credits
- CHE* 121 - General Chemistry I 4 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- EVS* 200 - Toxicology 3 credits

Total Semester Credits: 14**Third Semester**

- CHE* 122 - General Chemistry II 4 credits
- COM* 173 - Public Speaking 3 credits
- MAT* 167 - Principles of Statistics 3 credits
- PHY* 121 - General Physics I 4 credits

Total Semester Credits: 14**Fourth Semester**

- CHE* 220 - Biochemistry 4 credits
- EVS* 296 - Environmental Science & Toxicology Internship 3 credits
- PHL* 111 - Ethics 3 credits
- Restricted Electives (see below) 6 credits

Total Semester Credits: 16-17**Total Program Credits: 60-61****Restricted Electives**

- BIO* 121 - General Biology I 4 credits
- BIO* 122 - General Biology II 4 credits
- BIO* 235 - Microbiology 4 credits
- CHE* 211 - Organic Chemistry I 4 credits
- CHE* 212 - Organic Chemistry II 4 credits
- EAS* 102 - Earth Science 3 credits
- EAS* 106 - Natural Disasters 3 credits
- EAS* 110 - The Earth Sciences 4 credits
- MAT* 186 - Precalculus 4 credits
- MAT* 254 - Calculus I 4 credits
- MAT* 256 - Calculus II 4 credits
- PHY* 122 - General Physics II 4 credits
- PHY* 221 - Calculus-Based Physics I 4 credits
- PHY* 222 - Calculus-Based Physics II 4 credits
- POL* 208 - American Public Policy 3 credits
- WMT* 101 - Water Treatment and Distribution 6 credits
- WMT* 102 - Special Topics in Water Treatment 3 credits
- WMT* 103 - Special Topics in Water Distribution 3 credits
- WMT* 105 - Water Utility Management 3 credits

EXERCISE SCIENCE

CSCU Pathway Transfer Degree: Exercise Science Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Exercise Science, B.S.
At Eastern Connecticut State University	Sport and Leisure Management: Sports Science and Performance Concentration, B.S.
At Southern Connecticut State University	Exercise Science, Human Performance Concentration, B.S.

Here is the recommended course of study for the Exercise Science Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for this program:

- Professor Todd Degree, TDegree@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- BIO* 105 - Introduction to Biology 4 credits
- ENG* 101 - Composition 3 credits
- EXS* 101 - Introduction to Exercise Science and Wellness 3 credits
- PSY* 111 - General Psychology I 3 credits
- Choose one course in Aesthetic Dimensions 3 credits

Total Semester Credits: 16

Second Semester

- BIO* 211 - Anatomy and Physiology I 4 credits
- MAT* 167 - Principles of Statistics 3 credits
- NTR* 102 - Nutrition I: Principles of Nutrition 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 16

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- BIO* 212 - Anatomy and Physiology II 4 credits
- EXS* 225 - Essentials of Strength and Conditioning 3 credits
- EXS* 227 - Exercise Testing & Program Design 4 credits
- EXS* 2## (this course is not currently offered at GCC. You can choose to take this course online or on ground at another campus).

Total Semester Credits: 15

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- COM* 173 - Public Speaking 3 credits
- EXS* 230 - Exercise Programming for Special Populations 3 credits
- EXS* 235 - Exercise Physiology 4 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits

Total Semester Credits: 13

Total Program Credits: 60

Exercise Science and Wellness, AS

Program Mission

To prepare students with the knowledge, attitudes and skills necessary for competent practice in exercise and for employment in the health and fitness industry while providing a basis for professional advancement.

Program Outcomes

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

- Recognize which muscles are used in body movement patterns and then identify solutions to improve their performance
- Conduct appropriate business and administrative practices, including marketing and promotion, in order to successfully operate in the field
- Conduct individualized client consultations and fitness assessments
- Design appropriate exercise programs for various populations (aged, youth, overweight/obese, chronic disease, etc.) based on assessments
- Implement effective wellness programming specific for the needs of target populations
- Exemplify the Code of Ethics of the American College of Sports Medicine and National Strength and Conditioning Association
- Sit for national certification board exams

Admissions Requirements

Students must present current First Aid, CPR, and AED certification that has a practical skill examination component (such as the American Heart Association or the American Red Cross) and physical examination before beginning EXS* 212 . Students should consult with the coordinator of the Exercise Science and Wellness program for advice about course selection and information about additional costs, including liability insurance for EXS* 212. For more information, contact the Program Coordinator, Todd Degree at (203) 285-2446 or e-mail at (tdegree@gatewayct.edu)

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • BIO* 105 - Introduction to Biology | 4 credits |
| • ENG* 101 - Composition | 3 credits |
| • EXS* 101 - Introduction to Exercise Science and Wellness | 3 credits |
| • MAT* 167 - Principles of Statistics | 3 credits |
| • NTR* 102 - Nutrition I: Principles of Nutrition | 3 credits |

Total Semester Credits: 16

Second Semester

- | | |
|---------------------------------------|-----------|
| • BIO* 211 - Anatomy and Physiology I | 4 credits |
| • EXS* 115 - Fitness Management | 3 credits |
| • ENG* 200 - Advanced Composition | 3 credits |
| • NTR* 103 - Nutrition Therapy I | 3 credits |

Total Semester Credits: 13

Third Semester

- BIO* 212 - Anatomy and Physiology II 4 credits
- EXS* 225 - Essentials of Strength and Conditioning 3 credits
- EXS* 227 - Exercise Testing & Program Design 4 credits
- EXS* 229 - Human Biomechanics 4 credits

Total Semester Credits: 15**Fourth Semester**

- EXS* 212 - Exercise Science & Wellness Internship 3 credits
- EXS* 230 - Exercise Programming for Special Populations 3 credits
- EXS* 235 - Exercise Physiology 4 credits
- PHY* 101 - Physics for Today 3 credits
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 16**Total Program Credits: 60**

Fitness Specialist Certificate

Mission Statement

The mission of the Fitness Specialist Studies certificate program is to prepare graduates with entry level skills, and flexibility to compete successfully in a dynamic employment market wherever nutrition and fitness are emphasized.

The Fitness Specialist certificate prepares students for immediate employment in the fitness industry in such settings as health clubs, gyms, YMCAs, and corporate wellness programs. Graduates may also consider such self-employment careers as personal trainer or sales and marketing of health and nutrition programs and fitness equipment. Upon completion of the certificate program, students may take national exams for certification from a variety of fitness associations.

Admission Requirements

Students must present current First Aid and CPR certification that has a practical skill examination component (such as the American Heart Association or the American Red Cross) and physical examination before beginning EXS* 212. Students should consult with the coordinator of the Exercise Science and Wellness program for advice about course selection and information about additional costs, including liability insurance for EXS* 212. For more information, contact the Program Coordinator, Todd Degree at (203) 285-2446 or e-mail at (tdegree@gatewayct.edu).

Suggested Course Sequence

First Semester

- BIO* 211 - Anatomy and Physiology I 4 credits
- NTR* 102 - Nutrition I: Principles of Nutrition 3 credits
- Restricted (Elective) 3-4 credits (see below)

Total Semester Credits: 10-11

Second Semester

- BIO* 212 - Anatomy and Physiology II 4 credits
- NTR* 103 - Nutrition Therapy I 3 credits

Total Semester Credits: 7

Third Semester

- EXS* 225 - Essentials of Strength and Conditioning 3 credits

Total Semester Credits: 3

Fourth Semester

- EXS* 115 - Fitness Management 3 credits
- EXS* 212 - Exercise Science & Wellness Internship 3 credits
- EXS* 235 - Exercise Physiology 4 credits

Total Semester Credits: 10

Total Program Credits: 30-31

Restricted Electives:

- ACC* 113 - Principles of Financial Accounting I 3 credits
- BBG* 210 - Business Communication 3 credits
- BIO* 113 - Physiology of Aging 3 credits
- BES* 218 - Entrepreneurship 3 credits
- BMK* 201 - Principles of Marketing 3 credits
- BMK* 220 - Sales 3 credits
- CHE* 111 - Concepts of Chemistry 4 credits
- COM* 173 - Public Speaking 3 credits
- CSC* 101 - Introduction to Computers 3 credits
- CSC* 110 - Computer Logic and Problem Solving 3 credits
- EXS* 101 - Introduction to Exercise Science and Wellness 3 credits
- EXS* 102 - Seminar in Exercise Science and Wellness 3 credits
- EXS* 227 - Exercise Testing & Program Design 4 credits
- HSE* 151 - Introduction to Therapeutic Recreation 3 credits
- PSY* 111 - General Psychology I 3 credits

FIRE ADMINISTRATION

Fire Technology and Administration, AS

The program in Fire Technology and Administration trains and educates competent leaders in fire protection, prevention, and administration. It also provides training and education for insurance companies and industries involved in fire prevention and protection.

Fire technologists work in career and volunteer fire departments; local, state, and federal government agencies; industry, architectural and construction firms, and insurance organizations. They must recognize the need for fire prevention activities, the necessity of educating both children and adults in fire safety, and the importance of enforcing fire prevention codes.

Because fire technologists encounter a broad spectrum of problems and must be well versed in many subjects, the work of the fire technologist is seldom routine.

The Associate in Science degree in Fire Technology and Administration aligns with the National Fire Academy (NFA) standardized fire science courses under the Fire and Emergency Service Higher Education (FESHE) model. The goal of the FESHE initiative is to ensure a clear and consistent path for professional development for members of the fire service. Colleges and Universities can seek recognition from the NFA by meeting the curriculum for their associate or bachelor's degree programs. For more information email DMarcarelli@gatewayct.edu.

Suggested Course Sequence

First Semester

- FTA* 112 - Introduction to Fire Technology 3 credits
- FTA* 116 - Building Construction 3 credits
- ENG* 101 - Composition 3 credits
- MAT* 115 - Mathematics for Science and Technology 3 credits
- or**
- MAT* 137 - Intermediate Algebra 3 credits (or higher)
- BBG* 210 - Business Communication 3 credits

Total Semester Credits: 15

Second Semester

- FTA* 118 - Fire Prevention and Inspection 3 credits
- FTA* 122 - Fire Behavior and Combustion 3 credits
- FTA* 126 - Safety and Survival 3 credits
- CHE* 111 - Concepts of Chemistry 4 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits

Total Semester Credits: 16

Third Semester

- FTA* 210 - Water Supply and Hydraulics 3 credits
- FTA* 216 - Municipal Fire Administration 3 credits
- FTA* 219 - Fire Investigation I 3 credits
- ECN* 101 - Macroeconomics 3 credits
- PHL* 111 - Ethics 3 credits

Total Semester Credits: 15**Fourth Semester**

- FTA* 212 - Legal Aspects of Emergency Services 3 credits
- FTA* 217 - Occupational Safety & Health for
Emergency Services 3 credits
- FTA* 227 - Fire Protection Systems 3 credits
- FTA* 229 - Fire Investigation II 3 credits
- FTA* 230 - Strategy and Tactics 3 credits

Total Semester Credits: 15**Total Program Credits: 61**

Firefighter 1 & 2 Certificate

This Certificate was developed in collaboration with local fire agencies to provide career pathways that meet the needs of emergency response and fire service in and outside of New Haven County. Our program offers high quality, diverse learning and training opportunities to prepare students for the industry. Fire Department applicants who have post-secondary firefighting education have a clear advantage over other candidates. This technical certificate program will help graduates secure employment in the firefighter and emergency responder profession.

Gateway students are prepared as first responders in a fire, traffic accident or medical emergency. Training includes CPAT (Candidate Physical Ability Test), FFI, FFII, and EMT as most fire departments require prospective candidates to have certification as an EMT (Emergency Medical Technician). This program is designed to incorporate the orientation to fire service with the necessary theory and hands-on applications needed to become a certified Fire Fighter. This program qualifies students to take the state certification exam with the Bureau of Fire Standards and Training (which includes both written and practical skills) to become a Certified Fire Fighter in the state of Connecticut. An association or volunteer status is needed to have full certification. Continued population growth will increase the number of emergency calls requiring firefighter responses. The majority of situations that firefighters respond to are medical—rather than fire—emergencies, and the aging of the population will lead to an increased demand for emergency responders. For more information, contact Dave Marcarelli by e-mail at dmarcarelli@gatewayct.edu.

Note: There are prerequisites, medical, PPE gear, and physical requirements for program enrollment as well as mandatory attendance at an information session for program enrollment. Students must either test above MAT* 085 and ENG* 066 or complete these courses with a C or better prior to entering the program. Due to practical training, some courses in this program take place at the New Haven Regional Fire Academy. Students are required to wear a uniform in all classes and have structural firefighting Personal Protective Equipment (required PPE gear is Turnout and SCBA). Each student must rent or own the required PPE gear.

Suggested Course Sequence

First Semester

- FTA* 100 - Fitness and Health for Firefighters 3 credits
- FTA* 101 - Fundamentals of Firefighting I 9 credits

Total Semester Credits: 12

Second Semester

- EMT* 100 - Emergency Medical Technician Basic 6 credits
- FTA* 102 - Fundamentals of Firefighting II 3 credits
- FTA* 103 - Civil Service Test Preparation 1 credits
- FTA* 110 - Fire Ground Hydraulics 3 credits

Total Semester Credits: 13

Total Program Credits: 25

FIRST YEAR EXPERIENCE

No Active Programs

FOREIGN LANGUAGES

CSCU Pathway Transfer Degree: French Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	French, B.A.
At Eastern Connecticut State University	French, B.A.
At Southern Connecticut State University	French, B.A.
At Western Connecticut State University	French, B.A.

Here is the recommended course of study for the French Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for this program:

- Professor Victoria Morse, VMorse@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- ENG* 101 - Composition 3 credits
- FRE* 101 - Elementary French I 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take a math course that prepares you for required level of math in your program. If you begin French at a higher level than FRE 101, you will receive additional unrestricted electives. You should also consider using unrestricted electives to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Second Semester

- FRE* 102 - Elementary French II 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take a math course that prepares you for required level of math in your program. If you begin French at a higher level than FRE 101, you will receive additional unrestricted electives. You should also consider using unrestricted electives to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-17

Third Semester

- FRE* 201 - Intermediate French I 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one General Education I - Creativity 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take a math course that prepares you for required level of math in your program. If you begin French at a higher level than FRE 101, you will receive additional unrestricted electives. You should also consider using unrestricted electives to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Fourth Semester

- FRE* 202 - Intermediate French II 3 credits
- Choose one course in Oral Communication 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one course in General Education II - Global Knowledge 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use these credits to take a math course that prepares you for required level of math in your program. If you begin French at a higher level than FRE 101, you will receive additional unrestricted electives. You should also consider using unrestricted electives to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Total Program Credits: 61

CSCU Pathway Transfer Degree: Italian Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Italian, B.A.
At Eastern Connecticut State University	Italian, B.A.
At Southern Connecticut State University	Italian, B.A.
At Western Connecticut State University	Italian, B.A.

Here is the recommended course of study for the French Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for this program:

- Professor Victoria Morse, VMorse@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- ENG* 101 - Composition 3 credits
- ITA* 101 - Elementary Italian I 3 credits
- Choose one course in Critical Analysis and Logical Thinking 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepares you for the required level of math in your program. If you begin Italian at a higher level than ITA 101, you will receive additional unrestricted electives. You should also consider using unrestricted electives to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field; you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for Central, Southern, and Western Connecticut State Universities, and Charter Oak State College—but not Eastern. Your advisor will help you to determine which courses to select.

Total Semester Credits: 15

Second Semester

- ITA* 102 - Elementary Italian II 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- Choose one course in Quantitative Reasoning 3-4 credits
- Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepares you for the required level of math in your program. If you begin Italian at a higher level than ITA 101, you will receive additional unrestricted electives. You should also consider using unrestricted electives to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field; you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for Central, Southern, and Western Connecticut State Universities, and Charter Oak State College—but not Eastern. Your advisor will help you to determine which courses to select.

Total Semester Credits: 15

Third Semester

- ITA* 201 - Intermediate Italian I 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one course in General Education I - Creativity 3 credits
- Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepares you for the required level of math in your program. If you begin Italian at a higher level than ITA 101, you will receive additional unrestricted electives. You should also consider using unrestricted electives to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field; you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for Central, Southern, and Western Connecticut State Universities, and Charter Oak State College—but not Eastern. Your advisor will help you to determine which courses to select.

Total Semester Credits: 15-16

Fourth Semester

- ITA* 202 - Intermediate Italian II 3 credits
- Choose one course in Oral Communications 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one course in General Education II - Global Knowledge 3 credits
- Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepares you for the required level of math in your program. If you begin Italian at a higher level than ITA 101, you will receive additional unrestricted electives. You should also consider using unrestricted electives to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field; you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for Central, Southern, and Western Connecticut State Universities, and Charter Oak State College—but not Eastern. Your advisor will help you to determine which courses to select.

Total Semester Credits: 15

Total Program Credits: 61

CSCU Pathway Transfer Degree: Spanish Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Spanish, B.A.
At Eastern Connecticut State University	Spanish, B.A.
At Southern Connecticut State University	Spanish, B.A.
At Western Connecticut State University	Spanish, B.A.

Here is the recommended course of study for the Spanish Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances, you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for this program:

- Professor Victoria Morse, VMorse@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- ENG* 101 - Composition 3 credits
- SPA* 101 - Elementary Spanish I 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepares you for the required level of math in your program. If you begin Spanish at a higher level than SPA 101, you will receive additional unrestricted electives. You should also consider using unrestricted electives to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field; you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for Central, Southern and Western Connecticut State Universities and Charter Oak State College—but not Eastern Connecticut State University. Your advisor will help you to determine which courses to select.

Total Semester Credits: 15

Second Semester

- SPA* 102 - Elementary Spanish II 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- Choose one course in Quantitative Reasoning 3-4 credits
- Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepares you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-17

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- SPA* 201 - Intermediate Spanish I 3 credits
- Choose one course in Scientific Knowledge and Understanding 3 credits
- Choose one course in Social Phenomena 3 credits
- Choose one course in General Education I - Creativity 3 credits
- Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepares you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 16

Fourth Semester

- SPA* 202 - Intermediate Spanish II 3 credits
- Choose one course in Oral Communication 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one course in General Education II - Global Knowledge 3 credits
- Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepares you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Total Program Credits: 61-63

GENERAL STUDIES

General Studies, AS

The General Studies curriculum provides the fundamentals of a college education together with a range of open electives, allowing students to explore various courses of study and to clarify their educational and occupational goals. It is the least restrictive of all the degrees offered by the College so that students may put together a program compatible with their individual interests and skills. For more information, call the General Studies Coordinator, Catherine Babbitt at (203) 285-2104 or e-mail at CBabbitt@gatewayct.edu.

General Studies Program Outcomes

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

- Identify educational and occupational goals
- Work with others in a culturally and intellectually diverse community
- Utilize effective written and oral communication skills
- Apply quantitative methods to problem solving
- Apply scientific methods of investigation
- Demonstrate competency in using current, relevant technologies

Suggest Course Sequence

First Semester

- | | |
|--|-----------|
| • ENG* 101 - Composition | 3 credits |
| • MAT* 109 - Quantitative Literacy | 3 credits |
| • IDS 114 - Foundations of Academic Inquiry | 3 credits |
| • HIS* or POL* (Elective) | 3 credits |
| • ART*, DAN*, MUS*, THR*, or any course in Aesthetic Dimensions (Elective) | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|--|-------------|
| • ENG* 102 - Literature and Composition | 3 credits |
| or | |
| • ENG* 200 - Advanced Composition | 3 credits |
| • Choose one course in Scientific Knowledge (SK: Scientific Knowledge & Understanding) | 3-4 credits |
| • ANT*, PSY*, SOC* (Elective) | 3 credits |
| • Open (Elective) | 3 credits |
| • Restricted Elective (see below) | 3 credits |

Total Semester Credits: 15-16

Third Semester

- | | |
|--|-----------|
| • Choose one course in (Gen Ed - CALT: Critical Analysis/Logical Thinking) | 3 credits |
| • Choose one course in (Gen Ed - OC: Oral Communication) | 3 credits |
| • Choose one course in (Gen Ed - SP: Social Phenomena) | 3 credits |
| • Open (Electives) | 6 credits |

Total Semester Credits: 15

Fourth Semester

- BIO*, CHE*, EAS*, EVS*, MAT* or PHY* (Elective) 3 credits
- Restricted Elective (see below) 3 credits
- Open (Electives) 9 credits

Total Semester Credits: 15

Total Program Credits: 60-61

Resticted Electives

- ACC* 113 - Principles of Financial Accounting I 3 credits
- ARC* 133 - Technical Drafting 3 credits
- ART*
- BIO* 115 - Human Biology 4 credits
- BES* 218 - Entrepreneurship 3 credits
- BES* 239 - Business Plan 3 credits
- BFN* 110 - Personal Finance 3 credits
- BMG* 203 - Leadership 3 credits
- COM* 121 - Journalism I 3 credits
- COM* 141 - Television Production I 3 credits
- CSA* 105 - Introduction to Software Applications 3 credits
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- CSA* 140 - Database Applications (Access) 3 credits
- CJS* 101 - Introduction to Criminal Justice 3 credits
- CJS* 102 - Introduction to Corrections 3 credits
- DAR* 158 - Biology of Addiction 3 credits
- DAN*
- EAS* 106 - Natural Disasters 3 credits
- ENG* 281 - Creative Writing 3 credits
- EVS* 100 - Introduction to Environmental Science 3 credits
- ESL*
- FRE*
- GRA* 261 - Web Design I 3 credits
- HLT* 103 - Investigations in Health Careers 3 credits
- HSP* 101 - Principles of Food Preparation 3 credits
- HSP* 103 - Principles of Baking I 3 credits
- HSP* 249 - Food Writing 3 credits
- HUM* 130 - Philosophy and Practice of Yoga 3 credits
- HSE* 212 - Mediation 3 credits
- ITA*
- MAT* 146 - Mathematics for the Liberal Arts 3 credits
- MUS*
- PHY* 101 - Physics for Today 3 credits
- SPA*
- THR*

GEOGRAPHY

No active programs available.History

HISTORY

CSCU Pathway Transfer Degree: History Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	History, B.A.
At Eastern Connecticut State University	History, B.A.
At Southern Connecticut State University	History, B.A.
At Western Connecticut State University	History, B.A.
At Charter Oak State College	General Studies - History Concentration, B.A.

Here is the recommended course of study for the History Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for this program:

- Professor Joe Maynard, JMaynard@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- HIS* 201 - U.S. History I 3 credits
- ENG* 101 - Composition 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Second Semester

- HIS* 202 - U.S. History II 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- Choose one course in Quantitative Reasoning 3-4 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select

Total Semester Credits: 15-17

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one General Education I - Creativity 3 credits
- Choose two Unrestricted Electives* 6 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-16

Fourth Semester

- Choose one course in Oral Communication 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits (you cannot use U.S. History I or U.S. History II to meet this requirement)
- Choose one General Education II - Global Knowledge 3 credits
- Choose two Unrestricted Electives* 6 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Total Program Credits: 60-61

HOSPITALITY MANAGEMENT

Hotel Management, AS

The lodging industry is one of the fastest-growing industries in the nation. In the more than 50,000 hotels and motels in the U.S.A., nearly four million rooms are available each day. Gross annual income exceeds \$20 billion dollars. In the first year at Gateway Community College, students study the various aspects of the lodging industry. In the second year, emphasis is placed on practical management experience. As part of the course requirements, students participate in a 400-hour work experience/internship program. For individuals who want to continue their studies following graduation, courses in this program are transferable to similar programs at four-year colleges and universities.

Students in this program will be required to:

- Lift and transport food and other culinary products, equipment, small wares and utensils around the kitchen
- Use knives and other commercial cooking and food service equipment
- Use commercial cleaning and sanitizing equipment and materials
- Handle a variety of food items including meat, fish, poultry, produce, dairy products and flours
- Follow local Board of Health and safety protocol

Program Outcomes

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

- Process reservations, register guests, process guest departures, and assist in resolving guest complaints
- Describe functional relationships among hotel divisions and departments
- Identify and implement systems and processes for room status changes, front office posting, telephone/pbx, bank maintenance, cash transactions, and security and guest keys
- Effectively work as a member of a team, serve clients and customers, teach others new skills, exercise leadership behavior, negotiate, and work with others from diverse backgrounds
- Identify such current trends in the lodging industry as delivery systems and functions
- Perform basic mathematical computations accurately and appropriately, especially with regard to hotel and guest accounting, night audits, and cost controls for hotel and food operations within the hotel
- Describe and apply basic marketing, sales, and merchandising methods in hospitality operations

Graduates of the Hotel Management program at GCC are qualified for employment as supervisors in small hotels and inns as trainees and assistants in large hotels, and as salespersons and front office agents. Students in this program are responsible for purchasing uniforms, books, and knives. A physical examination and travel to internship / work experience sites are required. As part of the course requirements, students participate in a 400-hour work experience program. Individuals who wish to continue their studies following graduation may transfer courses in this program to similar programs at the baccalaureate level. For more information, call the Hospitality Management Program Coordinator, Stephen Fries, at (203) 285-2175 or e-mail at (sfries@gatewayct.edu).

Suggest Course Sequence

First Semester

- | | |
|---|-----------|
| • HSP* 100 - Introduction to the Hospitality Industry | 3 credits |
| • HSP* 101 - Principles of Food Preparation | 3 credits |
| • HSP* 109 - Food Safety Certification | 1 credits |
| • HSP* 134 - Hospitality Customer Relations | 3 credits |
| • HSP* 237 - Hospitality Marketing | 3 credits |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 16

Second Semester

- BBG* 210 - Business Communication 3 credits
 - ENG* 102 - Literature and Composition 3 credits
 - or**
 - ENG* 200 - Advanced Composition 3 credits
 - HSP* 117 - Beverage Management 3 credits
 - IDS 106 - Critical Thinking - Business 3 credits
 - MAT* 109 - Quantitative Literacy 3 credits (or higher)
- Total Semester Credits: 15**

Third Semester

- HSP* 211 - Food and Beverage Cost Control 3 credits
 - HSP* 231 - Hospitality Law 3 credits
 - ACC* 113 - Principles of Financial Accounting I 3 credits
 - CSA* 135 - Spreadsheet Applications (Excel) 3 credits
 - Choose any course in BIO*, CHE*, EAS*, EVS*, PHY* (Gen Ed - SK: Scientific Knowledge) 3 credits
- Total Semester Credits: 15**

Fourth Semester

- HSP* 244 - Meetings, Conventions, and Special Events Management 3 credits
 - HSP* 246 - Hotel Accounting and Front Office Management 3 credits
 - HSP* 295 - Hospitality Management, Internship/Work Experience I 3 credits
 - BMG* 220 - Human Resources Management 3 credits
 - PSY* 111 - General Psychology I 3 credits
- Total Semester Credits: 15**

Summer Semester

- HSP* 298 - Hospitality Management Internship/Work Experience II 1 credits
- Total Semester Credits: 1**
Total Program Credits: 62

Additional Requirements

Students seeking both the A.S. degree in Hotel Management and the A.S. degree in Restaurant and Food Service Management must complete all of the requirements of the Hotel Management degree as well as:

- BES* 218 - Entrepreneurship 3 credits
- BOT* 220 - Computerized Communication (Microsoft PowerPoint, e-mail, Internet) 3 credits
- HSP* 112 - Advanced Food Preparation 4 credits
- HSP* 232 - Restaurant Management 3 credits
- HSP* 249 - Food Writing 3 credits

Meetings, Conventions and Special Events Management Certificate

This certificate is designed for students seeking careers in the growing field of meeting planning. It will also develop and update the skills of those presently in the field. The certificate emphasizes the management of and services for meetings, conventions, trade shows, and special events. Students will be prepared for positions in such areas as independent or entry-level corporate meeting planning; conference, trade show, and association management; and convention/meeting services in the hotel industry. The certificate will also enable the veteran meeting planner to obtain college credentials in his/her profession. Furthermore, it gives administrative assistants and others who plan meetings as part of their regular jobs a formal opportunity to learn about this industry and enhance their planning skills. For more information, call the Hospitality Management Program Coordinator, Stephen Fries, at (203) 285-2175 or e-mail at (sfries@gatewayct.edu).

Suggest Course Sequence

First Semester

- BBG* 210 - Business Communication 3 credits
- or**
- COM* 173 - Public Speaking 3 credits
- HSP* 100 - Introduction to the Hospitality Industry 3 credits
- BMK* 215 - Principles of eBusiness 3 credits

Total Semester Credits: 9

Second Semester

- HSP* 231 - Hospitality Law 3 credits
- HSP* 237 - Hospitality Marketing 3 credits
- HSP* 244 - Meetings, Conventions, and Special Events Management 3 credits
- Restricted Electives: (Choose one): CSA* 135, CSA* 140, BOT* 220

Total Semester Credits: 12

Total Program Credits: 21

Restaurant and Food Service Management, AS

The food service industry is one of the fastest-growing industries in this country and now ranks third in the nation in terms of growth. The industry offers job opportunities in many areas where food and drink are served, including commercial, industrial, and health care organizations. There are more than 600,000 restaurants in this country, employing more than nine million workers.

Food service establishments serve more than 800 million meals per week, and gross sales exceed \$150 billion each year. Graduates of the Restaurant and Food Service Management program are qualified for employment in food production, food and beverage cost control, supervision, food service budgeting, and forecasting. As part of the course requirements, students participate in a 400-hour work experience program. Individuals who wish to continue their studies following graduation may transfer courses in this program to similar programs at the baccalaureate level.

Students in this program will be required to:

- Communicate with guests in Café Vincenzo
- Lift and transport food and other culinary products, equipment, small wares and utensils around the kitchen
- Lift and transport trays with hot and cold plated food, small ware and other items
- Pour and serve hot and cold liquids and beverages
- Use knives and other commercial cooking and food service equipment
- Maneuver in a commercial kitchen, dining room and related facilities
- Use commercial cleaning and sanitizing equipment and materials
- Handle a variety of food items including meat, fish, poultry, produce and dairy products
- Follow local Board of Health and safety protocol

Program Outcomes

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

- Identify, organize, plan, and allocate resources in food service operations such as time, materials and facilities, money, and human resources
- Demonstrate knowledge of food preparation theories and techniques, and use this knowledge to meet the production requirements of a food service operation within a projected budget
- Effectively work with others as a member of a team, serving clients and customers, teaching others new skills, exercising leadership behaviors, and negotiating and working with others from diverse backgrounds
- Apply concepts of procurement and inventory to purchase, receive, store, issue, and distribute food and related items in a food service operation
- Identify such current trends in the food service industry as delivery systems and functions
- Operate effectively, appropriately suggesting modifications to existing systems in order to improve products or services and develop new or alternative systems
- Select and apply the appropriate food service procedures, tools, or machines, including computer applications, to produce desired results
- Demonstrate ethical behavior and self-management in personal and professional activities
- Perform basic mathematical computations accurately and appropriately, especially with regard to food and beverage production, purchasing, and cost controls
- Describe and apply basic marketing, sales, and merchandising methods in hospitality operations

Students in this program are responsible for purchasing uniforms, books, and knives. A physical examination and travel to internship/work experience sites are required. For information, call the Hospitality Management Program Coordinator, Stephen Fries, at (203) 285-2175 or e-mail at (sfries@gatewayct.edu).

Suggest Course Sequence

First Semester

- HSP* 100 - Introduction to the Hospitality Industry 3 credits
- HSP* 101 - Principles of Food Preparation 3 credits
- HSP* 109 - Food Safety Certification 1 credits
- ENG* 101 - Composition 3 credits
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 13

Second Semester

- BBG* 210 - Business Communication 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- HSP* 112 - Advanced Food Preparation 4 credits
- HSP* 117 - Beverage Management 3 credits
- MAT* 109 - Quantitative Literacy 3 credits

Total Semester Credits: 16

Third Semester

- HSP* 134 - Hospitality Customer Relations 3 credits
- HSP* 211 - Food and Beverage Cost Control 3 credits
- HSP* 231 - Hospitality Law 3 credits
- HSP* 237 - Hospitality Marketing 3 credits
- Choose one course in Scientific Knowledge (Gen Ed - SK: Scientific Knowledge) 3-4 credits

Total Semester Credits: 15-16

Fourth Semester

- ACC* 113 - Principles of Financial Accounting I 3 credits
- HSP* 232 - Restaurant Management 3 credits
- HSP* 249 - Food Writing 3 credits
- HSP* 295 - Hospitality Management, Internship/Work Experience I 3 credits
- BES* 218 - Entrepreneurship 3 credits

Total Semester Credits: 15

Summer Semester

- HSP* 298 - Hospitality Management Internship/Work Experience II 1 credits

Total Semester Credits: 1

Total Program Credits: 60-61

Additional Requirements

Students seeking both the A.S. degree in Restaurant and Food Service Management and the A.S. degree in Hotel Management must complete all of the requirements of the Restaurant and Food Service Management degree as well as:

- BMG* 220 - Human Resources Management 3 credits
- CSA* 135 - Spreadsheet Applications (Excel) 3 credits
- HSP* 244 - Meetings, Conventions, and Special Events Management 3 credits
- HSP* 246 - Hotel Accounting and Front Office Management 3 credits
- IDS 106 - Critical Thinking - Business 3 credits

HUMAN SERVICES

CSCU Pathway Transfer Degree: Social Work Studies, A.A.

With this degree, you will be able to transfer to any CSU and apply to the following majors:

At Central Connecticut State University	Social Work, B.A.
At Eastern Connecticut State University	Social Work, B.A.
At Southern Connecticut State University	Social Work, B.S.
At Western Connecticut State University	Social Work, B.A.

Here is the recommended course of study for the Social Work Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances, you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for more information:

- Professor Kim Shea, KShea@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

Note: For admission to CCSU's Social Work program: (1).Minimum overall GPA of 2.00, which includes both CCSU grades and grades for courses taken at other institutions. (2) Minimum overall GPA of 2.50 for the following introductory Social Work courses and related requirements (Program GPA) Community College SOC 103/201, HSE 101/SOC 235, SOC 101, BIO 115, POL 111, & MAT 167/MAT 201/MAT 165/MAT 168; AND CCSU SW 225, SW 227, SOC 233, & ECON 200. Each of these courses must be completed with a minimum grade of C. (3) A minimum score of 2 (emerging) on the Potential for Professional Competence for Generalist Social Work Practice Scale in each of the following CSWE competencies 2.1.1, 2.1.3, and 2.1.4. (4) A minimum score of 3 or higher in every category of the Volunteer Experience Evaluation for HSE 101/SOC 235 and SW 227. (5) Minimum scores of 3 on the Professional Social Work Disposition Rubric for SW 225, HSE 101/SOC 235, and SW 227. The Transfer Student Reference Form may be substituted for field experiences from other colleges. Applications to the Social Work Program are accepted three times a year with deadlines of August 1st, October 1st, and March 1st. Students must submit an admission portfolio and have an interview with the Social Work faculty. The ideal time to apply to the Program is when the applicant is enrolled in SW 227 at CCSU. For TAP Transfer Students, this should be in the first semester at CCSU.

Note: For admission to ECSU's Social Work program: Admission to the Social Work Program is competitive and is not guaranteed by admission to Eastern Connecticut State University. Applications for the social work major are due on January 31 each year for students expecting to graduate in May, two years following application. Applications received after that date are reviewed as space is available in the junior class. The online application must be completed in one session (you cannot log out of your computer, save your work, or return to a survey that has been submitted). The application is linked to <http://www1.easternct.edu/socialwork/admissions/>.

First Semester

- | | |
|---|-----------|
| • ENG* 101 - Composition | 3 credits |
| • HSE* 101 - Introduction to Human Services | 3 credits |
| • MAT* 167 - Principles of Statistics | 3 credits |
| • Choose one course in Aesthetic Dimensions | 3 credits |
| • Choose one Unrestricted Elective* | 3 credits |

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take courses that prepare you for required courses in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Second Semester

- BIO* 115 - Human Biology 4 credits
- POL* 111 - American Government 3 credits
- SOC* 101 - Principles of Sociology 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 16

Third Semester

In addition to applying to the SOCIAL WORK program, you also need to begin the transfer application process to the University in your third semester or the semester before you plan to graduate. FAFSA become available October 1.

- ANT* 105 - Introduction to Cultural Anthropology 3 credits
- PSY* 111 - General Psychology I 3 credits
- SOC* 201 - Contemporary Social Issues 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Choose one course in General Education I - Creativity 3 credits

Total Semester Credits: 15-16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Oral Communication 3 credits
- Choose one course in General Education II - Global Knowledge 3 credits
- Choose one or two courses from the following: HSE* 247, HSE* 271, HSE* 281, PSY* 245, SOC* 210, or SOC* 220 3-6 credits
- Choose one Unrestricted Elective* 0-3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Total Program Credits: 61

Gerontology Certificate

The gerontology certificate curriculum meets the continuing educational needs of providers and users of services to older citizens. Applicants may be employees in the field of gerontology or elderly citizens themselves, hospital administrators, or students enrolled in other programs at the College. For more information, contact Kim Shea, Program Coordinator at (203) 285-2116 or e-mail at (kshea@gatewayct.edu)

First Semester

- BIO* 113 - Physiology of Aging 3 credits
- SOC* 114 - Sociology of Aging 3 credits
- PSY* 210 - Death and Dying 3 credits

Total Semester Credits: 9

Second Semester

- HSE* 247 - Supervisors' Seminar 3 credits
- PSY* 209 - Psychology of Aging 3 credits

Total Semester Credits: 6

Total Program Credits: 15

Human Services Career, AS

The Human Services Career course of study is designed for students who plan to enter the job market or who are already employed by a human services agency.

Suggested Course Sequence

First Semester

- BIO* 110 - Principles of the Human Body 3 credits
- or
- BIO* 115 - Human Biology 4 credits
- ENG* 101 - Composition 3 credits
- HSE* 101 - Introduction to Human Services 3 credits
- MAT* 109 - Quantitative Literacy 3 credits (or higher)
- SOC* 101 - Principles of Sociology 3 credits

Total Semester Credits: 15-16

Second Semester

- ENG* 102 - Literature and Composition 3 credits
- or
- ENG* 200 - Advanced Composition 3 credits
- POL* 111 - American Government 3 credits
- PSY* 111 - General Psychology I 3 credits
- SOC* 111 - Child, Family, School and Community 3 credits
- or
- SOC* 210 - Sociology of the Family 3 credits
- Restricted Electives (see below) 3 credits

Total Semester Credits: 15

Third Semester

- PSY* 105 - Group Dynamics 3 credits
- PSY* 245 - Abnormal Psychology 3 credits
- Choose one course in AD, HK, OC, or SR
(Aesthetic Dimension)
(Historical Knowledge)
(Oral Communication)
(Scientific Reasoning)
- Restricted Electives (see below) 6 credits

Total Semester Credits: 15**Fourth Semester**

- HSE* 271 - Field Work Seminar I 3 credits
- HSE* 281 - Human Services Field Work I 3 credits
- PHL* 111 - Ethics 3 credits
- PSY* 233 - Theories, Methods and Practice of Counseling and Therapy 3 credits
- Restricted Elective (see below) 3 credits

Total Semester Credits: 15**Total Program Credits: 60-61****Restricted Electives:**

Please contact the Program Coordinator for additional options.

- CSA* 105 - Introduction to Software Applications 3 credits
- PSY* 122 - Child Growth and Development 3 credits
- PSY* 209 - Psychology of Aging 3 credits
- PSY* 210 - Death and Dying 3 credits
- SOC* 114 - Sociology of Aging 3 credits
- Any CJS course
- Any DAR course
- Any HSE course higher than HSE 101

Human Services Certificate

The Human Service Certificate curriculum is designed for the professional who is already employed in the field of Human Services. For more information, contact Kim Shea, Program Coordinator at (203) 285-2116 or e-mail at (kshea@gatewayct.edu).

Program Requirements

First Semester

- | | |
|---|-----------|
| • COM* 173 - Public Speaking | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • HSE* 101 - Introduction to Human Services | 3 credits |
| • PSY* 111 - General Psychology I | 3 credits |
| • SOC* 101 - Principles of Sociology | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|-----------------------------------|---------------|
| • HSE* 247 - Supervisors' Seminar | 3 credits (S) |
| • POL* 111 - American Government | 3 credits |
| • PSY* 105 - Group Dynamics | 3 credits |
| • PSY* 245 - Abnormal Psychology | 3 credits |
| • Restricted Elective (see below) | 3 credits |

Total Semester Credits: 15

Total Program Credits: 30

Restricted Electives

(S) Offered spring semester

- | | |
|---|---------------------|
| BIO* 113 - Physiology of Aging | 3 credits |
| DAR* (any) | |
| PSY* 209 - Psychology of Aging | 3 credits |
| PSY* 122 - Child Growth and Development | 3 credits |
| PSY* 210 - Death and Dying | 3 credits |
| SOC* 114 - Sociology of Aging | 3 credits |
| CJS* (any) | |
| HSE* 101 - Introduction to Human Services | 3 credits or higher |

Human Services Transfer, AS

This course of study prepares students for transfer into a four-year college while training them in human services and developing the skills necessary in entry-level positions. Students wishing to transfer are strongly encouraged to obtain catalogs from the four-year college(s) under consideration to ensure the transferability of credits.

Suggested Course Sequence

First Semester

- ENG* 101 - Composition 3 credits
- HIS* 101 - Western Civilization I 3 credits
- or**
- HIS* 102 - Western Civilization II 3 credits
- HSE* 101 - Introduction to Human Services 3 credits
- MAT* 137 - Intermediate Algebra 3 credits or higher
- SOC* 101 - Principles of Sociology 3 credits

Total Semester Credits: 15-16

Second Semester

- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- POL* 111 - American Government 3 credits
- PSY* 111 - General Psychology I 3 credits
- SOC* 111 - Child, Family, School and Community 3 credits
- or**
- SOC* 210 - Sociology of the Family 3 credits
- Restricted Elective (see below) 3 credits

Total Semester Credits: 15

Third Semester

- BIO* 115 - Human Biology 4 credits
- PHL* 111 - Ethics 3 credits
- PSY* 105 - Group Dynamics 3 credits
- PSY* 245 - Abnormal Psychology 3 credits
- SOC* 220 - Racial & Ethnic Diversity 3 credits

Total Semester Credits: 16

Fourth Semester

- ANT* 105 - Introduction to Cultural Anthropology 3 credits
- HSE* 271 - Field Work Seminar I 3 credits
- HSE* 281 - Human Services Field Work I 3 credits
- Choose one course in Aesthetic Dimension
(Gen Ed - AD: Aesthetic Dimension) 3 credits
- Restricted Elective (see below) 3 credits

Total Semester Credits: 15

Total Program Credits: 61

Restricted Electives

- CSA* 105 - Introduction to Software Applications 3 credits
- ECN* 102 - Microeconomics 3 credits
- ENG* 281 - Creative Writing 3 credits
- POL* 102 - Introduction to Comparative Politics 3 credits
- THR* 110 - Acting I 3 credits
- Any studio art or music.
- Any HSE course higher than HSE 101

Human Services: Gerontology Option, AS

This option prepares students for entry-level positions working with the elderly and for transfer to a four-year college. The option presents the demographic, social, biological, and psychological changes occurring in elderly people and how these changes determine the skills and services needed to work in gerontology

Suggested Course Sequence

First Semester

- BIO* 113 - Physiology of Aging 3 credits
- ENG* 101 - Composition 3 credits
- HSE* 101 - Introduction to Human Services 3 credits
- MAT* 109 - Quantitative Literacy 3 credits (or higher)
- SOC* 101 - Principles of Sociology 3 credits

Total Semester Credits: 15

Second Semester

- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- HSE* 247 - Supervisors' Seminar 3 credits
- PHL* 111 - Ethics 3 credits
- PSY* 111 - General Psychology I 3 credits
- PSY* 209 - Psychology of Aging 3 credits

Total Semester Credits: 15

Third Semester

- POL* 111 - American Government 3 credits
- PSY* 245 - Abnormal Psychology 3 credits
- SOC* 114 - Sociology of Aging 3 credits
- Restricted Elective (see below) 6 credits

Total Semester Credits: 15

Fourth Semester

- HSE* 271 - Field Work Seminar I 3 credits
- HSE* 281 - Human Services Field Work I 3 credits
- PSY* 233 - Theories, Methods and Practice of Counseling and Therapy 3 credits
- Restricted Elective (see below) 3 credits
- Choose one course in AD, HK, OC, or SR (Gen Ed) 3 credits

Total Semester Credits: 15

Total Program Credits: 60

Restricted Electives

- CSA* 105 - Introduction to Software Applications 3 credits
- PSY* 201 - Life Span Development 3 credits
- PSY* 210 - Death and Dying 3 credits
- Any DAR course.
- Any HSE course higher than HSE 101

Therapeutic Recreation Certificate

This program prepares students to work as Therapeutic Recreation Directors under Connecticut State Regulations. With a steadily growing health care field, employment opportunities for Therapeutic Recreation Directors continue to increase. Students can pursue opportunities working with a variety of populations including Alzheimer's and dementia, autism, short-term rehabilitation, home care and individuals with a variety of physical and mental disabilities. For more information, contact Kim Shea, Program Coordinator at (203) 285-2116 or e-mail at (kshea@gatewayct.edu).

Program Outcomes

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

- Identify the purpose, service goals and outcomes of the therapeutic recreation profession
- Identify and analyze the skills necessary to provide appropriate interventions to individuals with special needs
- Demonstrate ability to write measurable goals and behavioral objectives for individuals with special needs
- Demonstrate knowledge of assessment, planning, implementation and evaluation skills needed for professional documentation
- Evaluate the different models for program delivery and recognize their strengths and weaknesses in relation to working with diverse populations with special needs

First Semester

- BIO* 113 - Physiology of Aging 3 credits
- HSE* 151 - Introduction to Therapeutic Recreation 3 credits
- HSE* 152 - Programming in Therapeutic Recreation 3 credits

Total Semester Credits: 9

Second Semester

- HSE* 153 - Methods and Materials for Therapeutic Recreation 3 credits
- HSE* 247 - Supervisors' Seminar 3 credits
- Restricted Electives (choose one): PSY* 209, PSY* 210 or SOC* 114

Total Semester Credits: 9

Total Program Credits: 18

Youth Worker Certificate

This certificate supports the professional development of people who work with youth, ages 12 and up. The program facilitates an understanding of adolescent development and the diverse ways in which adolescents learn about and experience the world. Courses prepare youth workers to assist youth, colleagues, organizations, and communities. Students learn about valuable local, state, and national youth development projects and resources.

Field experience is an integral part of the Youth Worker curriculum and is coordinated with the seminar assignments. The field experience and seminar courses must be taken during the same semester. For more information, contact Kim Shea, Program Coordinator at (203) 285-2116 or e-mail at (kshea@gatewayct.edu).

First Semester

- | | |
|---|-----------|
| • COM* 173 - Public Speaking | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • HSE* 101 - Introduction to Human Services | 3 credits |
| • SOC* 101 - Principles of Sociology | 3 credits |
| Elective: Computer Literacy | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|--|-----------|
| • DAR* 101 - Public Health Issues: Abuse & Addiction | 3 credits |
| • HSE* 228 - Youth Work Seminar | 3 credits |
| • HSE* 271 - Field Work Seminar I | 3 credits |
| • HSE* 281 - Human Services Field Work I | 3 credits |
| • PSY* 105 - Group Dynamics | 3 credits |
| Restricted Electives: ECE* 101 or SOC* 210 | 3 credits |

Total Semester Credits: 18

Total Program Credits: 33

INTERDISCIPLINARY PEACE, COLLABORATION, & CONFLICT

Interdisciplinary Peace, Collaboration, & Conflict Certificate

The Interdisciplinary Peace, Collaboration, and Conflict Certificate (IPCC) promotes the knowledge and skills leading to student success in meeting educational and workplace goals. Interactive traditional and online instruction and external service learning internships give students the opportunities to recognize their capacity to understand personal and global conflict and to use strategies that support emotional health and nonviolence. The Interdisciplinary Peace, Collaboration, and Conflict Certificate builds capacity in our communities to prevent and sustain a culture of nonviolence instead of reacting to it. Our faculty, staff, and students are involved in many local and statewide organizations that focus on the fields of peace education and collaborative conflict resolution. The Certificate promotes and coordinates services and educational opportunities to reduce and eliminate violence.

Program Outcomes

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

- Recognize the value of creative, collaborative and innovative approaches to problem-solving and acknowledging differing points of view
- Respond critically to ethical issues while applying standards of scholarship
- Apply a multi-scalar perspective to peace practices including alternative dispute resolution and mediation; reconciliation; peace building and peace making, peace keeping
- Clearly communicate peace and conflict concepts in both oral and written forms. Respond promptly to rhetorical situations, utilize and evaluate sources, construct logical arguments, apply language conventions and formulate effective writing strategies

Access, evaluate, and identify information appropriate to needs and audience, synthesize information and evaluate ethical and social issues associated with the use of information technologies

Program Requirements

- HUM* 125 - Introduction to Peace and Conflict Studies 3 credits
- PHL* 111 - Ethics 3 credits
- HSE* 212 - Mediation 3 credits
- IDS 292 - Peace/Conflict Service Learning Internship 3 credits
- Restricted Elective 3 Credits

Total Program Credits: 15

Restricted Electives

- ANT* 105 - Introduction to Cultural Anthropology 3 credits
- CJS* 101 - Introduction to Criminal Justice 3 credits
- CJS* 102 - Introduction to Corrections 3 credits
- ENG* 202 - Technical Writing 3 credits
- ECE* 176 - Health, Safety & Nutrition 3 credits
- HIS* 253 - History of Human Rights 3 credits
- HUM* 130 - Philosophy and Practice of Yoga 3 credits
- PSY* 105 - Group Dynamics 3 credits

LIBERAL ARTS AND SCIENCES

Liberal Arts and Sciences, AA

The Associate in Arts degree in Liberal Arts and Sciences (LAS) is designed for students who wish to complete a rigorous course of study in preparation for transfer to a baccalaureate degree program. A broadly integrated curriculum will provide students with an essential understanding of traditional discipline areas, as well as the academic skills necessary to engage them. Students will become familiar with techniques of inquiry in humanities, mathematics, natural sciences, and social sciences, allowing them to continue their education with confidence toward a 4-year degree in the discipline of their choice.

Courses which satisfy the requirements for an Associate's degree in the Liberal Arts and Sciences at Gateway are in many cases the same as those taught in the first two years of the Bachelor's degree program at receiving schools. With an LAS degree, students may pursue a professional degree (e.g., in education, business, science, law, medicine, social work, etc.) or a liberal arts degree at the bachelor's level (e.g., in English, philosophy, natural science, or mathematics, etc.). In order to ensure maximum transfer credit to the college or university of choice, students are strongly encouraged to study the catalog of the institution to which they intend to transfer and consult directly with its admissions office. Students should also confer each semester with the LAS program coordinator, or a qualified transfer advisor as they proceed.

Students considering transfer within the Connecticut State Colleges and Universities should consider a CSCU Transfer Ticket A.A. Degree: [Discipline] Studies. Visit www.ct.edu/transfer for more information.

For more information, contact the Program Coordinator, Dr. Lauren Doninger, at LDoninger@gatewayct.edu.

Program Outcomes

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

- Communicate effectively orally and in writing
- Demonstrate an understanding of the human experience from an historical perspective
- Draw from multiple disciplines and recognize the difference between reliable and unreliable sources in conducting an argument, and use reliable sources to think and argue critically and logically
- Employ scientific and quantitative reasoning skills to solve problems
- Articulate aesthetic and ethical aspects of human endeavor
- Analyze sociocultural context on the behavior of individuals and groups

General Education Requirements

In order to transfer as efficiently as possible and complete your baccalaureate degree without taking extra credits, all course selections should be made based on intended transfer institution and intended major. Seek advising.

Course Area	Courses	Credits
Written Communication I (WC I)	ENG* 101	3
Written Communication II (WC II)	ENG* 102 or ENG* 200	3
Quantitative Reasoning (QR)	MAT* 137 , MAT* 137A , or MAT* 137C (or higher)	3
Social Phenomena (SP)	Any course designated for Social Phenomena	3
Historical Knowledge (HK)	Any course designated for Historical Knowledge	3
Scientific Knowledge (SK)	Any course designated for Scientific Knowledge	3
Critical Analysis & Logical Thinking (CALT)	PHL* 101 or PHL* 111	3
	Total Credits	21

Program Requirements

Course Area	Courses	Credits
Foreign Language	FRE*/ITA*/SPA* 102 or higher (requirement may be waived for bilingual students and students who have completed level II of a foreign language in high school. Credits may be filled with open elective—consider transfer institution requirements and seek advising)	3
Scientific Reasoning (SR)	Choose any 4 credit course in: BIO*, CHE*, EAS*, EVS*, PHY*	4
Aesthetic Dimension (AD)	ART* 101 , ART* 102 , MUS* 101	3
Oral Communication (OC)	COM* 173	3
Liberal Arts & Sciences Electives	Students are strongly encouraged to seek advisement and carefully consider transfer issues and intended baccalaureate major. LAS elective course prefixes are: ANT*, ART*, BIO*, CHE*, COM*, EAS*, ECN*, ENG*, EVS*, FRE*, GEO*, HIS*, HUM*, ITA*, MAT*, MUS* (non-performance), PHL*, PHY*, POL*, PSY*, SGN*, SOC*, SPA*, THR*	15
Open Electives	Students are strongly encouraged to seek advisement and carefully consider transfer issues.	12
	Total Program Credits	40
	Total Credits	21

Total Degree Credits: 61

Liberal Arts and Sciences Transfer Opportunities

Gateway Community College Liberal Arts and Sciences students are able to transfer seamlessly to nearly any college/university for which they are qualified. Students have successfully transferred to, and graduate from colleges across the state and nation, including many top-tier institutions, and Ivy League schools. Requirements of baccalaureate institutions vary greatly as do the award of transfer credits. Therefore, students should select a transfer institution and major early, work with their Admissions Office, and meet with the Liberal Arts and Sciences program coordinator or a qualified transfer advisor to ensure maximum transfer credit of their course selections.

Connecticut State University System (Central, Eastern, Southern, and Western)

Students with an associate degree from a Connecticut Community College are guaranteed admission to any Connecticut State University. However, admission to competitive majors is not guaranteed. Students may be better served with the CSCU Transfer Ticket A.A. Degree: [Discipline] Studies. Visit www.ct.edu/transfer for more information.

Southern Connecticut State University

Students graduating with a degree in Liberal Arts and Sciences may transfer to SCSU having satisfied the Southern Liberal Education Program (LEP – their general education core), provided they have taken the correct math course, and in some cases, specific courses required by certain majors which are included in SCSU's LEP. The LEP LAS graduates will have the SCSU foreign language requirement waived. Capstone must be completed at SCSU. Southern provides active, regular advising at Gateway.

Pathway to Teaching – Southern Connecticut State University (SCSU)

The Pathway to Teaching is designed for Liberal Arts and Sciences students who intend to become certified elementary or secondary teachers in Connecticut. The Pathway prepares students to apply to the School of Education at SCSU and transfer seamlessly. Students interested in becoming elementary school teachers should contact Carmelita Valencia-Daye (cvalencia-daye@gatewayct.edu). Students interested in becoming a middle or high school teacher should contact Lauren Doninger (ldoninger@gatewayct.edu).

University of Connecticut

The Guaranteed Admission Program (GAP) is a transfer agreement between Connecticut Community Colleges and the University of Connecticut that guarantees admission to the University in the College of Liberal Arts and Sciences, College of Agriculture, Health and Natural Resources (select majors), or the School of Business. First time students who have attempted no more than 30 transferable credits may apply to GAP. Students must graduate from GCC with a minimum cumulative grade point average of 3.0 (3.3 for School of Business) and an associate degree in a Liberal Arts and Sciences. Former UConn degree-seeking students are not eligible to participate in GAP. Visit <http://admissions.uconn.edu/content/transfer/gap>. To complete the required application and begin the GAP advising process, see Dr. Lauren Doninger (ldoninger@gatewayct.edu).

University of Bridgeport

Gateway Community College and the University of Bridgeport (UB) have an articulation agreement that guarantees admission to UB and provides substantial scholarships based on GPA. GCC students must have completed their associate's degree and have earned a 2.5 GPA to be guaranteed admission. Program pathways are specified in the articulation agreement. UB will accept all GCC general education courses as equivalent to UB core curriculum or electives. There is no application fee and students will receive joint GCC and UB advising. Students participating in the UB articulation are eligible for the UB accelerated degree program – IDEAL. To complete the application and begin the dual-admission advising process, see Dr. Lauren Doninger (ldoninger@gatewayct.edu). Visit www.bridgeport.edu.

Albertus Magnus College

Gateway Community College and Albertus Magnus College (AMC) have an articulation agreement that guarantees admission with junior standing to all AA and AS degree graduates. The agreement includes the traditional AMC undergraduate program. AMC provides guaranteed scholarships based on GPA. There is no application fee and students will receive joint GCC and AMC advising. Visit www.albertus.edu.

MANUFACTURING ENGINEERING TECHNOLOGY

Manufacturing Engineering Technology, AS

Manufacturing Engineering Technology is a varied and challenging field that is becoming increasingly important with the advent of new production methods. Manufacturing Engineering Technicians work with engineers to design experiments, plan production methods, find better ways to manufacture products, troubleshoot, inspect, and perform quality control. Students use Computer Aided Drafting (CAD), Computer Aided Manufacturing (CAM), and Computer Integrated Manufacturing (CIM) technologies to design cutting tools, gauges, jigs, fixtures, and dies; study production line layout, production forecasting, planning, inventory control, and statistical quality control; learn the methods of determining and distributing expenses and estimating material, labor, and tool costs of product manufacturing; make time studies of manufacturing operations; and investigate hydraulic control, manufacturing processes, and engineering materials. For more information, contact Kititakone Panasy at (203) 285-2376 or e-mail kpanasy@gatewayct.edu.

Program Outcomes

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

- Apply foundations of mathematics, science, and technology to manufacturing engineering
- Work cooperatively and productively with others in a laboratory test setting
- Plan and implement manufacturing principles and processes
- Design, prototype, and manufacture 2-dimensional (2D) and 3-dimensional (3D) computer aided drafting (CAD) models
- Utilize Computer numerical Control (CNC) programming alongside Computer Aided Manufacturing (CAM) software to control industry-standard CNC equipment
- Understand and demonstrate statistical quality control
- Read blueprints and understand geometric dimensioning and tolerancing
- Understand and demonstrate tool design for manufacturing

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • ARC* 133 - Technical Drafting | 3 credits |
| • MFG* 102 - Manufacturing Processes | 3 credits |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits |
| • COM* 173 - Public Speaking | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|---|-----------|
| • CAD* 108 - CAD Introduction | 3 credits |
| • MFG* 108 - Computer Aided Manufacturing | 4 credits |
| • MAT* 186 - Precalculus | 4 credits |
| • ENG* 101 - Composition | 3 credits |
| • PHY* 121 - General Physics I | 4 credits |

Total Semester Credits: 18

Third Semester

- CAD* 200 - 3D CAD Modeling 4 credits
- MFG* 204 - Advanced Computer Aided Manufacturing 4 credits
- PHY* 122 - General Physics II 4 credits
- **or**
- MAT* 254 - Calculus I 4 credits
- Choose one course in Gen Ed -
SP: Social Phenomena/Knowledge/Understanding 3 credits
- Choose one course in Gen Ed -
CALT: Critical Analysis/ Logical Thinking 3-4 credits

Total Semester Credits: 18-19

Fourth Semester

- ENG* 102 - Literature and Composition 3 credits or
- ENG* 200 - Advanced Composition 3 credits
- MFG* 208 - Process Engineering 4 credits
- MFG* 216 - Tool Designing 4 credits
- MFG* 230 - Statistical Process Control 3 credits
- MFG* 296 - Manufacturing Internship 3 credits

Total Semester Credits: 17

Total Program Credits: 68-69

MATHEMATICS

CSCU Pathway Transfer Degree: Mathematics Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Mathematics, B.A.
	Mathematics, B.A. - Actuarial Science Specialization
	Mathematics, B.A. - Statistics Specialization
At Eastern Connecticut State University	Mathematics, B.A.
At Southern Connecticut State University	Mathematics, B.A.
	Mathematics, B.S. - Concentration: Applied
At Western Connecticut State University	Mathematics, B.A.
	Mathematics, B.A. - Computer Science Option
At Charter Oak State College	General Studies: Mathematics Concentration, B.A.

Here is the recommended course of study for the Mathematics Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances, you will be able to choose the specific course you will take from within a category.

Contact a campus advisor for any questions:

- Professor Susan Spencer, SSpencer@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- ENG* 101 - Composition 3 credits
- MAT* 186 - Precalculus 4 credits
- Choose one course in Scientific Reasoning 4 credits
(choose from the following: BIO* 121, CHE* 121, PHY* 121)
- Choose one course in Aesthetic Dimensions 3 credits

Total Semester Credits: 14

Second Semester

- MAT* 254 - Calculus I 4 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Knowledge and Understanding 4 credits
(you must choose the second course in the sequence you began in the first semester—choose from: BIO* 122, CHE* 122, or PHY* 122)
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take courses that prepare you for required courses in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 14

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- CSC* 124 - Programming Logic & Design with Python 3 credits
- MAT* 256 - Calculus II 4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- MAT* 268 - Calculus III: Multivariable 4 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Oral Communications 3 credits
- Choose one course from: MAT* 272 or MAT* 285
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 16

Total Program Credits: 60

MECHANICAL ENGINEERING TECHNOLOGY

Mechanical Engineering Technology, AS

Mechanical Engineering Technology concerns power and the machinery used to convert power to useful work. The Mechanical Engineering Technician is a practically-oriented member of the engineering team who applies existing technology to the solution of engineering problems. Students learn how to extract and analyze engineering data. Microcomputers are integrated into the curriculum to aid in both classroom and laboratory activities. Senior students are assigned projects in which they apply the principles they have learned. Applications to current technology are stressed and individual initiative is encouraged. The program is designed to train students as Mechanical Engineering Technicians ready for entry-level positions in industry upon graduation.

Program Outcomes

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

- Prepare and present technical and laboratory reports using modern computer software and oral presentation skills
- Prepare drawing and designs of machine components both manually and with the help of AutoCAD, Solidworks, and Pro-Engineer 3D modeling software
- Understand the nature, science, structure, and properties of metallic, plastic, ceramic, and composite engineering materials
- Measure the mechanical properties (tensile strength, hardness, impact strength, torsional shear strength, toughness, etc.) of a material specimen in a laboratory
- Draw the Free Body Diagram (FBD) of a two-dimensional body and solve its equations of equilibrium
- Perform force analyses of machine and frames
- Calculate the deformation of and thermal stress caused by temperature and pressure changes in various objects and vessels
- Analyze a column and determine the critical load that will cause it to fail

Students enrolling in the Mechanical Engineering Technology program should plan to spend approximately \$60.00 on drafting equipment. For more information, call the Interim Department Chair, at (203) 285-2371 or e-mail at (eflynn@gatewayct.edu).

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • ARC* 133 - Technical Drafting | 3 credits |
| • CAD* 108 - CAD Introduction | 3 credits |
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits |
| • MFG* 102 - Manufacturing Processes | 3 credits |

Total Semester Credits: 15

Second Semester

- MEC* 104 - Mechanics - Statics 3 credits
- MAT* 186 - Precalculus 4 credits
- PHY* 121 - General Physics I 4 credits
- COM* 173 - Public Speaking 3 credits
- ENG* 101 - Composition 3 credits

Total Semester Credits: 17

Third Semester

- MEC* 234 - Electromechanical Controls 4 credits
- MAT* 254 - Calculus I 4 credits
- MEC* 250 - Strength of Materials 3 credits
- MEC* 271 - Fluid Mechanics 4 credits

Total Semester Credits: 15

Fourth Semester

- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- MEC* 283 - Design of Machines 4 credits
- MEC* 296 - Mechanical Engineering Internship 2 credits
- Choose one course in CALT:
Critical Analysis/Logical Thinking 3-4 credits

Total Semester Credits: 12-13

Total Program Credits: 68

Quality Control Certificate

The Quality Control Certificate program is a sequence of courses that prepares students for the Certified Quality Technician (CQT) certification examination by the American Society for Quality Control (ASQC). The program assists students to develop competencies in concepts and techniques, statistical methods, sampling principles, reliability principles and applications, metrology and calibration fundamentals, quality data, quality analysis, problem solving and cost methodology, quality audit concepts and principles, geometry, trigonometry, and metric conversion. For more information, contact Kititakone Panasy at (203) 285-2376 or e-mail at (kpanasy@gatewayct.edu).

Suggested Course Sequence

First Semester

- ARC* 133 - Technical Drafting 3 credits
- QUA* 114 - Principles of Quality Control 3 credits
- MAT* 175 - College Algebra and Trigonometry 3 credits

Total Semester Credits: 9

Second Semester

- MFG* 102 - Manufacturing Processes 3 credits
- MFG* 239 - Geometric Dimensioning and Tolerancing 3 credits
- MFG* 230 - Statistical Process Control 3 credits

Total Semester Credits: 9

Total Program Credits: 18

MUSIC

No active programs available.

NUCLEAR MEDICINE TECHNOLOGY

Diagnostic Imaging and Therapy: Nuclear Medicine Technology, AS

The Associate in Science degree and certificate programs in Nuclear Medicine Technology prepare students for employment as nuclear medicine technologists in hospitals, medical offices, or ambulatory clinics. Upon completion of the program, the student may apply to take the certifying board examinations administered by the American Registry of Radiologic Technology (Nuclear Medicine) and the Nuclear Medicine Technology Certification Board (NMTCB). The program requires approximately twenty-two (22) months of clinical and academic course work. The curriculum includes appropriate didactic content and ample supervised clinical education to assure sufficient opportunity to achieve all didactic and clinical requirements. Students are assigned to a clinical practicum at Yale-New Haven Hospital, Yale New Haven Hospital St. Raphael Campus, the Veterans Affairs Connecticut Health Care System (West Haven), Middlesex Hospital (Middletown), Griffin Hospital (Derby), Cardinal Health Nuclear Pharmacy Services (East Hartford), Midstate Medical Center (Meriden), Waterbury Hospital, Milford Hospital, William W. Backus Hospital (Norwich), Lawrence & Memorial Hospital (New London), Saint Francis Hospital and Medical Center (Hartford), and UCONN Medical Center (Farmington). Simulated labs are held in the Nuclear Medicine lab at the Gateway campus and are scheduled on lecture days. Students are required to attend all orientation sessions scheduled in the summer in order to begin the program in the fall semester. For more information, call the Enrollment Services Assistant, Mary Beth Banks at (203) 285-2388 or e-mail at (MBanks@gatewayct.edu) or the Program Coordinator, AnnMarie Jones at (203) 285-2381 or e-mail at ajones@gatewayct.edu). Please see the Radiologic Technology Programs webpage for more information about the admissions process.

Mission Statement

The mission of the Gateway Community College Nuclear Medicine Technology program is to achieve and exceed established educational and healthcare standards by continually providing students and the professional community with educational opportunities that reflect the current practice of nuclear medicine technology and results in high quality patient care.

Program Outcomes

Upon successful completion of all program requirements, graduates will:

- Be eligible to take the Nuclear Medicine Technology Exams offered by the American Registry of Radiologic Technologists (ARRT-N) and/or the Nuclear Medicine Technology Certification Board
- Possess the skills necessary to fulfill the responsibilities of an entry-level staff technologist.

The major categories of the nuclear medicine technologist's scope of practice include, but are not limited to, the following areas (as defined in the "Scope of Practice for the Nuclear Medicine Technologist 2012", SNMMI Technologist Section: www.snmmti.org):

Patient Care: Requires the exercise of judgment to assess and respond to the patient's needs prior to, during, and after procedures in the nuclear medicine department, and in patient medication reconciliation. This includes record-keeping in accordance with the HIPAA.

Quality Control: Requires the evaluation and maintenance of a quality control program for all instrumentation to ensure its proper performance and stability.

Diagnostic Procedures: Requires the utilization of appropriate techniques, and administration of non-radiopharmaceutical agents when part of standard procedures, to ensure quality diagnostic images and/or laboratory results.

Radiopharmaceuticals: Involves the procurement, preparation, quality control, dispensing, dose calculation, identification, documentation, administration, disposal, storage, and safe handling of radioactive materials.

Adjunctive Medications: Involves the identification, preparation, calculation, documentation, administration and monitoring of adjunctive medication(s) used during an in-vitro, diagnostic imaging, or therapeutic procedure. Also included are the preparation and administration of oral and IV contrast used in the performance of imaging studies.

In-Vitro Diagnostic Testing: Involves the acquisition of biological specimens with or without oral, intramuscular, intravenous, inhaled or other administration or radiopharmaceuticals and adjunctive medications for the assessment of physiologic function.

Operation of Instrumentation: Involves the operation of imaging instrumentation: Gamma camera and PET imaging systems with or without sealed sources or radioactive materials or x-ray tubes for attenuation correction, transmission imaging, diagnostic CT (when appropriately educated, trained and/or credentialed); PET imaging systems with or without sealed sources of radioactive materials or x-ray tubes for attenuation correction, transmission imaging, diagnostic CT or MR imaging (when appropriately trained and/or credentialed); Bone density imaging systems with x-ray tubes; and Non-imaging instrumentation.

Transmission Imaging: Involves, but is not limited to, the operation of gamma cameras with sealed sources of radioactive material for transmission imaging with single photon emission computed tomography (SPECT) or positron emission tomography (PET) and operation of cameras with x-ray tubes for transmission imaging when performed as part of SPECT/CT or PET/CT. Additionally includes diagnostic CT when performed on SPECT/CT or PET/CT cameras, including the administration of oral and intravenous contrast (requires education in CT) and the operation of scanners with x-ray tubes for the measurement of bone density.

Radionuclide Therapy: Involves patient management, preparation and administration of therapeutic radiopharmaceuticals, under the personal supervision of the Authorized User.

Radiation Safety: Involves, but is not limited to, educating the public while practicing techniques that will minimize radiation exposure to the patient, general public, and health care personnel, through consistent use of protective devices, shields, monitors, and other devices consistent with ALARA (as low as reasonably achievable), as well as decontaminating spills and unplanned releases of radiation."

Suggested Course Sequence

Freshman Year - (NOTE: Required orientation sessions will be scheduled during the summer before entry into the program.)

First Semester - (Practicum at affiliates Tuesday and Thursday)

Program Requirements

First Semester

(Practicum at affiliates Tuesday and Thursday)

- ENG* 101 - Composition 3 credits
- MAT* 172 - College Algebra 3 credits
- NMT* 101 - Introduction to Nuclear Medicine 3 credits
- NMT* 102 - Nuclear Medicine Procedures I 3 credits
- NMT* 111 - Clinical Practicum I 1 credits
- PHY* 111 - Physics for the Life Sciences 4 credits

Total Semester Credits: 17

Winter Intersession

(Practicum at affiliates Monday through Friday, 40 hrs./week)

- NMT* 113 - Clinical Internship I 0.5 credits

Total Semester Credits: .5**Second Semester**

(Practicum at affiliates Tuesday and Thursday)

- CHE* 111 - Concepts of Chemistry 4 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- NMT* 112 - Clinical Practicum II 1 credits
- NMT* 121 - Physics in Nuclear Medicine 3 credits
- NMT* 201 - Nuclear Medicine Procedures II 3 credits

Total Semester Credits: 14**Summer Session**

(Practicum at affiliates Monday through Friday, May through August)

(40 hrs./week at clinical affiliates)

- NMT* 126 - Clinical Internship II 3 credits

Total Semester Credits: 3**Third Semester**

(Practicum at affiliates Monday, Wednesday, and Friday)

- PSY* 111 - General Psychology I 3 credits
- NMT* 202 - Nuclear Medicine Instrumentation 3 credits
- NMT* 203 - Radiopharmacy 3 credits
- NMT* 211 - Clinical Practicum III 2 credits
- RST 200 - Cross Sectional Anatomy 3 credits

Total Semester Credits: 14**Winter Intersession**

(Practicum at affiliates Monday through Friday, 40 hrs./week)

- NMT* 113 - Clinical Internship III 0.5 credits

Total Semester Credits: .5**Fourth Semester**

(Practicum at affiliates Monday, Wednesday, and Friday)

- NMT* 212 - Clinical Practicum IV 2 credits *
- NMT* 221 - Nuclear Medicine Procedures III 3 credits
- NMT* 222 - Introduction to Computers and Nuclear
Medicine Applications 3 credits
- NMT* 223 - Nuclear Medicine Seminar 3 credits

Total Semester Credits: 11**Total Program Credits: 60**

Total Clinical Practicum at the affiliates, (includes Clinical Internships I, II and III), is approximately 1,800 hours

Nuclear Medicine Technology Certificate

The certificate program in Nuclear Medicine Technology is designed to prepare students for employment as nuclear medicine technologists in hospitals, medical offices, or ambulatory clinics. Upon completion of the program, the student may apply to take the certifying board examinations administered by the American Registry of Radiologic Technology (Nuclear Medicine) and the Nuclear Medicine Technology Certification Board (NMTCB). The program requires approximately twenty-two (22) months of clinical and academic coursework. The structure of the curriculum includes appropriate didactic content and ample supervised clinical education to assure sufficient opportunity to achieve all didactic and clinical requirements.

Students are assigned to a clinical practicum at Yale-New Haven Hospital, Yale New Haven Hospital St. Raphael Campus, the Veterans Affairs Connecticut Health Care System (West Haven), Middlesex Hospital (Middletown), Griffin Hospital (Derby), Cardinal Health Nuclear Pharmacy Services (East Hartford), Midstate Medical Center (Meriden), Waterbury Hospital, Milford Hospital, William W. Backus Hospital (Norwich), Lawrence & Memorial Hospital (New London), Saint Francis Hospital and Medical Center (Hartford), and UCONN Medical Center (Farmington). Simulated labs are held in the Nuclear Medicine lab at the Gateway campus and are scheduled on lecture days. Students are required to attend all orientation sessions scheduled in the summer in order to begin the program in the fall semester.

For more information, call the Enrollment Services Assistant, Mary Beth Banks at (203) 285-2388 or e-mail at (MBanks@gatewayct.edu) or the Program Coordinator, AnnMarie Jones, at (203) 285-2381 or e-mail at (ajones@gatewayct.edu).

Prerequisites

Certificate program applicants must possess all of the following prerequisites:

- A. An associate degree in one of the following modalities:
 - Radiography
 - Radiation Therapy
 - Diagnostic Medical Sonography

The following policy may apply to applicants who do not possess an associate degree:

Gateway Community College will grant credit to those applicants who are graduates of a two-year accredited hospital (certificate) based program and hold certification by the American Registry of Radiologic Technologists. Certification areas include: Radiography, Nuclear Medicine, Diagnostic Medical Sonography, and Radiation Therapy. (see ARRTS program)

- B. Current and active credentials by one of the following certifying boards:
 - American Registry of Radiologic Technologists-Radiography (RTR)
 - American Registry of Radiologic Technologists-Radiation Therapy (RTT)
 - American Registry of Diagnostic Medical Sonographers (RDMS)
- C. The applicant must have completed the following courses with a "C" or better in their A.S. Degree program to be eligible for the NMT Certificate Program: CHE* 111 - Concepts of Chemistry; MAT* 172 - College Algebra; PHY* 111 - Physics for the Life Sciences; human anatomy and physiology with lab; medical terminology content; two courses in written communication and social science elective.

Please see the Diagnostic Imaging and Therapy programs' webpage for more information about the admissions process.

Program Outcomes

Program outcomes for Nuclear Medicine Technology Certificate Program are the same as for Nuclear Medicine Technology Associate in Science Degree (see degree outcomes).

Program Requirements

Program requirements will be changing for the year 2017. For more information, please contact Mary Beth Banks, Allied Health & Nursing Enrollment Services Assistant, at (203) 285-2388 or mbanks@gatewayct.edu.

First Semester

(Practicum at affiliates Tuesday and Thursday)

- NMT* 102 - Nuclear Medicine Procedures I 3 credits
- NMT* 111 - Clinical Practicum I 1 credits

Total Semester Credits: 4

Second Semester

(Practicum at affiliates Tuesday and Thursday)

- NMT* 112 - Clinical Practicum II 1 credits
- NMT* 121 - Physics in Nuclear Medicine 3 credits
- NMT* 201 - Nuclear Medicine Procedures II 3 credits

Total Semester Credits: 7

Summer Session

(Practicum at affiliates Monday through Friday, May through July")
(40 hrs./week at clinical affiliates)

- NMT* 126 - Clinical Internship II 3 credits

Total Semester Credits: 3

Third Semester

(Practicum at affiliates Monday, Wednesday, and Friday)

- NMT* 202 - Nuclear Medicine Instrumentation 3 credits
- NMT* 203 - Radiopharmacy 3 credits
- NMT* 211 - Clinical Practicum III 2 credits
- RST 200 - Cross Sectional Anatomy 3 credits

Total Semester Credits: 11

Winter Intersession

(Practicum at affiliates Monday through Friday 40 hrs./week)

- NMT* 216 - Clinical Internship III 0.5 credits

Total Semester Credits: .5

Fourth Semester

(Practicum at affiliates Monday, Wednesday, and Friday)

- NMT* 212 - Clinical Practicum IV 2 credits *
- NMT* 221 - Nuclear Medicine Procedures III 3 credits
- NMT* 222 - Introduction to Computers and Nuclear
Medicine Applications 3 credits
- NMT* 223 - Nuclear Medicine Seminar 3 credits

Total Semester Credits: 11

Total Program Credits: 36.5

NURSING

Nursing, AS

The Connecticut Community College Nursing Program (CT-CCNP) is an innovative associate degree program of study offered at six Connecticut Community Colleges. Gateway Community College offers evening classes with day and evening clinical experiences. The common nursing program offers a four-semester curriculum designed to prepare registered nurses to function in the professional role utilizing current standards of nursing practice. In addition, students within the program have the same admission and policy standards, which allows for greater student flexibility.

The Nursing Program is a four-semester program which, upon successful completion, awards an Associate in Science Degree. The curriculum is built upon courses from the social and biological sciences, liberal arts, and nursing. These courses provide the foundation for the practice of nursing. Six core values (critical thinking, safe and competent practice, caring, professionalism, communication, and holistic care) provide the framework for organizing the nursing curriculum.

A graduate of the nursing program is awarded an Associate in Science degree and is eligible to take the National Council Licensing Examination for Registered Nurses (NCLEX-RN).

Graduates can apply for licensure through the Connecticut Department of Public Health.

The graduate is prepared to function as an entry-level practitioner in health care settings such as general or specialty hospitals, extended care facilities, doctors' offices, and clinics.

Approval and Accreditation

All of the programs are individually approved by the Connecticut State Board of Examiners for Nursing with the consent of the Commissioner of the Connecticut Department of Public Health and are accredited by the Accreditation Commission for Education in Nursing (ACEN) located at 3343 Peachtree Road NE, Suite 850, Atlanta, GA 30326; P: 404-975-5000, www.acenursing.org.

The Role of the Associate Degree Graduate within the Scope of Nursing Practice

The Nursing Program will provide the graduate with the knowledge and technical skills to practice in a safe, effective and competent manner within the legal and ethical framework for an entry-level Registered Nurse. The scope of practice for the Associate Degree graduate is to provide and manage care for a diverse group of individuals, families and communities in collaboration with members of the health care team consistent with the CT-CCNP core values. For more information, please contact Mary Beth Banks, Enrollment Services Assistant, at MBanks@gatewayct.edu.

Advisement, Application Process, Admission Requirements

Please refer to the Nursing Information Packet that can be found in the nursing section on the Gateway Community College website - www.gatewayct.edu.

Nursing - End of Program Student Outcomes

Upon successful completion of the Nursing Program, the graduate will:

1. Integrate the principles of the natural, physical, social, biological and behavioral sciences, and nursing theory to provide holistic care to individuals, families, and groups across the wellness-illness continuum
2. Integrate nursing process and critical thinking skills for decision-making in nursing practice
3. Provide safe and competent care to individuals, families and groups utilizing evidence-based practice, quantitative reasoning and technological proficiency

4. Integrate effective communication skills through professional interactions with individuals, families, groups, and the health care team
5. Create an environment where therapeutic interventions reflect a respect for human dignity
6. Collaborate as a member of a multidisciplinary health team
7. Integrate accountability and responsibility for practice within the legal and ethical standards of the nursing profession
8. Function in the professional role utilizing current standards of nursing practice.

Program of Study

The following program of study reflects a full-time curriculum plan that students enrolled in the nursing program are required to complete for graduation. Many students make the decision to enroll in the nursing program on a part-time basis, taking the general education courses prior to the nursing courses. Non-nursing courses must be taken in the semester indicated in the plan of study below or may be taken earlier; nursing courses must be taken in the stated sequence.

The admission and pre-requisite requirements of BIO* 211 - Anatomy and Physiology I, BIO* 212 - Anatomy and Physiology II, and ENG* 101 - Composition are credits (11 credits) that are part of the total 68 credits required for graduation. BIO* 211 and ENG* 101 must be completed prior to submitting an application; BIO* 212 may be in progress and the applicant may be accepted pending successful completion with a grade of C+ or higher. Please refer to the Nursing Information Packet on the GCC Website for a complete list of admission requirements.

A grade of C is required for all co-requisite courses in the nursing plan of study unless a higher grade is required for admission to the program. Co-requisite courses must be satisfactorily completed before or during the semester in which they are scheduled in the curriculum. Students who fail to complete required co-requisite courses may be dismissed from the program.

Program Requirements

Admissions Requirements

- BIO* 211 - Anatomy and Physiology I 4 credits +
- ENG* 101 - Composition 3 credits +

Pre-Requisite Requirements

- BIO* 212 - Anatomy and Physiology II 4 credits +

First Semester

- NUR* 101 - Introduction to Nursing Practice 8 credits
- BIO* 235 - Microbiology 4 credits +
- PSY* 111 - General Psychology I 3 credits +

Second Semester

- NUR* 102 - Family Health Nursing 8 credits
- NUR* 103 - Pharmacology for Families Across the Life Span 1 credits
- PSY* 201 - Life Span Development 3 credits +
- SOC* 101 - Principles of Sociology 3 credits +

Third Semester

- NUR* 201 - Nursing Care of Individuals and Families I 9 credits
- NUR* 202 - Pharmacology for Individuals and Families with Intermediate Health Care Needs 1 credits
- ENG* 102 - Literature and Composition 3 credits +

Fourth Semester

- NUR* 203 - Nursing Care of Individuals and Families II 8 credits
- NUR* 204 - Pharmacology for Individuals, Families, and Groups with Complex Health Care Needs 1 credits
- NUR* 205 - Nursing Management and Trends 2 credits
- Humanities (Elective+) ++^ or Fine Arts (Elective+) 3 credits

Total Program Credits: 68

(General Education Credits - 30 credits; Nursing Credits - 38 credits)

+ There may be a prerequisite course that must be successfully completed prior to taking the course.

++ Norwalk Community College requires one interdisciplinary course to fulfill core curriculum requirements

^ Naugatuck Valley Community College requires COM*100 to fulfill core curriculum requirements.

NUTRITION & DIETETICS

Nutrition and Dietetics, AS

Mission Statement

To prepare graduates with entry-level skills, competence, and flexibility to compete successfully in a dynamic employment market wherever food, nutrition, and wellness are emphasized.

Program Goals

1. The program will prepare graduates to be competent entry-level dietetic technicians.
2. To provide a Nutrition and Dietetics program that maintains a high level of student retention.
3. The program will offer quality instruction and comprehensive services to a diverse student population.

There is a growing demand for qualified personnel in the field of nutrition and dietetics throughout the United States. The registered dietetic technician works under the supervision of a registered dietitian nutritionist in health care, community nutrition, and food service management. Registered dietetic technicians function as active members of the nutrition team by assessing, planning, implementing, and evaluating the nutritional care of individuals or by supervising food service operations. The Nutrition and Dietetics program is currently granted probationary accreditation by Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics (A.N.D.), 120 South Riverside Plaza, Suite 2190, Chicago, Illinois 60606-6995; (312) 899-0040 ext. 5400 or (800) 877-1600; www.eatright.org. Graduates of the program are encouraged to take the Commission on Dietetic Registration's registration examination to become registered nutrition and dietetics technicians (DTR). Graduates are also eligible for membership in the A.N.D. and the Association of Nutrition and Foodservice Professionals (ANFP). Graduates may take the ANFP exam to become a Certified Dietary Manager, Certified Food Protection Professional (CDM, CFPP). The program reflects the coordination of theory and practice that is required for students to acquire the knowledge, attitudes, and skills necessary for competent practice in nutrition and dietetics. A minimum of 450 hours of supervised internship provides opportunities to practice these skills. Students who wish to transfer to an A.N.D.-accredited four-year program in nutrition and dietetics should consult the program director regarding the transferability of courses.

Program Outcomes

Upon successful completion of all program requirements:

- Graduates will achieve a pass rate of at least 70% on the DTR exam over a five year period.
- Within twelve months of graduating at least 60% of the graduates will have attained employment related to the field of dietetics and/or enrolled in an accredited continuing education program.
- Students will achieve a satisfactory rating for the entry-level competencies of a dietetic technician.
- Employers will rate program graduates in their employ as satisfactory knowledge base on surveys.
- An attrition rate of 35% or less will be maintained for students completing NTR* 103 - Nutrition Therapy I.
- Eighty percent of students will evaluate each nutrition course with an overall minimum rating of good or better.
- Program faculty will maintain their Registered Dietitian status and professional portfolio/continuing education credits while employed by Gateway Community College.
- Students will attend a minimum of 8 hours at professional meetings offering continuing education units.

Admissions Procedure

All students must first apply to and be accepted by the College. Unless waived, all applicants must take placement tests in reading, English, and mathematics. Students in this program are responsible for expenses for uniforms, physical examinations, CPR, travel to field sites, parking, and meals. Specific information about these costs and coverage for accident and liability insurance is available from the Program Coordinator, Marcia Doran. A complete physical examination is required before internship begins.

Graduation Requirements

In addition to the College's general requirements, this program requires a minimum grade of "C" in each and all science, math and program-specific courses. The student must also successfully complete all of the program competencies and must pass the National Restaurant Association Sanitation exam. The program coordinator reserves the right to recommend to the College the withdrawal of a student from the Nutrition and Dietetics program whose health, clinical performance, attendance, or conduct does not meet the program standards. For more information, contact the Program Coordinator, Marcia Doran, at (203) 285-2390 or e-mail mdoran@gatewayct.edu.

Suggested Course Sequence

First Semester

- ENG* 101 - Composition 3 credits
- HSP* 109 - Food Safety Certification 1 credits
- MAT* 115 - Mathematics for Science and Technology 3 credits (or higher)
- NTR* 101 - Introduction to Dietetics 3 credits
- NTR* 102 - Nutrition I: Principles of Nutrition 3 credits
- NTR* 120 - Foods 3 credits

Total Semester Credits: 16

Second Semester

- BIO* 115 - Human Biology 4 credits
- COM* 173 - Public Speaking 3 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- NTR* 103 - Nutrition Therapy I 3 credits
- NTR* 105 - Food Management Systems 3 credits

Total Semester Credits: 16

Summer Session

- NTR* 210 - Nutrition Internship I 3 credits

Total Semester Credits: 3

Third Semester

- CHE* 111 - Concepts of Chemistry 4 credits
- NTR* 104 - Life Cycle Nutrition 3 credits
- NTR* 201 - Community Nutrition Education 3 credits
- NTR* 212 - Nutrition Internship II 3 credits

Total Semester Credits: 13

Fourth Semester

- NTR* 202 - Nutrition Therapy II 3 credits
- NTR* 205 - Management in Dietetics 3 credits
- NTR* 214 - Nutrition Internship III 3 credits
- Choose one course in (Gen Ed - SP:
Social Phenomena/Knowledge/Understanding) 3 credits

Total Semester Credits: 12

Total Program Credits: 60

PHILOSOPHY

No active programs available.

Physics

CSCU Pathway Transfer Degree: Physics Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Physics, B.S.
At Eastern Connecticut State University	Physics, B.S.
At Southern Connecticut State University	Physics, B.S.
	Physics, B.A.
At Western Connecticut State University	Physics, B.S.
At Charter Oak State College	General Studies - Physics Concentration, B.A.
At Western Connecticut State University	Mathematics, B.A.
	Mathematics, B.A. - Computer Science Option
At Charter Oak State College	General Studies: Mathematics Concentration, B.A.

Here is the recommended course of study for the Physics Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances, you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for more information:

- Professor Robert Tremblay, RTremblay@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- | | |
|--------------------------------------|-------------|
| • CHE* 121 - General Chemistry I | 4 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 254 - Calculus I | 4 credits |
| • Choose one Unrestricted Elective*# | 3-4 credits |

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepares you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

If you have not taken Physics in high school, you should use this elective to take either PHY* 109 or PHY* 111

Total Semester Credits: 14-15

Second Semester

- CHE* 122 - General Chemistry II 4 credits
- MAT* 256 - Calculus II 4 credits
- PHY* 221 - Calculus-Based Physics I 4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits

Total Semester Credits: 15**Third Semester**

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- MAT* 268 - Calculus III: Multivariable 4 credits
- PHY* 222 - Calculus-Based Physics II 4 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Social Phenomena 3 credits

Total Semester Credits: 17**Fourth Semester**

During your last semester at GCC, don't forget to apply for graduation!

- MAT* 285 - Differential Equations 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Oral Communications 3 credits
- Choose one course in General Education - Creativity 3 credits
- Choose one course in General Education II - Global Knowledge 3 credits

Total Semester Credits: 15**Total Program Credits: 61**

POLITICAL SCIENCE

CSCU Pathway Transfer Degree: Political Science Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Political Science, B.A.
At Eastern Connecticut State University	Political Science, B.A.
At Southern Connecticut State University	Political Science, B.A.
	Political Science, B.S.
At Western Connecticut State University	Political Science, B.A.
At Charter Oak State College	General Studies - Political Science Concentration, B.A.

Here is the recommended course of study for the Political Science Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances, you will be able to choose the specific courses you will take from within a category.

Please contact a campus advisor for any questions:

- Professor Joe Maynard, JMaynard@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- | | |
|--|-----------|
| • ENG* 101 - Composition | 3 credits |
| • POL* 111 - American Government | 3 credits |
| • Choose one course in Aesthetic Dimensions | 3 credits |
| • Choose one course in Quantitative Analysis | 3 credits |
| • Choose one Unrestricted Elective* | 3 credits |

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take courses that prepare you for required courses in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Second Semester

- | | |
|---|-----------|
| • Choose one course in Written Communication II | 3 credits |
| • Choose one course in Scientific Reasoning | 3 credits |
| • Choose one course in Historical Knowledge and Understanding | 3 credits |

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-16

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available on October 1.

- Choose any course in Scientific Knowledge and Understanding 3 credits
- Choose one course in Social Phenomena 3 credits
- Choose one General Education I - Creativity 3 credits
- Elective - Choose any POL course
- Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Oral Communication 3 credits
- Choose one course in Genral Education II - Global Knowledge 3 credits
- Choose two Unrestricted Electives* 6 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Total Program Credits: 60-61

PSYCHOLOGY

CSCU Pathway Transfer Degree: Psychology Studies, A.A.

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Psychological Science, B.A.
At Eastern Connecticut State University	Psychology, B.S.
At Southern Connecticut State University	Psychology, B.A.
At Western Connecticut State University	Psychology, B.A.
At Charter Oak State College	Psychology, B.S.

Here is the recommended course of study for the Psychology Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances, you will be able to choose the specific course you will take from within a category.

Please contact a campus advisor for questions:

- Professor Teresa Russo, TRusso@gatewayct.edu
- Professor Lauren Doninger, LDoninger@gatewayct.edu

First Semester

- ENG* 101 - Composition 3 credits
- MAT* 167 - Principles of Statistics 3 credits
- Choose one course in Critical Analysis/Logical Thinking 3-4 credits
- PSY* 111 - General Psychology I 3 credits **
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required courses in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

** Students who transfer to SCSU will use PSY 111 to fulfill a SCSU General Education requirement and have only the Capstone requirement left—unless they use PSY 111 to fulfill a community college General Education requirement. In that case, they will have an additional LEP requirement at SCSU.

Total Semester Credits: 15

Second Semester

- PSY* 201 - Life Span Development 3 credits
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-16

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- PSY* 245 - Abnormal Psychology 3 credits
- Choose one course in Social Phenomena 3 credits
- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Choose one course in General Education I - Creativity 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15-16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!.

- PSY* 240 - Social Psychology 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Choose one course in Oral Communications 3 credits
- Choose one course in General Education II - Global Knowledge 3 credits
- Choose one Unrestricted Elective* 3 credits

* You are free to choose any courses at or above the 100-level to complete unrestricted electives, although you may need to use some of these credits to take a math course that prepare you for required level of math in your degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern, and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field—you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Semester Credits: 15

Total Program Credits: 60-61

RADIATION THERAPY

Diagnostic Imaging and Therapy: Radiation Therapy, AS

A Radiation Therapist delivers radiation treatment as prescribed by a physician for the treatment of disease, primarily cancer. The Radiation Therapist will monitor patients' physical condition and response to treatment. The associate degree program in radiation therapy is based on twenty-two (22) months of full time study. The curriculum prepared students for employment as entry-level Radiation Therapist in hospitals and cancer centers. Upon successful completion of the program, students are eligible to take the American Registry of Radiologic Technologists (ARRT) board examination (Radiation Therapy). For more information, call the Program Director Gina Finn, at (203) 285-2392 or e-mail at (gfinn@gatewayct.edu).

Program Curriculum:

The structure of the curriculum is such that courses are offered in sequence and progress in complexity. It offers appropriate didactic content and ample supervised clinical education to assure sufficient opportunity to achieve all didactic and clinical requirements established by the ARRT. Clinical education takes place in hospitals and cancer centers. Students will rotate through all clinical settings during the length of the Program. The following clinical sites are: Yale-New Haven Hospital Smilow Cancer Hospital, New Haven, CT; McGivney Cancer Care at Yale-New Haven Hospital Hamden Campus, Hamden, CT; Yale-New Haven Hospital Shoreline Medical Center Guilford, Guilford, CT; Danbury Hospital, Danbury, CT; Bridgeport Hospital-Norma F. Pfriem Cancer Institute, Trumbull, CT; Lawrence and Memorial Hospital, Waterford, CT. Transportation and parking are the student's responsibility. The following pre-requisites must be completed with a grade of C or higher before applying to the Program:

- * BIO* 211 - Anatomy and Physiology I
- * BIO* 212 - Anatomy and Physiology II (within five years prior to application date)
- * PHY* 111 - Physics for the Life Sciences

- * Attendance at one program specific information session within one year of application submission to the department

The Program is accredited by the Board of Governors for Higher Education and the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182, (312)704-5300, www.jrcert.org.

Mission Statement:

The Radiation Therapy Program at Gateway Community College is committed to educating and preparing competent, entry-level therapists who provide high quality patient care to members of the community. Furthermore, the Program is dedicated to providing tools to support life-long learning.

Program Goals and Student Learning Outcomes

Goal 1. Students will demonstrate skills in effective written and oral communication

- Students will evaluate and assess daily the physiological and psychological responsiveness of each patient to treatment delivery utilizing effective oral communication.
- Students will evaluate and assess daily the physiological and psychological responsiveness of each patient to treatment delivery utilizing effective oral communication.

Goal 2. Students will demonstrate skills in effective critical thinking and problem solving in the principles and practices of Radiation Therapy.

- Students will demonstrate the ability to evaluate and assess treatment delivery components to perform proper treatment procedures.
- Students will demonstrate the ability to assess disease specific information and outcomes of the specific cancer.

Goal 3. Students will achieve personal and professional growth.

- Students will evaluate and assess treatment delivery components within a healthcare team.
- Students will maintain values congruent with the professional code of ethics and scope of practice while adhering to national, institutional and/or departmental standards, policies and procedures regarding treatment delivery and patient care.

Goal 4. Students will be clinically competent in the practice of Radiation Therapy.

- Students will consistently explain or describe the principles and practices of radiation protection.
- Students will provide appropriate patient care.
- Students will produce radiation therapy treatment delivery services to cure or improve the quality of life of patients by accurately delivering a prescribed course of treatment.

Goal 5. The program will prepare graduates to be entry-level Radiation Therapists.

- Students will meet the criteria to apply for the American Registry of Radiologic Technologists (ARRT) certification exam and pass on the 1st attempt.
- Students will provide quality radiation therapy to the community.

Student Program Fees

The student is responsible for all fees associated with the following program requirements:

Textbooks	\$1,500
Uniforms	\$200
Toxicology Screening	\$65
Background Check	\$65
Castle Branch online health management systems	\$35
Pin for pinning ceremony	\$30
Transportation and associated costs	variable
Health care immunizations and titers	variable
BLS or CPR/AED	variable
Liability Insurance	\$15

These fees are approximate and subject to change. If a student takes a leave of absence from the program, they will need to cover additional program fees as needed.

Program Requirements

First Semester

(NOTE: Required orientation sessions will be scheduled during the summer before entry into the program.) (Practicum at affiliates Tuesday and Thursday)

- ENG* 101 - Composition 3 credits
- MAT* 175 - College Algebra and Trigonometry 3 credits
- or**
- MAT* 186 - Precalculus 4 credits
- RDT* 101 - Introduction to Radiation Therapy I 3 credits
- RDT* 111 - Clinical Practicum I 1 credits
- RST 200 - Cross Sectional Anatomy 3 credits

Total Semester Credits: 13-14

Second Semester

(Clinical Practicum at hospital Tuesday and Thursday)

- ENG* 200 - Advanced Composition 3 credits
- PSY* 111 - General Psychology I 3 credits
- RDT* 102 - Radiation Therapy II 3 credits
- RDT* 112 - Clinical Practicum II 1 credits
- RST* 213 - Radiation Physics 3 credits

Total Semester Credits: 13

Summer Session

(40 hrs./week at clinical affiliates Monday through Friday, May through July)

- RDT* 126 - Clinical Internship II 3 credits

Total Semester Credits: 3

Third Semester

(Practicum at affiliates Monday, Wednesday, and Friday)

- RDT* 201 - Radiation Oncology I 3 credits
- RDT* 202 - Radiation Therapy III 3 credits
- RDT* 205 - Dosimetry and Computer Assisted Treatment Planning 3 credits
- RDT* 211 - Clinical Practicum III 2 credits

Total Semester Credits: 11

Winter Intersession

(40 hrs./week at affiliates Monday through Friday)

- RDT* 218 - Clinical Internship III 1 credits

Total Semester Credits: 1

Fourth Semester

(Practicum at affiliates Monday, Wednesday, and Friday)

- RDT* 203 - Radiation Oncology II 3 credits
- RDT* 204 - Radiation Therapy IV 3 credits
- RDT* 212 - Clinical Practicum IV 2 credits
- RDT* 222 - Radiobiology and Protection 3 credits
- RDT* 223 - Radiation Physics II 3 credits
- RDT* 224 - Radiation Therapy Senior Seminar 2 credits

Total Semester Credits: 16

Total Program Credits: 58-59

(including pre-requisites)

Total practicum at the clinical affiliates, including Clinical Internships I, II, and III, is approximately 2,000 hours.

RADIOGRAPHY

Diagnostic Imaging and Therapy: Radiography, AS

The Associate Degree program in Radiography prepares students for employment as entry-level radiographers in hospitals, outpatient facilities, medical offices, community health agencies, or industrial concerns where radiation is used for quality control. Upon completion of the program, the student may apply to take the certifying board examination administered by the American Registry of Radiologic Technology (Radiography).

The program requires approximately twenty (20) months of full-time study. The structure of the curriculum is sequential and includes appropriate didactic content and ample supervised clinical education to assure sufficient opportunity to achieve all didactic and clinical requirements. Students are assigned to a clinical practicum at the following education sites:

Griffin Hospital	Division Street	Derby
Griffin Imaging & Diagnostics Center	Ivy Brook Road	Shelton
Yale New Haven Health System	Psychology, B.A.	
Bridgeport Hospital	Grant Street	Bridgeport
New Haven-Pediatric Specialty Center	Long Wharf Drive	New Haven
Yale New Haven Health Outpatient Radiology	Main Street	Stratford
Yale New Haven Health Park Avenue Medical Center	Park Avenue	Trumbull
Yale New Haven Hospital	York Street	New Haven
Yale New Haven Hospital Spine Center	Long Wharf Drive	New Haven
Yale New Haven Hospital - St. Raphael's Campus	Chapel Street	New Haven
Yale Orthopaedics of Guilford	Boston Post Road	Guilford
Yale Orthopaedics of Milford	Wellington Road	Milford
VA New England Health Care System West Haven Campus	Campbell Avenue	West Haven

Students are required to attend all orientation sessions scheduled in the summer in order to begin the program in the fall semester. For more information, call the Enrollment Services Assistant, Mary Beth Banks at (203) 285-2388 or e-mail at mbanks@gatewayct.edu or the Program Coordinator, Julie Austin, at (203) 285-2382 or e-mail at jaustin@gatewayct.edu. Please see the Diagnostic Imaging and Therapy Programs webpage for more information about the admissions process.

The following pre-requisites must be completed with a grade of C or higher before applying to the Program:

- BIO* 211 - Anatomy and Physiology I
- BIO* 212 - Anatomy and Physiology II (within five years prior of application date)

The program is accredited by the Board of Governors for Higher Education and the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182, (312) 704- 5300, www.jrcert.org.

Program Mission Statement

The Radiography program at Gateway Community College is committed to educating and preparing competent, entry-level technologists who can provide high quality imaging and patient care to members of the community. Furthermore, the program is dedicated to providing tools to support life-long learning.

Program Goals and Student Learning Outcomes

1. Students will demonstrate skills in effective oral and written communication
 - 1.1 Students will demonstrate oral communication skills
 - 1.2 Students will demonstrate written communication skills
2. Students will demonstrate skills in critical thinking and problem solving in the principles and practices of Radiography
 - 2.1 Students will assess patient requisitions in order to perform proper imaging procedures
 - 2.2 Students will modify imaging procedures for trauma cases
3. Students will demonstrate clinical competence in the practice of Radiography
 - 3.1 Students will apply principles and practices of radiation protection
 - 3.2 Students will provide appropriate patient care
4. Students will model professionalism
 - 4.1 Students will discuss the importance of continued professional development
 - 4.2 Students will participate in professional organizations

Program Fees

Students are responsible for all fees associated with the following Program requirements:

Textbooks	\$800
Uniforms	\$200
Clinical Markers	\$30
Toxicology Screening	\$65
Background check	\$65
Trajecsys online clinical documentation system	\$150
Castle Branch online health management system	\$35
Pin for pinning ceremony	\$30
Transportation and associated costs	Variable
Health care immunizations and titers	Variable
BLS or CPR/AED	Variable

These fees are approximate and subject to change. If a student takes a leave of absence from the program, they will need to cover additional program fees as needed.

Program Requirements

Freshman Year (NOTE: Required orientation sessions will be scheduled during the summer before entry into the program.)

First Semester

(Clinical practicum at clinical affiliates Tuesdays and Thursdays)

- ENG* 101 - Composition 3 credits
- MAT* 172 - College Algebra 3 credits
- RAD* 104 - Introduction to Radiography 3 credits
- RAD* 105 - Radiographic Anatomy and Procedures I 3 credits
- RAD* 193 - Clinical Practicum I 2 credits

Total Semester Credits: 14

Winter Intersession

(40 hrs./week at clinical affiliates)

- RAD* 187 - Clinical Internship I 0.5 credits

Total Semester Credits: .5

Second Semester

(Clinical practicum held at clinical affiliates Tuesdays and Thursdays)

- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- RAD* 116 - Physics in Radiography 3 credits
- RAD* 194 - Clinical Practicum II 2 credits
- RAD* 204 - Radiographic Anatomy and Procedures II 3 credits

Total Semester Credits: 11

Summer Session

40 hrs./week at clinical affiliates Monday - Friday)

- RAD* 188 - Clinical Internship II 4 credits

Total Semester Credits: 4

Third Semester

(Clinical practicum held at clinical affiliates Mondays, Wednesdays and Fridays)

- RAD* 196 - Radiographic Anatomy and Procedures III 3 credits
- RAD* 203 - Principles of Radiographic Exposure I 3 credits
- RAD* 215 - Radiographic Pathology 3 credits
- RAD* 222 - Radiobiology and Protection 3 credits
- RAD* 291 - Clinical Practicum III 3 credits

Total Semester Credits: 15

Winter Intersession

(40 hrs./week at clinical affiliates)

- RAD* 286 - Clinical Internship III 0.5 credits

Total Semester Credits: .5

Fourth Semester

(Clinical practicum held at assigned clinical affiliates Mondays, Wednesdays and Fridays)

- RAD* 205 - Computers in Medical Imaging:
Advanced Practice 3 credits
- RAD* 206 - Quality Assurance 3 credits
- RAD* 218 - Senior Seminar 3 credits
- RAD* 292 - Clinical Practicum IV 3 credits
- PSY* 111 - General Psychology I 3 credits

Total Semester Credits: 15

Total Program Credits: 60

RADIOLOGIC SCIENCE TECHNOLOGY

No active programs available.

RAILROAD ENGINEERING TECHNOLOGY

Railroad Engineering Technology, AS

Railroad Engineering Technology will prepare students for employment in the railroad industry within a career path for maintaining and repairing railcars through a degree orientation in electromechanical equipment. Graduates will be prepared for technical application exams commonly administered by railroad companies for entry-level maintenance of equipment positions. The program reflects current skills needed within job positions that require electromechanical knowledge and skills.

The Signaling and Communications Option will prepare students for employment in the railroad industry for maintaining and repairing rail line and railcars where signaling and communications systems are used. Graduates will be prepared for technical application exams commonly administered by railroad companies for entry-level signaling and switching positions. The program reflects current skills needed within job positions that require electronic and communications knowledge and skills. For more information on either program, call Interim Coordinator, Richard Halkyard at (203) 285-2311 or e-mail at (rhalkyard@gatewayct.edu).

Railroad Practicum Additional Information

- Practicum experiences may be assigned during daytime, evening or weekend hours.
- Practicum assignments in all courses are subject to change based upon availability of practicum sites and numbers in groups.
- Practicum sites could be within an hour radius of the college and may require a mandatory parking fee.
- Students must make their own travel arrangements during the program.

Practicum learning experiences are planned as an integral part of the railroad engineering technology courses and are held at a variety of railroad settings, such as the Shoreline Trolley Museum/Branford Railway and the Railroad Museum of New England/Naugatuck Railroad. Students are responsible for arranging their own transportation to and from assigned clinical sites. Practicum experiences may be assigned during daytime, evening, or weekend hours. Assignment of practicum sites is at the discretion of the railroad engineering technology faculty. Practicum sites could be within an hour radius of the college, and may require a mandatory parking fee.

Criminal Background Checks & Toxicology Screening

Practicum sites may now require criminal background checks and/or toxicology screening (drugs/alcohol) be completed on any student who will be attending a practicum rotation at those sites. Students must follow instructions for obtaining a background and/or toxicology screening at the college if necessary. Students who are found guilty of having committed a felony/misdemeanor and/or are found to have a positive toxicology screen may be prevented from participating in practicum exercises.

If you cannot participate in a practicum at an assigned facility, you may not be able to complete the objectives of the course and of the program. Specific situations are reviewed by college personnel.

Program Outcomes

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

- Demonstrate and have an understanding of typical railroad rules and regulations including changes that are a result of accidents and imposed by Homeland Security
- Demonstrate a basic understanding of career opportunities within the railroad industry with an Electromechanical oriented degree

Electromechanical Degree:

- Demonstrate a basic understanding of the operation of railcar electromechanical systems
- Conduct entry level troubleshooting and repairs of electromechanical systems on railcars
- Be prepared to take an application exam on electromechanical skills for employment in the railroad industry

Signaling & Communications Option:

- Demonstrate a basic understanding of the operation of rail line and railcar signaling and communication systems
- Conduct entry level troubleshooting and repairs on signaling and communications systems along rail lines and on railcars
- Be prepared to take an application exam on signaling and communications skills for employment in the railroad industry

Electromechanical Option

Suggested Course Sequence

First Semester

- CET* 116 - Computer Applications for Technology 3 credits
- EET* 103 - Fundamentals of Electricity 4 credits
- RET* 101 - History of Railroading 3 credits
- ENG* 101 - Composition 3 credits
- MAT* 115 - Mathematics for Science and Technology 3 credits
- Choose one course in Gen Ed -
CALT: Critical Analysis/Logical Thinking 3 credits

Total Semester Credits: 19

Second Semester

- EET* 110 - Electric Circuits I 4 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- PHY* 109 - Fundamentals of Applied Physics 4 credits (or higher)
- RET* 110 - Careers in the Railroad 2 credits
- RET* 120 - Railroad Rules, Regulations, Standards & Practices 3 credits

Total Semester Credits: 16

Third Semester

- MEC* 234 - Electromechanical Controls 4 credits
- RET* 220 - Safety in the Railroad Workplace 3 credits
- RET* 230 - Reading and Interpreting Railroad Diagrams 2 credits
- RET* 240 - Railroad Pneumatics and Hydraulic Controls 4 credits
- RET* 270 - Practicum in Passenger Railroad Technology 1 credits
- COM* 173 - Public Speaking 3 credits

Total Semester Credits: 17**Fourth Semester**

- ECN* 101 - Macroeconomics 3 credits
- RET* 242 - Railroad HVAC Systems 4 credits
- RET* 244 - Railroad Electro-mechanical Troubleshooting 4 credits
- Restricted (Elective) (CET* courses only) 4 credits

Total Semester Credits: 15**Total Program Credits: 67**

Railroad Engineering Technology: Signaling & Communications Option, AS

Suggested Course Sequence

First Semester

- CET* 116 - Computer Applications for Technology 3 credits
- EET* 103 - Fundamentals of Electricity 4 credits
- RET* 101 - History of Railroading 3 credits
- ENG* 101 - Composition 3 credits
- MAT* 115 - Mathematics for Science and Technology 3 credits (or higher)
- Choose one course in Gen Ed -
CALT: Critical Analysis/Logical Thinking 3 credits

Total Semester Credits: 19

Second Semester

- EET* 110 - Electric Circuits I 4 credits
- ENG* 102 - Literature and Composition 3 credits
- or**
- ENG* 200 - Advanced Composition 3 credits
- PHY* 109 - Fundamentals of Applied Physics 4 credits (or higher)
- RET* 110 - Careers in the Railroad 2 credits
- RET* 120 - Railroad Rules, Regulations,
Standards & Practices 3 credits

Total Semester Credits: 16

Third Semester

- MEC* 234 - Electromechanical Controls 4 credits
- RET* 220 - Safety in the Railroad Workplace 3 credits
- RET* 250 - Railroad Signaling & Switching 4 credits
- RET* 270 - Practicum in Passenger Railroad Technology 1 credits
- COM* 173 - Public Speaking 3 credits

Total Semester Credits: 15

Third Semester

- RET* 252 - Railroad Communications 4 credits
- RET* 254 - Railroad Maintenance,
Troubleshooting and Repair 4 credits
- RET* 271 - Practicum in Passenger Railroad Technology 1 credits
- Restricted (Elective) (CET* courses only) 4 credits
- ECN* 101 - Macroeconomics 3 credits

Total Semester Credits: 18

Total Program Credits: 68

RETAIL MANAGEMENT/ FASHION MERCHANDISING/ENTREPRENEURIAL

Retail Management/Fashion Merchandising Certificate

The certificate program is designed to offer an abbreviated study in retailing and fashion merchandise to prepare for work in these industries or to build upon an existing degree to provide additional career opportunities. Students may complete the program in two semesters. Students should check with their advisor during the scheduling process to make sure courses are taken in proper sequence and any prerequisites have been met. Students will be able to apply the credits earned towards an AS degree in Retail Management and Fashion Merchandising. For more information, contact the Program Coordinator, Rose Luglio, at 203.285.2198 or rluglio@gatewayct.edu.

Program Outcomes

Upon successful completion of all program requirements:

- Understand the basic theory and practice of retail management and merchandising
- Understand competition and its relationship to private enterprise
- Explain the marketing concept for retailers and fashion manufacturers
- Understand the importance of planning to retail and fashion organizations
- Read, understand, and prepare standard types of business communications

Suggested Course Sequence

First Semester

- | | |
|--|-----------|
| • BMK* 201 - Principles of Marketing | 3 credits |
| • BMK* 215 - Principles of eBusiness | 3 credits |
| • BMK* 241 - Principles of Advertising | 3 credits |
| • BMK* 255 - Fashion Analysis | 3 credits |

Total Semester Credits: 12

Second Semester

- | | |
|--------------------------------------|-----------|
| • BES* 218 - Entrepreneurship | 3 credits |
| • BMK* 103 - Principles of Retailing | 3 credits |
| • BMK* 257 - Textiles | 3 credits |

Total Semester Credits: 9

Total Program Credits: 21

Retail Management/Fashion Merchandising, AS

Retail and fashion are exciting and vital industries in our economy. This program prepares students for careers with retail, wholesale, and manufacturing organizations in buying, merchandising, fashion coordination, and sales promotion. Practical training is provided through field work experiences, including New York City. The program courses may be transferred to bachelor's degree programs. For more information, contact the Program Coordinator, Rose Luglio at 203.285.2198 or rluglio@gatewayct.edu

Program Outcomes

Upon successful completion of all program requirements:

- Identify core concepts of retail management and fashion merchandising and their role in society and the global economy.
- Describe the legal and ethical environments of the retail and fashion industries.
- Demonstrate information literacy through research skills and the use of technology.
- Demonstrate analytical, problem-solving, and decision-making skills applicable to retail management and fashion merchandising.
- Apply effective written and oral communication skills to business situations.

Suggested Course Sequence

First Semester

- | | |
|--------------------------------------|-----------------------|
| • BMK* 201 - Principles of Marketing | 3 credits |
| • BMK* 220 - Sales | 3 credits |
| • BMK* 255 - Fashion Analysis | 3 credits |
| • MAT* 109 - Quantitative Literacy | 3 credits (or higher) |
| • ENG* 101 - Composition | 3 credits |

Total Semester Credits: 15

Second Semester

- | | |
|---|-----------|
| • BMK* 103 - Principles of Retailing | 3 credits |
| • BMK* 257 - Textiles | 3 credits |
| • BMK* 295 - Field Experience I | 3 credits |
| • CSA* 135 - Spreadsheet Applications (Excel) | 3 credits |
| • ENG* 102 - Literature and Composition | 3 credits |
| or | |
| • ENG* 200 - Advanced Composition | 3 credits |

Total Semester Credits: 15

Third Semester

- | | |
|---|-----------|
| • ACC* 100 - Basic Accounting | 3 credits |
| or | |
| • ACC* 113 - Principles of Financial Accounting I | 3 credits |
| • BES* 218 - Entrepreneurship | 3 credits |
| • BMK* 215 - Principles of eBusiness | 3 credits |
| • BMK* 241 - Principles of Advertising | 3 credits |
| • Business Communication
(Gen Ed - OC: Oral Communication) | 3 credits |

Total Semester Credits: 15

Fourth Semester

- | | |
|--|-------------|
| • BMK* 296 - Field Experience II | 3 credits |
| • PSY* 111 - General Psychology I | 3 credits |
| • Choose one course in BIO*, CHE*, EAS*, EVS*, PHY*
(Gen Ed - SK: Scientific Knowledge & Understanding) | 3-4 credits |
| • Business (Electives) | 6 credits |

Total Semester Credits: 15

Total Program Credits: 60-61

SCIENCE

Natural Sciences and Mathematics, AS

The Natural Sciences and Mathematics program prepares qualified students to work at research facilities as laboratory or research assistants and/or continue their studies in the sciences at a four-year institution. For more information, contact Mark Bruno at (203) 285-2353 or e-mail mbruno@gatewayct.edu.

Program Outcomes

Upon successful completion of all program requirements:

- Recognize ethical issues and understand the social responsibility involved in scientific decision making
- Communicate effectively both orally and in writing
- Demonstrate knowledge of the basic principles of the natural and physical sciences
- Prepare, conduct, document, and interpret scientific experiments
- Demonstrate knowledge of the basic principles of algebra, trigonometry, and calculus
- Incorporate an interdisciplinary approach to investigating scientific problem

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • CHE* 121 - General Chemistry I | 4 credits |
| • COM* 173 - Public Speaking | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 172 - College Algebra | 3 credits |
| or | |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits |
| • Choose one course in Social Phenomena (Gen Ed - SP: Social Phenomena/Knowledge/Understanding) | 3 credits |

Total Semester Credits: 16

Second Semester

- | | |
|---|-----------|
| • CHE* 122 - General Chemistry II | 4 credits |
| • ENG* 102 - Literature and Composition | 3 credits |
| or | |
| • ENG* 200 - Advanced Composition | 3 credits |
| • MAT* 186 - Precalculus | 4 credits |
| • Math or Science (Elective) | 4 credits |

Total Semester Credits: 15

Third Semester

- BIO* 121 - General Biology I 4 credits
- **or**
- BIO* 211 - Anatomy and Physiology I 4 credits
- MAT* 254 - Calculus I 4 credits
- PHY* 121 - General Physics I 4 credits
- Math or Science (Elective) 3 credits

Total Semester Credits: 15**Fourth Semester**

- BIO* 122 - General Biology II 4 credits
- **or**
- BIO* 212 - Anatomy and Physiology II 4 credits
- PHL* 111 - Ethics 3 credits
- PHY* 122 - General Physics II 4 credits
- Math or Science (Elective) 3 credits

Total Semester Credits: 14**Total Program Credits: 60****SIGN LANGUAGE**

No active programs available.

SOCIOLOGY

CSCU Pathway Transfer Degree: Sociology Studies, A.A.

Please contact a campus advisor for this program:

- Professor Jonah Cohen JCOhen@gatewayct.edu
- Professor Lauren Doninger LDoninger@gatewayct.edu

With this degree, you will be able to transfer to the following majors:

At Central Connecticut State University	Sociology, B.A.
At Eastern Connecticut State University	Sociology, B.A.
At Southern Connecticut State University	Sociology, B.A.
At Western Connecticut State University	Anthropology/Sociology, B.A.
At Charter Oak State College	Sociology, B.A.

Here is the recommended course of study for the Sociology Studies Transfer Degree. If you are studying part-time, simply follow the order of the courses listed here. Note that not all courses will be available every semester. You will notice that in many instances, you will be able to choose the specific course you will take from within a category.

Suggested Course Sequence

First Semester

- ENG* 101 - Composition 3 credits
- SOC* 101 - Principles of Sociology 3 credits
- Choose one course in Historical Knowledge and Understanding 3 credits
- Choose one course in Aesthetic Dimensions 3 credits
- Unrestricted Elective 3 credits

Total Semester Credits: 15

Second Semester

- Choose one course in Quantitative Reasoning 3 credits (CCSU recommends MAT 167)
- Choose one course in Written Communication II 3 credits
- Choose one course in Scientific Reasoning 3-4 credits
- SOC Elective (you may take any SOC courses for these electives, but two of them must be at the 2xx level)
- Unrestricted Elective*

Total Semester Credits: 15-16

Third Semester

Begin the transfer application process in your third semester or the semester before you plan to graduate. FAFSA becomes available October 1.

- Choose one course in Scientific Knowledge and Understanding 3-4 credits
- Choose one course in Social Phenomena 3 credits
- Choose one additional General Education I - Creativity 3 credits
- SOC Elective (you may take any SOC courses for these electives, but two of them must be at the 2xx level) 3 credits
- Unrestricted Elective 3 credits

Total Semester Credits: 15-16

Fourth Semester

During your last semester at GCC, don't forget to apply for graduation!

- Choose one course in Critical Analysis/Logical Thinking 3 credits
- Choose one course in Oral Communications 3 credits
- Choose one course in Additional General Education II - Global Knowledge 3 credits
- SOC Elective (you may take any SOC courses for this elective, but two of them must be at the 2xx level) 3 credits
- Unrestricted Elective 3 credits

Total Semester Credits: 15

Total Program Credits: 60-61

TECHNOLOGY

Aviation Maintenance Technology, AS

To be eligible for an Associate in Science degree in the Aviation Maintenance Technology Program, a student must successfully complete a Federal Aviation Agency (FAA) approved Airframe and Powerplant Mechanics program that is offered at FAA approved schools and have an active license. Thirty credits will be granted to individuals who have an active FAA license. An additional 32 credits of college instruction must be completed for the Associate in Science degree. To find an FAA school, please visit <http://av-info.faa.gov>.

Program Outcomes

Upon successful completion of all program requirements:

- Perform mathematics related to the occupation, including but not limited to algebra, arithmetic, decimals, and graphs
- Use the scientific method and critical thinking to solve problems related to the occupation
- Apply knowledge of theory and safety to accomplish certain tasks related to the occupation
- Identify and use the appropriate tools, testing procedures, and measurement equipment to accomplish certain tasks related to the occupation
- Use current reference and training materials from accepted industry publications and standards to accomplish certain tasks related to the occupation.

Graduates of this program may obtain employment as mechanics at airports, technicians with aircraft and powerplant companies, or they may continue their education toward a Bachelor's degree in the industrial and manufacturing fields.

For more information on this program, contact the Department Chairperson, Eric Flynn at (203) 285-2371 or EFlynn@gatewayct.edu.

First Semester

- | | |
|---|-----------------------|
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • ENG* 101 - Composition | 3 credits |
| • MAT* 137 - Intermediate Algebra | 3 credits (or higher) |
| • PHY* 121 - General Physics I | 4 credits |
| • Choose one course in Aesthetic Dimensions | 3 credits |

Total Semester Credits: 16

Second Semester

- | | |
|---|-----------|
| • COM* 173 - Public Speaking | 3 credits |
| • MAT* 175 - College Algebra and Trigonometry | 3 credits |
| • PHY* 122 - General Physics II | 4 credits |
| • Choose one course in Written Communication II | 3 credits |
| • Choose one course in Social Phenomena | 3 credits |

Total Semester Credits: 16

Active FAA License

An active FAA Airframe and Powerplant Mechanics License is required for entry to this program 30 credits

Total Program Credits: 62

Solar Technology Certificate

The Solar Technology Certificate will teach students operational skills and will impart a basic understanding of photovoltaic (solar electric), solar thermal (water/air/heating/effects of wind), and passive solar equipment, including course work in electricity and electronics. Contextualized instruction in related academic math and computer skills will enable program graduates to compare and contrast, estimate the costs, evaluate performance, and understand the overall effectiveness of various types of solar installations. Successful graduates will be eligible for the North American Board of Certified Energy Practitioners (NABCEP) PV Entry-Level Exam. For information, please contact Eric Flynn at (203) 285-2371 or e-mail eflynn@gatewayct.edu.

Learning Outcomes

- Working knowledge of the benefits and limitations of a solar energy system and conducting an economic assessment of its return on investment;
- Basic understanding of state and federal regulations and permit requirements in the energy systems field;
- Understanding of the importance of safety in an energy system environment;
- Knowledge of solar technology field to become eligible for the NABCEP entry-level "Certificate of Knowledge" exam
- Knowledge of solar electrical work to become eligible for the Connecticut Solar PV licensing exams (PV-1, PV-2);
- Knowledge of solar electrical work to become eligible for the Connecticut Solar Thermal licensing exams (ST-1, ST-2), contact the Department Chairperson, Eric Flynn at (203) 285-2371 or EFlynn@gatewayct.edu.

Suggested Course Sequence

First Semester

- | | |
|---|-----------|
| • EET* 110 - Electric Circuits I | 4 credits |
| • ENV* 100 - Introduction to Alternative Energy Systems | 3 credits |
| • ENV* 181 - Solar Thermal Systems | 3 credits |
| • MEC* 234 - Electromechanical Controls | 4 credits |

Total Semester Credits: 14

Second Semester

- | | |
|---|-----------|
| • CAD* 126 - Electronics Graphics | 3 credits |
| • CET* 116 - Computer Applications for Technology | 3 credits |
| • EET* 136 - Electronics I | 4 credits |
| • ENV* 182 - Solar Photovoltaic Systems I | 3 credits |

Total Semester Credits: 13

Total Program Credits: 27

WATER MANAGEMENT TECHNOLOGY

Water Management Certificate

The Water Management Certificate covers the operation of water treatment plants from both ground and surface water sources as well as the water distribution systems that deliver treated water to residential, commercial, industrial and government customers. Connecticut continually needs qualified individuals in the water treatment and distribution areas to fill positions in the increasing number of facilities.

Certification by the CT Department of Public Health Drinking Water Section is required to operate water treatment and distribution facilities. Gateway's Water Management Certificate program offers a sequence of courses to prepare students for the Connecticut Department of Health certification examinations. Successful completion of the program provides the necessary education requirements to take the CT Department of Public Health's highest class water industry license examinations (Class IV Water Treatment and Class III Distribution). If successful, graduates are licensed as Operators-in-Training; OIT licenses become full licenses after work experience requirements are met. CT DPH licenses are recognized by most other states.

For more information, contact Wesley Winterbottom at (203) 285-2354 or e-mail at wwinterbottom@gatewayct.edu.

Suggested Course Sequence

First Semester

- WMT* 101 - Water Treatment and Distribution 6 credits
- CWM* 106 - Introduction to Utility Management 3 credits

Total Semester Credits: 9

Second Semester

- ENV* 110 - Environmental Regulations 3 credits
- WMT* 102 - Special Topics in Water Treatment 3 credits +
- or**
- WMT* 103 - Special Topics in Water Distribution 3 credit

Total Semester Credits: 6

Total Program Credits: 15

+ If both the CT DPH Class IV Water Treatment and Class III Water Distribution Operator-in-Training Examinations are to be taken, it is highly recommended that both of these classes be taken.

COURSE DESCRIPTIONS

Courses with an asterisk (*) have been converted to the Community College System Common Course Numbers. For your information, former course numbers are listed after the title

Accounting

ACC* 100 - Basic Accounting

3 credits

Covers the fundamental concepts of accounting. Provides an overview of key topics in financial and managerial accounting. Examines the use of accounting reports by business managers, investors, creditors, and other stakeholders. Topics include financial statements, the accounting cycle, accounting for service businesses, merchandising operations, cash and payroll, internal controls and cost behavior. Supplemented with software applications.

Notes: This course is not open to students who have completed ACC* 113 or higher with a grade of C- or better.

ACC* 113 - Principles of Financial Accounting I

3 credits

Examines the structure of accounting and the accounting equation. Studies the basic essentials which include journalizing and posting transactions; preparing the trial balance; preparing financial statements and journalizing and posting adjusting and closing entries. Introduces the basic concepts of asset and liability measurement, both current and long-term, and revenue determination by examination of specific accounts. Corporate organizations and retained earning accounts are studied.

ACC* 117 - Principles of Managerial Accounting

3 credits

Presents basic concepts and practice of accounting's role in providing information to managers to assist in planning, control, and decision making. Topics include cost accounting systems, cost behavior relationships, analysis for managerial decisions, and the budget process.

Prerequisite(s): ACC* 113.

ACC* 125 - Accounting Computer Application I

3 credits

Use accounting software to complete the accounting cycle. Topics include cash receipts, cash disbursements, accounts receivable, accounts payable, and payroll taxes. Various software packages will be presented, but emphasis will be on QuickBooks.

Prerequisite(s): ACC* 113 or BOT* 165.

ACC* 241 - Federal Taxes I

3 credits

Interprets and applies laws in preparing federal income tax returns for individuals.

Prerequisite(s): ACC* 113.

Allied Health

HIM* 101 - Medical Terminology

3 credits

Introduces the language of medicine. Topics include basic word structure, prefixes, roots, suffixes, and terms pertaining to the body, including singular/plural forms. Also presents terminology related to body systems (cardiovascular/circulatory, digestive, female reproductive, integumentary, musculoskeletal, respiratory, and urogenital). Covers body system units, including anatomic, diagnostic, symptomatic, surgical, and eponymic terms, plus standard abbreviations and acronyms. Emphasizes defining and spelling elements and terms.

Prerequisite(s): Eligible for ENG* 101 or ESL* 161 or ESL* 169 with a grade of C or better. Notes: (Program has not been offered in the past two years)

HLT* 103 - Investigations in Health Careers

3 credits

Designed to assist students in meeting the expectations of a health care curriculum and career. Students will become familiar with rigors of higher education and the specific skills needed to maximize their opportunity for academic and clinical success. Will include a comprehensive overview of the duties and responsibilities associated with clinical competency. Interdisciplinary learning strategies, correlating clinical and didactic education, life management skills, work ethics and critical thinking skills necessary for all health providers will be emphasized.

HLT* 107 - Methods of Learning in a Clinical Curriculum**3 credits**

Designed to assist traditional and non-traditional first year college students to meet the expectations of a curriculum in health related fields. The intent is to familiarize the students with the rigors of higher education and to provide specific skills which will maximize the students' opportunity for academic and clinical success. The course will include a comprehensive overview of the duties and responsibilities associated with clinical education and clinical competency. Interdisciplinary learning strategies, correlating clinical and didactic education, life management skills, work ethics and critical thinking skills so critical for all health care providers will be emphasized. Participation in field work and classroom visits are required.

Anthropology**ANT* 105 - Introduction to Cultural Anthropology****SP: Social Phenomena/Knowledge and Understanding****3 credits**

The student of people's interactions in communities, behaviors, beliefs, and institutions. It examines theories of how cultures are created and searches for deeply embedded patterns of meanings cross cultures. Compares and studies our own patterns and behaviors in an effort to gain a better understanding of how local and global communities interact. Prerequisite(s): Eligibility for ENG* 101.

Art & Graphics**ART* 101 - Art History I****AD: Aesthetic Dimension of Humankind****3 credits**

Surveys art and architecture from prehistoric times through the Middle Ages. Presents art as a fundamental aspect of human existence during a wide range of periods and cultures. Includes the art of indigenous cultures in Africa and the Americas, as well as the art of the ancient world. Emphasizes history and formal appreciation of art through the use of text, slides, reproductions, and original works. Requires museum trips.

ART* 102 - Art History II**AD: Aesthetic Dimension of Humankind****3 credits**

Surveys art and architecture from the Renaissance to the late nineteenth century. Surveys the Renaissance in Italy and Northern Europe and the Baroque, Rococo, Romantic, Impressionist, and Post-Impressionist periods. Emphasizes history and formal appreciation of art through the use of text, slides, reproductions, and original works. Requires museum trips.

ART* 103 - Art History III**3 credits**

Surveys modern and contemporary art and architecture from the mid nineteenth century to the present. Emphasizes history, issues, and formal appreciation of art through the use of text, slides, reproductions, and original works. Requires museum and gallery visits. Prerequisite(s): ART* 101 or ART* 102.

ART* 109 - Color Theory**3 credits**

Studies the interaction of color. Works with collage and paints to formulate presentations ranging from fundamental problem solving to individual expression. Emphasizes the use of color and its properties. Requires field trips and outside assignments. (6 studio hours)

ART* 111 - Drawing I**3 credits**

Introduces traditional drawing materials and techniques and examines drawing from life, composition, and design. Students work with a variety of subjects, including still life, interior, landscape, and human form. Requires sketchbook, outside assignments, and museum visits. (6 studio hours)

ART* 112 - Drawing II**3 credits**

Expands the fundamentals of drawing acquired in Drawing I. Focuses on the structure and development of drawing as a form of artistic expression. Includes figure drawing, sketchbook, outside assignments, and museum trips. (6 studio hours) Prerequisite(s): ART* 111 or instructor's permission.

ART* 113 - Figure Drawing I**3 credits**

Applies the knowledge acquired in Drawing I and II. Concentrates on traditional and contemporary approaches to the representation of the figure. Focuses on the costumed and nude figure as well as portraiture. Requires outside assignments and museum trips. (6 studio hours)

Prerequisite(s): ART* 111 or instructor's permission.

ART* 121 - Two Dimensional Design**3 credits**

Investigates elements of art and principles of two-dimensional design and the nature of design. Explores space, shape, color, line, texture, and value, beginning with simple relationships and building toward more complex systems of composition. Requires outside assignments and museum visits. (6 studio hours)

ART* 122 - Three Dimensional Design**3 credits**

Investigates the elements and principles of three-dimensional design, emphasizing forms and spatial organization. Studies the various types of three-dimensional forms found in both art and nature. Explores the use of various materials, tools, and techniques used to create three-dimensional forms. Requires outside assignments and museum visits. (6 studio hours)

ART* 131 - Sculpture I**3 credits**

Introduces principles and materials that facilitate student response to three-dimensional forms. Stresses the concepts of modeling, carving, construction, portrait sculpture, and casting. Requires museum and gallery visits. (6 studio hours)

ART* 132 - Sculpture II**3 credits**

Sculpture II builds on Sculpture I by presenting more challenging work. Applies knowledge acquired in Sculpture I and concentrates on traditional approaches to the representation of the human form. Requires outside assignments and museum visits. (6 studio hours)

Prerequisite(s): ART* 131 or instructor's permission.

ART* 141 - Photography I**3 credits**

Explores the fundamentals of still photography and processing, basic camera techniques, and dark room procedures. The course emphasizes examining photographic images and making pictures. Picture-making assignments cover camera operation and stress making deliberate artistic choices during picture taking. Most picture taking will be done outside of class time. Lab instruction will include black and white darkroom techniques, workshops, and demonstrations. Students are required to supply their own 35 mm SLR camera. (6 studio hours)

ART* 142 - Photography II**3 credits**

Builds on skills learned in Photography I by applying those skills to more challenging work. This is primarily a black and white photography course with an introduction to color. Combines picture-taking projects and darkroom printing techniques with the study of artistic photography. Includes lectures with slides and text. Requires outside assignments. Students are required to supply their own 35 mm SLR camera. (6 studio hours)

Prerequisite(s): ART* 141 or instructor's permission.

ART* 151 - Painting I**3 credits**

Introduces basic oil painting methods and procedures. Emphasizes composition, paint handling, and color. Explores still life, interior scenes, and landscape in both group and individual projects. Includes study of master works from various periods. Requires outside assignments and museum visits.

ART* 152 - Painting II**3 credits**

Builds on knowledge acquired in Painting I. Presents more challenging work including the figure. Encourages the pursuit of individual expression by stressing a painting sequence that works toward a personal statement. (6 studio hours)

Prerequisite(s): ART* 151.

ART* 167 - Printmaking I**3 credits**

An introductory studio course in the methods and materials of printmaking: etching, woodblock printing, linoleum printing, collagraph, monotype, and photo-transfer. The basic elements of art will be articulated through these printmaking methods.

Prerequisite(s): ART* 111 and ART* 121.

ART* 176 - Digital Video Art I**3 credits**

Investigates digital video as an extension of the fine arts. Formal attributes which make up the language of video including time, sound, content, and composition will be investigated as tools of expression and devices for creating meaning. Basic production techniques such as story boarding, cinematography, lighting, and editing will be acquired through creative problem solving. Through both a survey of historical and contemporary video art and in responding to collective and individual assignments, students will become critically observant and sensitive to video as a time-based medium. Digital video art's relationship to fine arts as well as to other media is covered.

ART* 251 - Painting III**3 credits**

Applies knowledge acquired in Painting I and II. Concentrates on traditional and contemporary approaches to the representation of the figure. Focuses on the nude and costumed figure and portraiture. Requires outside assignments and museum visits. (6 studio hours)

Prerequisite(s): ART* 151 or instructor's permission.

ART* 261 - Web Design I**3 credits**

Introduces students to web design concepts using programs such as Adobe Photoshop, Illustrator, and Dreamweaver along with utilizing HTML coding and Macromedia. Students will dissect and investigate websites in order to gain knowledge and critical insight into the design of websites. (6 studio hours)

Prereq/Corequisite(s): GRA* 149.

ART* 293 - Internship in Art I**3 credits**

Provides students with the opportunity to gain "real-life" experience in Studio Art/Graphic Design. The student is required to work 120 hours during the semester. Hours will be arranged by mutual consent of the student and the supervisor.

GRA* 149 - Introduction to Adobe Creative Suite**3 credits**

Introduces the Adobe Creative Suite. Through lectures, demonstrations, exercises and projects, the students will learn technical skills and basic tools of digital art and design using Adobe Photoshop, Illustrator, and InDesign. Lab Hours: 6

GRA* 151 - Graphic Design I**3 credits**

Presents various problems in graphic design and typography. Explains the process of creation from rough layout to tight composition. Stresses creative and aesthetically successful solutions to graphic design problems. Lab Hours: 6

Prereq/Corequisite(s): GRA* 149

GRA* 231 - Digital Imaging (Photoshop)**3 credits**

Introduces and focuses on Adobe Photoshop and the manipulation of the still image in digital media. Through lectures, demonstrations, exercises, and real-world projects, students will learn how to alter and design images using the tools, functions, and libraries found in this Adobe Creative Suite program. Lab Hours: 6

Prereq/Corequisite(s): GRA* 149

GRA* 237 - Computer Graphics (Adobe Illustrator)**3 credits**

Introduces and focuses on Adobe Illustrator. Through lectures, demonstrations, exercises, and real-world projects, students will learn how to use this Adobe Creative Suite program to create special imagery and typographic effects and apply these skills to solving design problems in print advertising, consumer packaging and desktop publishing environments. Lab Hours: 6

Prereq/Corequisite(s): GRA* 149

GRA* 241 - Digital Page Design I (InDesign)**3 credits**

Through lectures, demonstrations, exercises, and real world projects, students will learn document construction, page layout and typography and will apply these techniques to solving design problems in electronic publishing environments. Lab Hours: 6

Prereq/Corequisite(s): GRA* 149

GRA* 252 - Graphic Design II**3 credits**

Builds on the skills developed in Graphic Design I, this course introduces more advanced production techniques and stresses more advanced design concepts. Lab Hours: 6

Prerequisite(s): GRA* 151.

GRA* 261 - Web Design I**3 credits**

Introduces students to web design. Using the programs in the Adobe Creative Suite as well as Dreamweaver, HTML coding and other programs, students will design and create their own website. Lab Hours: 6

Prereq/Corequisite(s): GRA* 149

Automotive - General (CARS)**AUT* 130 - Power Plant****3 credits**

Covers in both theory and practice, the automotive engine and its' systems. Students will gain the skills necessary to service and repair current automotive engines. Students will learn to diagnose engine problems and repair them properly. Lecture Hours: 1 Lab Hours: 4

AUT* 132 - Automotive Systems & Shop Practices**3 credits**

This course surveys all of the vehicle systems. Students will be introduced to safety and shop practices. Additional emphasis will be on the lube maintenance and vehicle inspection process. Lecture Hours: 1 Lab Hours: 4

AUT* 134 - Electrical/Electronic Systems**3 credits**

Covers in both theory and practice, automotive electrical and electronic systems. Students will study the most updated automotive electronic systems and become familiar with electrical circuits, alternators, starters, batteries, and electrical components. Theory, operation, diagnosis, and repair procedures will be covered. Emphasizes lecture and related laboratory experiences in the diagnosis and service of automotive electrical systems and their components. Lecture Hours: 1 Lab Hours: 4

AUT* 136 - Steering and Suspension Systems**3 credits**

Covers in both theory and practice, the diagnosis and repair of automotive steering and suspension systems including vehicle alignment. A comprehensive presentation of automotive wheel and tire covers and their repair will be examined. Theory, machines, operations, diagnosis, and repair procedures will be covered. Lecture Hours: 1 Lab Hours: 4

AUT* 138 - Braking Systems**3 credits**

Covers in both theory and practice, all automotive hydraulic braking systems. It covers all types of disc and drum brakes and repair procedures. Modern traction control and stability control systems will be explored. Theory, operation, diagnosis and repair procedures will be covered. Lecture Hours: 1 Lab Hours: 4

AUT* 159 - ASE Prep & Shop Practices**1 credits**

Presents all aspects of systems pertaining to the G1 and A5 ASE exam. Test taking skills that are tailored to the ASE test will be explored. Theory, operation, and study and practice evaluations will be taught. Course surveys all vehicle systems. Students will be introduced to safety and shop practices as well as lube maintenance and vehicle inspection process. Lecture Hours: 1 Lab Hours: 1

AUT* 170 - Practicum I**4 credits**

Designed to provide students supervised practical application of previously studied theory. An opportunity to focus on the development of professional and technical competencies as well as on-the-job training. Students are responsible for finding their own placement. Each credit equates to roughly one hundred hours of experience.

AUT* 226 - Service, Parts, Dealer Operations**CALT: Critical Analysis/Logical Thinking****3 credits**

Presents the overall operation of the service and parts departments. The skills developed in this class can be applied to enhance the knowledge base of the student who has the technical skills, but needs the larger industry focus to complete the well-rounded student. Students will prepare for the C1, P2, & P4 ASE exams.

AUT* 231 - Engine Management Systems**3 credits**

Covers in both theory and practice, basic performance and emissions theory and nomenclature, as well as the skills necessary to service and repair computerized automotive fuel and ignition systems. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 1 Lab Hours: 4

AUT* 233 - Manual Drivetrain Systems**3 credits**

Covers in both theory and practice, proper procedures for the diagnosis and repair of automotive manual drive transmissions and transaxles. Places particular emphasis on clutches, drive (half) shafts, and universal joints, along with rear axle and four-wheel drive components. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 1 Lab Hours: 4

AUT* 235 - Automatic Drivetrain Systems**3 credits**

Covers in both theory and practice, the transference of engine power through the transmission to the final drive units on both front and rear wheel drive cars. Includes maintenance and repair of automatic transmission, drive shaft assemblies and differentials. Transmission/transaxle mechanical, hydraulic and electrical operation. Service, overhaul, mechanical/electrical diagnosis procedures will be covered. Use and application of diagnostic equipment. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 1 Lab Hours: 4

AUT* 237 - Climate Control & Restraint Systems**3 credits**

Presents in both theory and practice, the proper procedures for the diagnosis and repair of air conditioning systems, heating, and engine cooling systems, operating systems, and related controls. Also covers the diagnosis and repair of restraint components and systems. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 1 Lab Hours: 4

AUT* 238 - Advanced Electrical Diagnosis & Performance Tuning**3 credits**

Covers advanced electrical theory, diagnosis, and repair. An overview of various hybrid systems will be presented. Investigation of high performance applications of automotive upgrades. Students will receive training theory, hands-on repair and diagnosis of modern hi-tech power plants and gasoline powered vehicles with an emphasis on performance. Lecture Hours: 1 Lab Hours: 4
Prerequisite(s): AUT* 134.

AUT* 244 - Honda Advanced Electrical Systems**4 credits**

Covers advanced electrical theory, diagnosis, and repair of Honda/Acura vehicles. An overview of various hybrid systems will be presented. Investigation of high performance applications of automotive upgrades. Students will receive training theory, hands-on repair and diagnosis of modern hi-tech power plants and gasoline powered vehicles with an emphasis on performance. Lecture Hours: 2 Lab Hours: 6
Prerequisite(s): AUT* 144.

AUT* 245 - Honda Automatic Drivetrain Systems**4 credits**

Covers both in theory and practice, the transference of engine power through transmission to final drive units on both front and rear wheel drive Honda/Acura vehicles. Includes maintenance and repair of automatic transmissions, drive shaft assemblies and differentials, transmission/transaxle mechanical, hydraulic, and electrical operation. Service, overhaul, mechanical/electrical diagnosis procedures and use and application of diagnostic equipment will also be covered. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 2 Lab Hours: 6

AUT* 270 - Practicum II**2 credits**

Designed to provide students supervised practical application of previously studied theory. An opportunity to focus on the development of professional and technical competencies as well as on-the-job training. Students are responsible for finding their own placement. Each credit equates to roughly one hundred hours of experience.

AUT* 272 - Practicum III**3 credits**

Designed to provide students supervised practical application of previously studied theory. An opportunity to focus on the development of professional and technical competencies as well as on-the-job training. Students are responsible for finding their own placement. Each credit equates to roughly one hundred hours of experience.

Automotive - General Motors (ASEP)**AUT* 110 - GM Engine Repair****3 credits**

Focuses on basic engine theory, nomenclature, and skills necessary to service and repair current model year General Motors engines. Upon completion of the course, students should be able to identify engine problems and make repairs to return an automobile to satisfactory operating condition. Lecture Hours: 1 Lab Hours: 4

AUT* 112 - GM Specifications**2 credits**

Includes the selection, use, and care of specialized shop tools and manuals. Describes the many manipulation skills needed in simple mechanical operation. The course is designed for students with no previous experience as well as for advanced students who desire further knowledge. Lab Hours: 4

AUT* 114 - GM Electrical Systems**3 credits**

Introduces GM ASEP program students to automotive electrical theory and repair in accordance with ASE standards. Presents content specified in the current GM dealership electrical curriculum. Includes content covered in ASE exam A6 Electrical/Electronic Systems. Lecture Hours: 2 Lab Hours: 3

Prerequisite(s): AUT* 112.

AUT* 116 - GM Suspension and Steering**3 credits**

Enables the student to study and understand the diagnosis and repair of General Motors steering and suspension systems, including wheel alignment. Provides a thorough knowledge of wheel and tire problems and repair. Lecture Hours: 1 Lab Hours: 4

AUT* 118 - GM Braking Systems**3 credits**

Introduces GM ASEP program students to automotive braking system theory and repair in accordance with ASE standards. Presents content specified in the current GM dealership brakes curriculum. Includes content covered in ASE exam A5 Brakes. Lecture Hours: 2 Lab Hours: 3

Prereq/Corequisite(s): AUT* 112.

AUT* 161 - GM Internship 1A**1 credits**

Students participate in three weeks of practical training at either a GM dealership or AC Delco repair facility during their freshman fall semester. Students will reinforce automotive skills and theory acquired during the freshman fall semester. All automotive students are required to attend an Internship Orientation session prior to starting their internship.

AUT* 162 - GM Internship 1B**1 credits**

Students participate in four weeks of practical training at either a GM dealership or AC Delco repair facility during their freshman winter intersession. Students will reinforce automotive skills and theory acquired during the freshman fall semester. All automotive students are required to attend an Internship Orientation session prior to starting their internship.

AUT* 163 - GM Internship 1C**1 credits**

Students participate in three weeks of practical training at either a GM dealership or AC Delco repair facility during their freshman winter intersession. Students will reinforce automotive skills and theory acquired during the freshman fall semester. All automotive students are required to attend an Internship Orientation session prior to starting their internship.

AUT* 171 - GM Internship 2**4 credits**

Students participate in 12 weeks (approximately 400 hours) of practical training at either a GM dealership or AC Delco repair facility during their freshman summer semester. Students will reinforce automotive skills and theory acquired during the freshman spring semester.

AUT* 201 - GM Engine Performance**3 credits**

Introduces GM ASEP program students to fuel and emission system theory and repair in accordance with NATEF standards. Presents content specified in the current GM dealership engine performance curriculum. Includes content covered in ASE exam A8 Engine Performance. Lecture Hours: 2 Lab Hours: 3
Prerequisite(s): AUT* 112.

AUT* 203 - GM Manual Drivetrain**3 credits**

Introduces GM ASEP program students to manual drivetrain theory and repair in accordance with ASE standards. Presents content specified in the current GM dealership manual drivetrain curriculum. Includes content covered in ASE exam A3 Manual Drivetrain. Lecture Hours: 2 Lab Hours: 3
Prerequisite(s): AUT* 112.

AUT* 205 - GM Automatic Drivetrain**3 credits**

Introduces GM ASEP program students to automatic drivetrain theory and repair in accordance with ASE standards. Presents content specified in the current GM dealership automatic drivetrain curriculum. Includes content covered in ASE exam A2 Automatic Drivetrain. Lecture Hours: 2 Lab Hours: 3
Prerequisite(s): AUT* 203.

AUT* 207 - GM Climate Control and Safety Systems**3 credits**

Introduces GM ASEP program students to climate control and safety system theory and repair in accordance with ASE standards. Presents content specified in the current GM dealership safety curriculum. Includes content covered in ASE exam A6 and A7. Lecture Hours: 2 Lab Hours: 3
Prerequisite(s): AUT* 112.

AUT* 261 - GM Internship 3A**1 credits**

Students participate in three weeks of practical training at either a GM dealership or AC Delco repair facility during their sophomore fall semester. Students will reinforce automotive skills and theory acquired during the sophomore fall semester. All automotive students are required to attend an Internship Orientation session prior to starting their internship.

AUT* 262 - GM Internship 3B**1 credits**

Students participate in four weeks of practical training at either a GM dealership or AC Delco repair facility during their sophomore winter intersession. Students will reinforce automotive skills and theory acquired during the sophomore fall semester.

AUT* 263 - GM Internship 3C**1 credits**

Students participate in three weeks of practical training at either a GM dealership or AC Delco repair facility during their sophomore spring semester. Students will reinforce automotive skills and theory acquired during the sophomore fall semester. All automotive students are required to attend an Internship Orientation session prior to starting their internship.

AUT* 271 - GM Internship 4**3 credits**

Students participate in ten weeks of practical training at either a GM dealership or AC Delco repair facility during their sophomore summer semester. Students will reinforce automotive skills and theory acquired during the sophomore spring semester. All automotive students are required to attend an Internship Orientation session prior to starting their internship.

Automotive - Honda PACT**AUT* 140 - Honda Power Plant****4 credits**

Covers in both theory and practice, the automotive power plant and its' subsystem and the skills necessary to service and repair current Honda/Acura engines. Lecture Hours: 2 Lab Hours: 6

AUT* 141 - Honda Express Service**3 credits**

Provides the student with fundamentals of operation and maintenance procedures including researching vehicle service information. Students will learn basic automotive shop safety, tool and equipment use. Upon completion of the course, students should be able to safely and accurately perform Honda's A1-B1 vehicle inspection and maintenance service with efficiency and 100% accuracy. Lecture Hours: 2 Lab Hours: 4

AUT* 144 - Honda Electrical/Electronic Systems**4 credits**

Covers in both theory and practice, automotive electrical and electronic systems. Students will study the most updated Honda/Acura electronic systems and be familiar with electrical circuits, alternators, starters, batteries, and all automotive electrical components. Theory, operation, diagnosis, and repair procedures will be covered. Emphasizes lecture and related laboratory experiences in the diagnosis and service of Honda/Acura electrical systems and their components. Lecture Hours: 2 Lab Hours: 6

Prerequisite(s): AUT* 141

AUT* 146 - Honda Steering and Suspension Systems**4 credits**

Covers both in theory and practice, the diagnosis and repair of Honda/Acura steering and suspension systems including alignment. Includes a complete presentation of automotive wheel and tire problems and how to repair them. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 2 Lab Hours: 6

AUT* 148 - Honda Braking Systems**4 credits**

Covers in both theory and practice, all Honda/Acura hydraulic brake systems, all types of disc and drum brakes and repair procedures. Honda/Acura traction control and stability control systems will be explored. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 2 Lab Hours: 6

AUT* 181 - Honda Practicum I**1 credits**

Designed to provide students supervised practical application of previously studied theory. An opportunity to focus on the development of professional and technical competencies as well as on-the-job training. Students are responsible for finding their own placement. Each credit equates to roughly one hundred and ten hours of experience.

AUT* 241 - Honda Engine Management Systems**3 credits**

Presents both in theory and practice, basic performance and emissions theory and nomenclature, as well as the skills necessary to service and repair computerized automotive fuel and ignition systems on Honda and Acura vehicles. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 2 Lab Hours: 6

AUT* 243 - Honda Transmission & Drivetrain Systems**4 credits**

Presents in both theory and practice, proper procedures for the diagnosis and repair of Honda/Acura transmissions and transaxles. Places particular emphasis on clutch, drive (half) shafts, and universal joints, along with rear axle and four-wheel drive components. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 2 Lab Hours: 6

AUT* 247 - Honda Climate Control & Restraint Systems**4 credits**

Presents in both theory and practice, the proper procedures for the diagnosis and repair of Honda/Acura air conditioning systems, heating, and engine cooling systems, operating systems, and related controls. Also covers the diagnosis and repair of restraint components and systems. Theory, operation, diagnosis, and repair procedures will be covered. Lecture Hours: 2 Lab Hours: 6

AUT* 281 - Honda Practicum II**1 credits**

Designed to provide students supervised practical application of previously studied theory. An opportunity to focus on the development of professional and technical competencies as well as on-the-job training. Students are responsible for finding their own placement. Each credit equates to roughly one hundred and ten hours of experience.

AUT* 283 - Honda Practicum III**2 credits**

Designed to provide students supervised practical application of previously studied theory. An opportunity to focus on the development of professional and technical competencies as well as on-the-job training. Students are responsible for finding their own placement. Each credit equates to roughly one hundred and ten hours of experience.

AUT* 284 - Honda Practicum IV**1 credits**

Designed to provide students supervised practical application of previously studied theory. An opportunity to focus on the development of professional and technical competencies as well as on-the-job training. Students are responsible for finding their own placement. Each credit equates to roughly one hundred and ten hours of experience.

AUT* 285 - Honda Practicum V**1 credits**

Designed to provide students supervised practical application of previously studied theory. An opportunity to focus on the development of professional and technical competencies as well as on-the-job training. Students are responsible for finding their own placement. Each credit equates to roughly one hundred and ten hours of experience.

Biology**BIO* 100 - Basic Biology****SK: Scientific Knowledge and Understanding****3 credits**

A one-semester course in Biology that introduces students to the chemical and cellular bases of life, diversity and classification of life and the mechanisms that different organisms require for survival and reproduction. Also introduces the basis principles of inheritance and evolution as well as interactions with other organisms and their environment.

BIO* 105 - Introduction to Biology**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Deals with the chemical and cellular bases of life, cell structure and function, growth, diversity and classification, life cycles of plant and animal representatives. Principles of genetics, organic evolution, and ecology. Involves fieldwork and dissection. Lecture Hours: 3 Lab Hours: 3
Prerequisite(s): Eligible for ENG* 101.

BIO* 110 - Principles of the Human Body**SK: Scientific Knowledge and Understanding****3 credits**

Introduces students to the basic structures and functions of the human body. An overview of chemical and cellular processes will be covered. Explores the major organs and systems. Students will gain insights into how their own bodies work. Lecture only.

BIO* 113 - Physiology of Aging**SK: Scientific Knowledge and Understanding****3 credits**

Studies the physical aging process of older individuals to give the student knowledge of age-related cognitive and physical changes and the impact those changes have on the social and psychological functioning of the individual.

BIO* 115 - Human Biology**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Deals with the structure of the body in relation to function in both health and disease. The laboratory exercises explore the human body's biological systems. Involves dissection. Lecture Hours: 3 Lab Hours: 3

BIO* 121 - General Biology I**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Deals with basic chemistry, the molecular and cellular bases of life, metabolism, and the growth and reproduction of cells. Covers the molecular and chromosomal bases of heredity and evolution. Details of Prokaryotes, Protista, and Fungi are included. Involves some fieldwork and dissection. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): MAT* 137A or higher or sufficient placement scores

BIO* 122 - General Biology II**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Builds on concepts in General Biology. Deals with the diversity and classification of life, plant and animal structures, functions and evolution, animal behavior and the immune system, and the interaction between various forms of life and their environments. Involves some fieldwork and dissection. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): BIO* 121 or instructor's permission.

BIO* 211 - Anatomy and Physiology I**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Covers the human body structure and functions, emphasizes the basic concepts of chemistry and cells. Topics covered in more depth are tissues, the integumentary, skeletal, articular, muscular, and nervous systems. Laboratory work parallels the material covered in lecture. Dissection and microscope work is required. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): BIO* 105 or BIO* 121 both with a C or better.

BIO* 212 - Anatomy and Physiology II**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Builds on the knowledge learned in BIO* 211. Covers the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems. Laboratory work parallels the material covered in lecture. Dissection is required. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): BIO* 211 with a grade of C or better.

BIO* 213 - Human Cadaver Anatomy**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Explores the human anatomy integrating online course work and human cadaver dissection.

Prerequisite(s): BIO* 211 and BIO* 212 with a grade of B+ or higher.

BIO* 217 - Survey of the Human Cadaver**1 credits**

Surveys a prosected human cadaver. All organ systems are studied with special reference to clinical significance.

Prerequisite(s): BIO* 212 with a C or better.

BIO* 235 - Microbiology**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Considers the general characteristics of microorganisms, emphasizing host-parasite relationships, details of morphology and physiology, and the control of epidemiological problems. Emphasizes human and animal pathogens. Laboratory work parallels the material covered in lectures and provides experience in microbial techniques.

Prerequisite(s): BIO* 105 or BIO* 121 or BIO* 122 or BIO* 211 or BIO* 212 or instructor's permission.

BIO* 262 - Genetics**4 credits**

Covers the basic concepts of classical and molecular genetics. Topics covered will focus on the fundamentals of gene structure and function, genome organization, molecular variation, patterns of inheritance, genetic disease, and current research. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): BIO* 121

Biomedical Engineering Technology

BME* 110 - Biomedical Technology

2 credits

Introduces the interdisciplinary nature of the Biomedical Engineering Technology program through engineering and medical terminology. Presents hospital and industrial policies, procedures, and codes with an emphasis on safety. Introduces biomedical instrumentation, control systems, and the man-machine interface.

BME* 112 - Biomedical Electrical Circuits

5 credits

Presents electrical circuits for biomedical instrumentation. Introduces and develops concepts of voltage, resistance, current, and power in DC and AC circuits. Analyzes RLC circuits in DC and AC circuit applications. Presents Thevenin, maximum power transfer, and superposition theorems. Introduces electromagnetism and its effects. Lecture Hours: 4 Lab Hours: 2

BME* 114 - Biomedical Electronics

5 credits

Offered: (Course has not been offered in the past two years)

Presents electronics for biomedical instrumentation. Stresses reliability and safety. Introduces electron tubes and solidstate devices. Presents design and application of amplifiers, oscillators, high input impedance devices, and precision timers. Introduces and develops power supply design, voltage regulation, and high power-high speed switching. Lecture Hours: 4 Lab Hours: 2

Prerequisite(s): BME* 112.

BME* 116 - Physiological Systems

4 credits

Examines human anatomy and physiology, using chemical, mechanical, and electrical system models. Presents biopotential generation and regulatory control systems. Develops computer simulations of physiological events. Lecture Hours: 3 Lab Hours: 2

BME* 210 - Biomedical Instrumentation

CALT: Critical Analysis/Logical Thinking

4 credits

Presents the principles, applications, and design of biomedical instrumentation. Includes discussion of measuring, monitoring, diagnostic, therapeutic, and clinical laboratory equipment. Presents imaging techniques and computer based systems. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): EET* 136.

BME* 212 - Biomedical Equipment Design

CALT: Critical Analysis/Logical Thinking

4 credits

Develops instrumentation standards and construction techniques for biomedical equipment. Design of the documentation and hardware/software for a biomedical instrumentation system. Uses commercial instrumentation systems for analysis and testing. Lecture Hours: 2 Lab Hours: 4

Prerequisite(s): BME* 210.

BME* 214 - Advanced Biomedical Instrumentation

4 credits

Presents applications of data acquisition and analysis, imaging, and control systems. Develops microprocessor- and computer-based instrumentation. Systems studied include Medical Networking, Expert Systems, Fiberoptics, Lasers, and Tomography. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): BME* 210.

BME* 220 - Biomedical Practicum

3 credits

Applies safety, calibration, and troubleshooting techniques to practical situations. Also provides on-site practical experience in a hospital.

Prerequisite(s): Approval of Program Coordinator.

Business - Finance

BFN* 110 - Personal Finance

CALT: Critical Analysis/Logical Thinking

3 credits

Examines the basic principles and important concepts of personal finance. Includes personal budgeting, consumer credit, insurance, real estate, personal income taxes, retirement, investments, and safeguarding of assets.

Prerequisite(s): Eligibility for ENG* 101

BFN* 126 - Principles of Insurance

3 credits

Examines the history, economics, and social values of insurance. Compares various contracts and coverage; studies the structure of the insurance industry; emphasizes principles such as sales, underwriting, claims, rate making and government regulations. Meets the education prerequisite for Connecticut Property and Casualty Insurance Broker examination.

BFN* 201 - Principles of Finance

3 credits

Surveys sources of short-, intermediate- and long-term funds for a business. Discusses stocks, bonds, investment and working capital, banking policy of systems, urban financing, and government financing.

Prerequisite(s): ACC* 113, ACC* 117, CSA* 135, ECN* 101, ECN* 102, MAT* 166 or instructor's permission.

Business - General

BBG* 101 - Introduction to Business

3 credits

Introduces the principles and practices of business management. Applies management principles to various types of business and industrial organizations and organizational problems.

BBG* 115 - Business Software Applications

3 credits

Stresses the usefulness of computers in business. Students will learn in this hands-on course how to use word processing software for writing and editing, data base software to organize and search for information, and spreadsheet software to perform calculations on tables of numbers.

BBG* 210 - Business Communication

OC: Oral Communication

3 credits

Emphasizes basic communication skills in a business environment. After a review of grammar, punctuation and sentence structure, students will plan, organize, and edit several forms of business communications, including memos, letters, resumes, and reports. Oral presentations are part of the curriculum. Social networking for business purposes and its various uses is also discussed; students evaluate the advantages and potential risks.

Prerequisite(s): Eligibility for ENG* 101.

BBG* 231 - Business Law I

3 credits

Provides knowledge and understanding of fundamental legal principles and their application to business transactions. Stresses laws relating to administrative regulations, consumer protection, environmental protection, torts and crimes, and contracts.

BBG* 232 - Business Law II

3 credits

Emphasizes laws relating to personal property, bailments, sales, negotiable instruments, agency and employment, and business organizations.

Prerequisite(s): BBG* 231.

BBG* 240 - Business Ethics

3 credits

Introduces students with little or no background in philosophy or ethics to traditional and contemporary ethical theory. This course critically examines both the theories and applications of moral problems in business. Topics include employee rights and responsibilities, pay equity and comparable worth, whistle blowing, trade secrets and confidentiality, conflict of interest, discrimination and sexual harassment, pollution, consumer protection, professional ethics, truth-telling in business dealings, social responsibility of business, and fiduciary responsibility to stockholders and stakeholders.

Prerequisite(s): ENG* 101.

BBG* 294 - Business Internship**3 credits**

Provides an opportunity for students to gain experience in business and industry. Students will be required to spend a minimum of five hours per week at their internship site. Furthermore, in-class sessions will be held during the semester for orientation and evaluation purposes.

Prerequisite(s): Fifteen earned credits in Business courses, ENG* 101, a minimum GPA of 2.75. Students will be interviewed during the semester prior to taking this course. Instructor's permission required for registration.

Business - Management**BMG* 110 - Public Utility Management****3 credits**

Introduces the management of water, gas, electric, and wastewater utilities. Introduction to utility management, planning regulations, finance, operation and maintenance, safety, public relations, customer service, environmental health and safety, legal and ethical issues. Designed to prepare individuals to meet the initial certification Continuing Education Unit Certification Requirements of the Connecticut Department of Health Services and the Connecticut Department of Energy and Environmental Protection. Also appropriate for practicing professionals who may desire to broaden and update their knowledge and skills.

BMG* 202 - Principles of Management**3 credits**

Introduces the study of management, which is both a discipline and a process. Major topic areas include the evolution and scope of management, decision making, planning, organizing, leading, and controlling. Emphasizes the importance of managing in a global environment and understanding the ethical implications of managerial decisions.

BMG* 203 - Leadership**3 credits**

Provides an in-depth examination of the nature and importance of leadership concepts and principles as applied to organizational effectiveness. Leadership research, practice, and skills are emphasized in light of modern theories and applications. This course utilizes personal inventories, journals, service opportunities, discussion, and critical reflection to develop leadership skills and build an understanding of the role of leadership in organizations.

BMG* 210 - Organizational Behavior**3 credits**

Presents the concepts and principles of modern management theory and practice as they apply to organizations. Emphasizes the functions of planning, organizing, directing, and controlling along with staffing and communications.

BMG* 216 - Rates and Revenues**3 credits**

Covers the legal basis, principles, and concepts of public utility regulation and provides an overview for those new to regulatory policies. Determination of revenue, utility business models, and the ratemaking process are included. Students must be capable of critical business thinking and evaluation before enrolling in this course. Students should already be able to explain and apply basic public utility management skills.

Prerequisite(s): C- or better in BMG* 110, BMG* 202, IDS 106.

BMG* 219 - Asset & Infrastructure Management**3 credits**

Covers basic information, problems, and solutions associated with infrastructure and asset management. Topics include evaluation, preservation, and rehabilitation of existing infrastructures, repair materials, strategies, risk, fiscal and management concerns. Comprehensive knowledge of the fundamental processes and techniques required to establish an effective infrastructure asset management program will be provided. Systematic and risk-based processes for making decisions concerning the management and renewal of the utility's physical assets including infrastructure, fixed plant, and mobile equipment. Students should already be able to explain and apply basic public utility management skills.

Prerequisite(s): C- or better in BMG* 110, BMG* 202, IDS 106.

BMG* 220 - Human Resources Management**3 credits**

Introduces the legal and social function of Human Resource Management in today's dynamic business environment. Topics include personnel, planning, recruitment, testing, training, compensation, motivation, appraisals, discipline, and career management.

BMG* 221 - Customer Relations**3 credits**

Introduces the fundamentals of developing best practices for internal customer service and the impact on external customer service. Explores the basic elements of setting internal expectations for service delivery, hands-off within the customer supply chain, and the five Ws of a hand-off (who, what, when, where, and why). Students should already be able to explain and apply basic public utility management skills.

Prerequisite(s): C- or better in BMG* 110 and IDS 106.

BMG* 227 - Risk Management**3 credits**

Covers risk management policies, business property risks, family property, and liability risks. Analyzes and discusses actual cases.

Prerequisite(s): BFN* 126.

Business - Marketing**BMK* 201 - Principles of Marketing****3 credits**

Presents the fundamentals of marketing and marketing theory. Emphasis will be on theories relevant to marketing and the business environment, marketing and the social environment, product strategies, distribution, promotion, and pricing.

BMK* 215 - Principles of eBusiness**3 credits**

Presents the fundamentals of eBusiness focusing on e-marketing. Covers the concepts, tools, and strategies for exploring and understanding the opportunities and challenges associated with eBusiness.

Business Office Technology**BOT* 111 - Keyboarding for Information Processing I****3 credits**

Presents the keyboard and correct stroking techniques by means of the touch method and word processing computer software packages. Practical applications include simple tabulations, letters, memoranda, and short reports.

Notes: May not be taken concurrently with BOT* 137. All Business Office Technology courses may be taken as a business or computer elective.

BOT* 112 - Keyboarding for Information Processing II**3 credits**

Improves on the skills developed in the beginning course and introduces a variety of production problems, including correspondence, tabulations, business forms, and reports.

Prerequisite(s): BOT* 111. Note: may not be taken concurrently with BOT* 111. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 137 - Word Processing Applications (Word)**3 credits**

Introduces students to the concepts of word processing and hands-on experience with computers and popular word processing software.

Prerequisite(s): BOT* 111. Note: may not be taken concurrently with BOT* 111. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 181 - Medical Coding I**3 credits**

Offered: Spring Only

Provides students with an in-depth study of basic International Classification of Disease, 9th rev. Clinical Modification (ICD-10-CM) and Current Procedural Terminology (CPT-4) coding. Diagnoses, procedures, signs, and symptoms will be studied and coded by students using the assigned textbook. The flow of medical records from the physician's office to hospital discharge will be tracked for insurance, risk management, and case study purposes.

Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 182 - Medical Coding II**3 credits**

Continues the concepts introduced in Medical Coding I using International Classification of Disease, Clinical Modification (ICD-9-CM) and Current Procedural Terminology (CPT-4). Students will utilize medical records and case histories to code the diagnoses and procedures according to the level of care received in the appropriate medical facilities.

Prerequisite(s): BOT* 181. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 215 - Word Processing Applications II (Word)**3 credits**

Offered: (Course has not been offered in the past two years)

Concentrates on applications and projects to promote competency with microcomputers using popular word processing software. Emphasizes recording, formatting, editing, and temporary and permanent revising.

Prerequisite(s): BOT* 137 or instructor's permission. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 217 - Desktop Publishing (BOT 218)**3 credits**

Offered: (Course has not been offered in the past two years)

Presents the concepts and applications of desktop publishing. Using personal computers and state-of-the-art software, students will learn the fundamentals of using desktop publishing to create newsletters, brochures, reports, fliers, and resumes.

Prerequisite(s): Knowledge of Microsoft Windows and touch keyboarding (35 wpm). Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 219 - Integrated Microsoft Office**3 credits**

Offered: Spring

Students will work independently to solve production problems of increasing complexity using Microsoft Office (Word, Excel, Access, and PowerPoint).

Prerequisite(s): CSA* 140. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 220 - Computerized Communication (Microsoft PowerPoint, e-mail, Internet)**3 credits**

Provides students with hands-on experience using the Internet, e-mail and Microsoft PowerPoint presentation and voice-recognition software. In this activity-oriented course, students will use state-of-the-art software and hardware to develop skills in these areas.

Prerequisite(s): Knowledge of Microsoft Windows. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 251 - Administrative Procedures**3 credits**

Offered: Fall Only

Includes letter composition, keyboarding rough drafts, handling incoming and outgoing mail, records management, preparing itineraries and reports, telephone etiquette, business ethics and etiquette.

Prerequisite(s): BOT* 137 or instructor's permission. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 271 - Legal Document Production**3 credits**

Offered: Fall Only

Helps students achieve the ability to type legal documents correctly and efficiently. Includes keyboarding legal terminology with speed and accuracy, understanding the use of legal documents, and knowing how to produce legal documents and correspondence. Offered in the fall semester of odd years (2005, 2007, etc.).

Prerequisite(s): BOT* 112 and BOT* 137 or instructor's permission. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 272 - Legal Administrative Procedures**3 credits**

Offered: Spring Only

Applies keyboarding skills to prepare legal papers and correspondence and presents the court system and the sources of laws, law office ethics, non-court documents, litigations, and appeals. Offered in the fall semester of odd years (2005, 2007, etc.).

Prerequisite(s): BOT* 112 and BOT* 137 or instructor's permission. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 279 - BOT Administrative Practicum**4 credits**

Offered: Spring Only

Provides on-the-job experiences in the offices of the College, area business, local lawyers' or doctors' offices or hospitals. Students are required to work a total of 125 hours during the semester. Hours will be arranged by mutual consent of the student and employer. In addition to the 125 hours, in-class session will be held which will involve online tutorials emphasizing soft-skills training. Additional meetings will be held during the semester for orientation and evaluation purposes.

Prerequisite(s): BOT* 251; BOT* 271 (legal) and BOT* 282 (medical) or instructor's permission. Minimum overall GPA 2.5 or higher. Notes: Students must meet with an instructor during the semester prior to taking this course. Instructor's permission required for registration. All Business Office Technology courses may be taken as a business or computer elective.

BOT* 280 - Medical Transcription and Document Production**3 credits**

Introduces medical terms and develops transcription techniques to produce acceptable copy within a time frame that meets real employment requirements. Enlarges medical vocabulary through the study of prefixes and suffixes used in general medicine.

Prerequisite(s): BOT* 137 or instructor's permission. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 282 - Medical Administrative Procedures**3 credits**

Offered: Spring Only

Presents the duties and responsibilities of the medical administrative assistant, including medical office ethics, how to deal with patients, health insurance, medical office software, telephone techniques, and filing.

Prerequisite(s): BOT* 137 or instructor's permission. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 287 - Foundations/Management of Medical Insurance**3 credits**

Offered: Spring Only

Designed to develop those abilities and skills that will enable students to define and explain the types of health insurance policies, contracts, and guideposts. Comparisons and analysis of insurance forms and application information are included. Emphasis will be placed on legal issues and medical record confidentiality.

Prerequisite(s): HIM* 101 with a grade of C or better. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 291 - Electronic Health Records**3 credits**

Offered: Fall Only

Provides a comprehensive understanding of the history, theory, and functional benefits of Electronic Health Records (EHR). Through practical, hands-on learning activities, students will learn how to scan, import, and convert health information into specialized EHR applications. Students will learn to review electronic health records for timeliness, completeness, accuracy, and appropriateness. Emphasis will be placed on the need for strict adherence to patient confidentiality laws, authorized release of information, and data security. Skills acquired in this course can be applied to the medical office, clinic, or medical records department of a hospital. Recommended preparation: basic computer proficiency.

Prerequisite(s): HIM* 101 with a grade of C or better. Notes: All Business Office Technology courses may be taken as a business or computer elective.

BOT* 295 - Administrative Practicum**3 credits**

Provides on-the-job experience in the offices of the College, area businesses, local lawyers' or doctors' offices or hospitals. Students are required to work a total of 125 hours during the semester. Hours will be arranged by mutual consent of the student and employer. In-class sessions are held during the semester for orientation and evaluation purposes.

Prerequisite(s): BOT* 251; Legal: BOT* 271 and BOT* 272; Medical: BOT* 280 and BOT* 282. Note: Students must meet with instructor during the semester prior to taking this course. Instructor's permission required for registration. Notes: All Business Office Technology courses may be taken as a business or computer elective.

Chemistry

CHE* 101 - Introductory Chemistry

SK: Scientific Knowledge and Understanding

3 credits

Surveys important chemical theories and applications, including the atomic structure of matter, chemical bonding and energy changes, gas laws, stoichiometry, solutions, electrochemistry, organic chemistry, and biochemistry. Prerequisite(s): MAT* 115 or MAT* 137 or higher or placement in MAT* 142 or higher.

CHE* 111 - Concepts of Chemistry

SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding

4 credits

Serve either as a survey course or as a preparatory course for general chemistry. Intended for students with little or no background in Chemistry or for students who need to meet a readmission requirement for nursing or other allied health programs. Also serves students who require a laboratory science course. Discusses fundamental principles, theories, and laws of chemistry, including organic chemistry and biochemistry. Lecture Hours: 3 Lab Hours: 3 Prerequisite(s): MAT* 115, MAT* 137, MAT* 137S, MAT* 137C, MAT* 137A or higher, or placement into MAT* 142 or higher.

CHE* 121 - General Chemistry I

SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding

4 credits

Presents the fundamental principles of chemistry, including atomic structure, stoichiometry, chemical bonding, chemical reactions, and chemical and physical changes. Laboratory experiments consist of the basic techniques used for chemical analysis and chemical reactions. Lecture Hours: 3 Lab Hours: 3 Prerequisite(s): MAT* 115 or MAT* 137 or higher or placement in MAT* 142 or higher.

CHE* 122 - General Chemistry II

SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding

4 credits

Builds on the knowledge learned in General Chemistry I. Includes reaction rates, electrochemistry, equilibrium conditions, pH, buffers and energy effects in chemical reactions. Lecture Hours: 3 Lab Hours: 3 Prerequisite(s): CHE* 121.

CHE* 211 - Organic Chemistry I

4 credits

Presents bonding, formulation, and molecular shapes of organic molecules. Presents nomenclature, preparation, and creations of alkanes, cycloalkanes, alkenes, alkynes, and aromatics. Explains reaction mechanisms when necessary. The laboratory portion features the basic reaction and preparation techniques used in organic chemistry. The laboratory exercises investigate either the preparation or the reaction of the aforementioned chemical species. Lecture Hours: 3 Lab Hours: 4 Prerequisite(s): CHE* 122 or instructor's permission.

CHE* 212 - Organic Chemistry II

4 credits

Builds on the knowledge learned in Organic Chemistry I, presenting the nomenclature, preparation, and creation of alcohols, ethers, aldehydes, ketones, carboxylic acids, esters, amines, and biomolecules. Explains reaction mechanisms when necessary. The laboratory exercises investigate either the preparation or the reaction of the aforementioned chemical species. Other laboratory exercises include using modern instrumentation to identify organic compounds. Lecture Hours: 3 Lab Hours: 4 Prerequisite(s): CHE* 211 or instructor's permission.

CHE* 220 - Biochemistry

SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding

4 credits

Provides an overview of the principal themes of biochemistry. The organization of amino acids, lipids, carbohydrates, and nucleic acids are addressed through a discussion of their hierarchical structure and their assembly into essential complexes in biological systems. Protein function is examined through the study of enzyme kinetics, the characterization of major metabolic pathways, and the interconnectivity of these pathways in tightly regulated networks. Lecture Hours: 3 Lab Hours: 3 Prerequisite(s): BIO* 121, CHE* 121, & CHE* 122 or instructor's permission; all with a grade of C or better.

CHE* 231 - Quantitative Chemical Analysis with Environmental Applications**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Provides both theoretical and practical instruction in the fundamental principles of quantitative chemical analysis. Through both lecture and laboratory instruction, students will become proficient in how to perform a range of methods and techniques that are commonly applied in analytical settings. Students will be instructed in the use of statistics to evaluate the precision and accuracy of measurements. This knowledge will aid in assessing experimental data and will serve as a foundation for future work involving instrumental techniques. Emphasis will be placed on the specific methods employed for the analysis of toxic substances and environmental pollutants. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): CHE* 121 and CHE* 122.

Clean Water Management**CWM* 106 - Introduction to Utility Management****3 credits**

Introduces areas of water and clean water (aka wastewater) including organization, planning, public relations, customer service, finances, environmental health and safety, security, operations and maintenance, human resources, information system and services, legal issues, support services, competition, continual improvement management and crisis communication.

CWM* 108 - Chemistry, Biology & Mathematics of Clean Water**4 credits**

Provides the biology, chemistry and mathematics knowledge necessary to succeed in subsequent courses covering the operation and maintenance of municipal wastewater facilities. Emphasis is placed on application to municipal wastewater facilities with a goal of preparing students to successfully pass Class I, II and IV Wastewater Certification Examinations administered by the Connecticut Department of Environmental Protection.

CWM* 110 - Clean Water I**3 credits**

Introduces the safe and effective operation of wastewater treatment plants including preliminary, primary, and secondary treatment and disinfection.

CWM* 112 - Clean Water II**3 credits**

Introduces the safe and effective operation of wastewater treatment plants including security, surface and groundwater quality standards, sludge/biosolids handling, effluent disposal, biological processes and cycles, plant safety and maintenance, pumps, laboratory testing of wastewater and permits, records and reports. Lecture Hours: 2 Lab Hours: 2

Prerequisite(s): CWM* 110, DEP Class 1 License or permission of instructor.

CWM* 114 - Clean Water III**3 credits**

Introduces the safe and effective operation of wastewater treatment plants including odor control, nitrogen and phosphorous removal, wastewater reclamation and recycling, instrumentation and residual solids management.

Lecture Hours: 2 Lab Hours: 2

Corequisite(s): CWM* 112, DEP Class 2 license or permission of instructor.

Communications**COM* 101 - Introduction to Mass Communication****3 credits**

Surveys the American mass media and communication complex. The focus will be on the various print and electronic mass media industries and the impact of mass communication on our society. Introduces the various forms of communication media, the role of media as it informs, entertains and persuades. Designed as an introductory course for those students who plan to major in communication and for those who want to be informed about the development of the influence of modern mass media.

Prerequisite(s): Eligible for ENG* 101.

COM* 106 - Introduction to Broadcasting**3 credits**

Surveys broadcasting in the United States from its beginning to the present. Emphasizes the physical nature of the medium, the historical accidents of its origin and growth, the economic basis of its operation, and the role of the broadcaster in our society.

COM* 107 - Mass Communication and Advertising**3 credits**

Examines the social and economic aspects of advertising and consumer psychology, including the role of mass communication and advertising in marketing strategies. Presents legal restrictions, advertising practices, and issues and emphasizes the organization of the advertising industry today.

COM* 121 - Journalism I**3 credits**

Examines the role of the newspaper in our changing society and introduces the practical aspects of newspaper production. Includes assignments in reporting, editorializing, feature writing, and editing. May require students to participate in the production of college-wide periodicals.

Prerequisite(s): ENG* 101 or instructor's permission.

COM* 141 - Television Production I**3 credits**

Introduces the art, practice, theory and history of television production. Both experienced and non-experienced students will benefit from this course through study, hands-on production and editing techniques, workshops and actual studio practice during which students will work on actual live and taped programs.

COM* 172 - Interpersonal Communication**3 credits**

Develops oral communication skills in personal, family, and business relationships through practical applications and exercises. Provides an understanding of self and others. Examines assertiveness and interactive strategies. Lecture Hours: 3

Prerequisite(s): Eligibility for ENG* 101

COM* 173 - Public Speaking**OC: Oral Communication****3 credits**

Provides students with an understanding, appreciation, and capacity for public speaking. Excellence in public speaking requires mastery of informative and persuasive techniques of language, organization, citation of evidence, and use of rhetorical patterns of introduction and conclusion. Exposure to theoretical elements and their application in public speaking will be explored. Lecture Hours: 3

Prerequisite(s): Eligibility for ENG* 101.

COM* 174 - Advanced Public Speaking**3 credits**

Builds on the theory and practice of public speaking. Designed for professionals, advanced communication students, and for students needing to improve their presentation skills beyond an entry-level course.

Prerequisite(s): COM* 173

COM* 208 - Mass Media and Society**3 credits**

Surveys the components of mass communication. Introduces the nature and complexity of mass media by examining its role today in the political, economic, and social fabric of society.

Prerequisite(s): ENG* 101 and COM* 101 both with a C or better (effective Spring 2019)

Computer Aided Drafting (CAD)**CAD* 108 - CAD Introduction****3 credits**

Introduces the procedures and techniques of Computer-Aided Design (CAD). Lectures cover production of orthographic and simple isometric drawings from basic entities and editing commands. All classes are conducted in a computer laboratory. Lecture Hours: 1 Lab Hours: 4

Corequisite(s): CET* 116 or equivalent and ARC* 133 or equivalent.

CAD* 124 - CAD: Electrical**1 credits**

Introduces students to the computer-aided drawing software of MultiSim and LabView. Students produce a variety of electrical and electronic schematics and diagrams. Students also learn to apply the principles of graphing to engineering technology. (CAD* 126 - Electronics Graphics/CAD can be substituted for this course.) Lab Hours: 3

CAD* 126 - Electronics Graphics**3 credits**

Introduces the concepts and practical applications of computer-aided design for electrical and electronic circuits, using software such as MultiSim and LabView. Also introduces the simulation of electrical and electronic circuits. (CAD 126 can be substituted for CAD* 124). Lecture Hours: 3

CAD* 200 - 3D CAD Modeling**4 credits**

Improves students' CAD competencies by presenting additional techniques and specialized commands. All classes are conducted in a computer laboratory. Lecture Hours: 2 Lab Hours: 4
Prerequisite(s): CAD* 108 or equivalent.

CAD* 220 - Parametric Design**3 credits**

Introduces the Solidworks parametric mechanical design software. Focuses on parametric modeling and includes topics such as the design process, rapid prototyping, and mechanism analysis. Students will design 3D solid parts, sheet metal parts, and assemblies and develop 2D documentation from them. Students will participate in individual and group design projects as appropriate. (Prior knowledge of CAD or permission of instructor required)

CAD* 271 - CAD Solids Mechanical Pro-Engineer**3 credits**

Introduces the basic Pro-Engineer software operation including part creation, drawing and assembly. 3D objects are made and orthographic drawings are created. Pro-Engineer is 3D solid modeling software from parametric technology.

Computer Engineering Technology**CET* 110 - DC/AC Circuits****5 credits**

Presents the fundamental concepts of electric circuit behavior. Students will also learn basic DC and AC circuit analysis involving resistive, inductive, and capacitive elements and how reactance, resonance, and transformer relationships affect AC circuit response. Lecture Hours: 4 Lab Hours: 2
Prerequisite(s): MAT* 095 or higher level math class.

CET* 116 - Computer Applications for Technology**3 credits**

Introduces technology-driven reporting requirements for text, data and graphics, virtual instrumentation, computer simulations for technology problem solving, and determination of computer tools for technology issues. Stresses technical report preparation, including graphical and tabulated analysis of data, with appropriate calculations and conclusions displayed in a variety of formats. Computer skills used to access and apply technical information will also be included. Lecture Hours: 2 Lab Hours: 2

CET* 120 - Computer Electronics**5 credits**

Surveys hardware and software computer elements beginning with semiconductor devices and theory. Topics covered include general and special purpose diodes and related circuits, rectifier circuits, clipping and clamping circuits, transistors (including BJT, FET and UJT), and amplifier, oscillator, power supply, and voltage regulation circuits. This course concludes with an introduction to op-amps and their basic applications. Lecture Hours: 4 Lab Hours: 2
Prerequisite(s): CET* 110 or equivalent.

CET* 124 - Structured Programming**4 credits**

Covers structured programming techniques as tools for problem solving in engineering and technology applications. Emphasizes program development, structure, and testing. Lab assignments reinforce the topics discussed in lecture. Lecture Hours: 3 Lab Hours: 2

CET* 126 - Computer Servicing**4 credits**

Presents an overview of a microprocessing system with emphasis on hardware design, operation, troubleshooting, and servicing. The lab provides practical experience with electronic troubleshooting techniques. Actual servicing will take place on a basic microcomputing system. Lecture Hours: 3 Lab Hours: 2

CET* 145 - Fundamentals of Voice and Cabling**4 credits**

Introduces students into the various hardware aspects of establishing communication links between computers and/or other end devices (printers, fax machines, telephony systems, video systems, data transmission systems). There is a growing need for experienced and knowledgeable voice and data cabling installation, maintenance, repair, and plant layout design technicians. Will utilize the Cisco program or similar title as a foundation, but will supplement this program with college-level report writing, laboratory experimentation, and theoretical analysis of the practical information contained in the Cisco on-line curriculum program. Lecture Hours: 2 Lab Hours: 4

Notes: (Course has not been offered in over two years)

CET* 210 - Computer Systems Software**4 credits**

Investigates the computer's hardware-software interface. Topics include CPU architecture and programming, interfacing with I/O devices, memory management, file systems, and an introduction to networking. Laboratory assignments include installation and troubleshooting of system software for stand-alone and networked devices. Lecture Hours: 3 Lab Hours: 2

CET* 220 - Digital/Data Communications**4 credits**

Presents the fundamentals of digital and data communications, including serial and parallel transmission methodologies, media, protocol standards, and system architecture. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): EET* 136 and EET* 256.

CET* 270 - Computer Engineering Technology Practicum**3 credits**

Provides students with experience within the Computer Engineering Technology workplace. Students will gain knowledge and experience through technical training working closely with others to service users and customers under the supervision of a team leader, supervisor, or proctor. Students are required to attend four weeks of class prior to performing 50 hours of internship over the remainder of the semester. Uniforms, some travel and physical work may be required.

Prerequisite(s): CET* 126 & CET* 210.

Computer Science**CSC* 101 - Introduction to Computers****3 credits**

Introduces the fundamental components common to all computer systems, including a comprehensive overview of contemporary computer terminology and concepts. Utilizes the College's computer resources for solving problems. Topics studied include the use of word processing, electronic spreadsheets, Microsoft Windows, the Internet, and other popular software packages.

CSC* 110 - Computer Logic and Problem Solving**3 credits**

Presents the fundamentals of computer problem-solving techniques. Stresses flow-charting and algorithm development. Lecture Hours: 3 Lab Hours: 2

Prereq/Corequisite(s): CSA* 105 or CSC* 101.

CSC* 124 - Programming Logic & Design with Python**3 credits**

Introduces structured programming concepts using Python and assumes no prior programming experience (for any language). Topics include data types, input/output from both the console and data files, arithmetic, comparison and logical operators, selection statements, looping, functions and arrays. Students should be comfortable working with simple algebraic equations and have basic file and folder managements skills on a personal computer.

Prerequisite(s): MAT* 137 or higher.

CSC* 150 - Database Applications and Design - Using SQL**4 credits**

Presents relational database concepts and organization. Students will learn to use SQL to query and change these databases and generate the output needed. Furthermore, students will design their own databases using one or more of the dominant relational databases, such as ACCESS or ORACLE. Lecture Hours: 3 Lab Hours: 2

CSC* 207 - Introduction to Visual Basic I**4 credits**

Presents both the design and implementation of computer programs using Microsoft Visual Basic for Windows.

Students will build applications, work with controls, and design forms. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CSC* 101 or CSA* 105.

CSC* 208 - Advanced Visual Basic**4 credits**

Covers the benefits of on-line systems while concentrating on Visual Basic as the supportive software. Topics will be related to the operating environment, screen layouts and design, program components, input, output, file commands, and maintenance control. Using Visual Basic, students will build applications for the interactive control of file maintenance, including inquiry, adds, deletes, updates, and browse. Students have control of the complete cycle of program development. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CSC* 207.

CSC* 215 - Programming with Object Oriented C++**4 credits**

Introduces computer programming using C++. Each student will design, test, debug, and document several programs during the semester. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CSA* 105 or CSC* 101.

CSC* 223 - Introduction to Java Programming**4 credits**

Presents the fundamentals of Java programming as an object-oriented language. Topics include classes, objects, data structures, event handling, graphical user interfaces, control structures, and methods. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CSA* 105 or CSC* 101.

CSC* 250 - Systems Analysis and Design**3 credits**

Introduces systems analysis and design concepts and techniques. Using a case study method, students will conduct systems surveys, create feasibility studies, and design typical computer systems used in business and industry. Uses case studies to individualized student projects, reports, and PC systems.

Prerequisite(s): CSC* 101 or CSA* 105 or departmental permission.

CSC* 257 - Web Development with PHP**4 credits**

Introduces the fundamentals of programming with PHP; a widely used scripting language that is especially suited for creating dynamic websites and can be embedded into HTML. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CST* 152.

CSC* 262 - Programming Mobile Devices I**3 credits**

Introduces students to the various platforms in use on small and mobile devices. Platforms include Apple iPhone; Google Androids OS; Microsoft Windows Mobile and others. Students will create applications for each platform using specialized development environments. Lecture Hours: 3 Lab Hours: 2

CSC* 263 - Programming Mobile Devices II**3 credits**

Builds on the knowledge gained in CSC* 262 by enabling the student to specialize in development on a single device. The device is chosen prior to offering the class. All aspects of the development are covered in the context of the device. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CSC* 262.

Computer Science Applications

CSA* 105 - Introduction to Software Applications

3 credits

Provides an introduction to IBM-compatible microcomputers, a basic understanding of Windows and the Internet, and an in depth coverage of the use of the microcomputer as an office productivity tool. Covers creating and editing word processing documents, spreadsheets and computerized visual presentations. Also covers file management using the Microsoft Windows operating system. This course assumes no prior computing experience and is open to all students except those majoring in computer science.

CSA* 135 - Spreadsheet Applications (Excel)

3 credits

Provides students with the hands-on experience necessary to create, print, modify, and enhance electronic spreadsheets. This course also covers creating and printing charts; using formulas with absolute addresses and function formulas; Goal Seek; Solver; using and filtering Data Lists; creating Pivot Charts; using Outlines, Subtotals, and Lookup functions; and preparing what-if alternatives.

Prerequisite(s): Eligible for MAT* 095 or sufficient score on placement exam or permission of Program Coordinator or MAT* 095 or higher.

CSA* 140 - Database Applications (Access)

3 credits

Provides students with hands-on experience entering and editing data, working with and customizing forms, creating and using queries, creating and customizing printing reports and mailing labels, and creating and relating tables using database software.

CSA* 295 - Computer Science Applications Practicum

3 credits

Exposes students to real business programming that involves installing a brand new system. This project is typical of what would be expected from an entry-level programmer in business. Students will be responsible for the entire program development cycle for each of three new programs. Furthermore, students will be required to coordinate each of the parts into one integrated system.

Prerequisite(s): CSC* 208.

CSA* 296 - CWE - Computer Applications

3 credits

Places senior Computer Science students in positions where they can use the technical skills acquired in this program. Assignments may be in an educational or corporate environment. It is strongly recommended that students interested in securing internships take advanced courses in subjects such as: Visual BASIC, networking, and 'C' language. All of the organizations participating in our program require that interns earn excellent grades in advanced courses in the internship area prior to placement. Both the number and the type of internships vary from year to year and the most qualified applicants are awarded the internships available. Students are responsible to the department for proper documentation of their work assignments and a final report summarizing the overall work experience. The student will work a minimum of eight hours per week.

Prerequisite(s): 24 earned credits in Computer Science courses; minimum QPA of 3.25; completion of CSC* 208; and formal notification of approval of internship application.

Computer Science Technology

CST* 127 - Server Operating System

4 credits

Analyzes the use of operating systems as a computer resource manager. It covers installation, configuration, maintenance and performance tuning of the operating system. Students will work on servers using the Microsoft Windows operating system. Also covers managing users and groups, computers and printers, file server management, and file system security. Microsoft Active Directory Services is a major topic in this course.

Prerequisite(s): CST* 133.

CST* 133 - Networking Fundamentals I**4 credits**

Presents the necessary knowledge and skills to complete the basic network management tasks of system administration in a Windows environment. Designed with frequent lab exercises, students will learn network fundamentals including the OSI layer, topology, TCP/IP (IPv4 & IPv6), network security, and troubleshooting procedures. Network hardware such as routers, hubs, switches, racks and cabling are introduced. Lecture Hours: 3 Lab Hours: 2

Corequisite(s): CSC* 101.

CST* 149 - Computer Network Hardware**4 credits**

Provides students with the technical knowledge and skills to maintain, troubleshoot and service Microsoft server and network equipment. Designed with frequent lab exercises to provide students with ample "hands-on" experience with the hardware and software components of a Windows network. Students will disassemble, reassemble, troubleshoot, and load device drivers for PC and server type computers. Also covers network hardware such as routers, switches, racks, uninterruptable power supplies, and tape drives. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CST* 133.

CST* 152 - Introduction to Web Page and Design**4 credits**

Discusses effective design of Web pages, emphasizing clarity, organization, text, images, and links. Students will work with an HTML editor and an Internet browser to test and view pages. Students will use JavaScript to create, maintain, and update Web pages. Tags, objects events, input methods, table creation, and rollover images are among the JavaScript topics that will be covered. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CSA* 105 or CSC* 101.

CST* 180 - Networking I**4 credits**

Serves as the first course in a series of four courses that provide classroom and laboratory experience in current and emerging networking technology. This series will empower students to enter the workforce and/or further their education and training in the computer networking field. Topics include the functions of the ISO/OSI reference model, data link and network addresses, the function of a MAC address, data encapsulation, the different classes of IP addresses and subnetting, and the functions of the TCP/IP network-layer protocols. Students learn how to plan, design, and install an Ethernet LAN using an extended or hierarchical star topology; select, install, and test cable; and determine wiring closet locations. Lecture Hours: 3 Lab Hours: 2

CST* 181 - Networking II**4 credits**

Serves as the second course in a series of four courses that provide classroom and laboratory experience in current and emerging networking technology. This series will empower students to enter the workforce and/or further their education and training in the computer networking field. Instruction includes, but is not limited to, safety, networking, network terminology and protocols, network standards, LANs, WANs, OSI models, ethernet, Token Ring, Fiber Distributed Data Interface, TCP/IP Addressing Protocol, dynamic routing, routing, and the network administrator's role and function. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CST* 180.

CST* 182 - Networking III**4 credits**

Serves as the third course in a series of four courses that introduces new content and extends previously learned networking skills. This series will empower students to enter the workforce and/or further their education and training in the computer networking field. Instruction introduces and extends the student's knowledge of and practical experience in skills related to configuring LANs, WANs, Novell Networks, Internet work Packet Exchange (IPX) routing, Interior Gateway Routing Protocol (IGRP) protocols, and network troubleshooting. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CST* 181.

CST* 183 - Networking IV**4 credits**

Serves as the fourth course in a series of four courses that introduces new content and extends previously learned networking skills. This series will empower students to enter the workforce and/or further their education and training in the computer networking field. Instruction introduces and extends students' knowledge of and practical experience with Wide Area Networks (WANs), Integrated Services Data Networks (ISDN), Point-To-Point Protocols (PPP), and Frame Relay design, configuration, and maintenance. Develops practical experience and skills related to configuring WANs, ISDN, PPP, Frame Relay protocols, and network troubleshooting. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CST* 182.

CST* 188 - Networking Fundamentals II**4 credits**

A continuation of CST* 133, this course provides the student with knowledge and skills to administer Local Area Networking concepts beyond the client/server topics of CST 133. More advanced information on routers, switches, wireless technology, cable management and the new Internet Protocol standard (IPv6) will be discussed. The process of designing and installing a Network are also discussed. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CST* 127 and CST* 149.

CST* 196 - Protocol Analysis**3 credits**

An advanced course intended for networking students who already grasp the general concepts of data communications and networking. Network architectures will be discussed from an OSI model perspective of the networking protocol stack, and a detailed analysis of the protocol will ensue using traces taken with the protocol analyzer.

Prerequisite(s): CST* 133 or CST* 180 or CST* 234.

CST* 234 - Network+**3 credits**

Prepares students to take the Network+ certification exam from the Computing Technology Industry Association (CompTIA). The Network+ exam provides a challenging test of networking knowledge and skills. This course provides all the information needed to perform key networking installation, configuration, and administration tasks.

Prerequisite(s): CSC* 101.

CST* 259 - JavaScript**4 credits**

Complements the CST* 152, Introduction to Web Page and Design course. Utilizes JavaScript programming techniques to enhance and animate the static HTML web pages learning in CST* 152 into vibrant and active web pages. Students will work with variables, functions, arrays, conditional operators, various object models, strings, event handlers and forms.

Prerequisite(s): CST* 152.

CST* 273 - Security Management Practices**3 credits**

Covers the identification of an organization's information assets and the development, documentation, and implementation of policies, standards, procedures, and guidelines that ensure confidentiality, integrity, and availability. This course will prepare the student to understand the planning, organization, and roles of individuals involved in security, develop security policies, and utilize management tools used to identify threats, classify assets, and rate vulnerabilities.

Prerequisite(s): CSA* 105, CSC* 101 or CET* 116 and ENG* 101.

CST* 280 - Network Security**3 credits**

Delivers a comprehensive introduction to network security issues, concepts, and technology. Addresses the core technologies of access control, cryptography, digital signatures, authorization, network firewalls, and network security services. Covers issues in security policy and risk management. Examines in depth firewalls, intrusion detection/prevention, and packet analysis, including email, database, Internet, and Intranet security.

Prerequisite(s): CSC* 101.

CST* 284 - Malware and Intervention**3 credits**

Provides the student with theoretical and practical issues surrounding computer viruses as well as intervention. It discusses malicious code, viruses, worms, backdoors, and Trojan horses on how they are introduced, how they function and how to intervene. It also discusses user-mode and kernel-mode rootkits.

Prerequisite(s): CSC* 101.

CST* 285 - Attacks and Counter Measures**3 credits**

Provides an overview of the actors, motives, and methods used in the commission of computer-related crimes. It describes the methods used by organizations to prevent, detect, and respond to these crimes. Offers overviews of Windows (client/server).

Prerequisite(s): CSC* 101.

CST* 287 - Cryptography Fundamentals**3 credits**

Surveys cryptographic concepts and algorithms and their application to data security. Techniques include: private key cryptosystems, public key cryptosystems, and hash functions. Commonly used algorithms include: DES; 3DES; IDEA; RSA; Diffie-Hellman; MD5; SHA; and DSS. Covers other algorithms that provide confidentiality, message authentication, key exchange, and digital signatures in applications such as client-server authentications, email security and web security.

Prerequisite(s): CSC* 101.

CST* 289 - Cyber Forensics**3 credits**

Provides students with the basic theoretical and practical foundations of investigating computer related or assisted crimes. Digital forensics will be discussed and outlined emphasizing computer forensics. Students will learn how to acquire digital evidence from storage media, authenticate the digital evidence, and analyze it. Topics covered include: deleted file recovery, auto-forensics, rules of evidence, law as it related to computer crimes, computer crime scene search and seizure, email forensics, and network forensics.

Prerequisite(s): CSC* 101.

Connecticut College of Technology

No active courses available.

Criminal Justice**CJS* 101 - Introduction to Criminal Justice****3 credits**

Surveys the evolution, principles, concepts, and practices of law enforcement. The course examines the structure and organization of courts in the administration of criminal justice in the U.S.A. Topics include the American model of criminal justice, police and the community, police and the constitution, and the American legal system.

CJS* 102 - Introduction to Corrections**3 credits**

A study of the history, philosophy, and evolution of corrections. The course examines the following processes used by our courts: probation, parole, treatment programs, and rehabilitation models. Punishment and the functions of our jails and prisons are examined. Additional topics include plea-bargaining, speedy trial, sentencing, prisoner's rights, victimization, and juvenile justice.

CJS* 105 - Introduction to Law Enforcement**3 credits**

Offers a comprehensive examination of the public safety and law enforcement functions of government in a modern society. Topics covered include the evolution, history, and philosophy of the law enforcement function: the role of the police in a democratic society: policy accountability, corruption and deviance: police operational principles and practices: and current problems confronting the police in their relationship to the community they serve. Lecture Hours: 3

Prerequisite(s): CJS* 101

CJS* 120 - Police and the Community**3 credits**

Covers the study, analysis and recommendations for reducing the severity of the major tension points between the police, the community and other government agencies as a method of responding to citizen demand for service. Students are taught the evolution of policing ranging from the political era to the professional era. Lecture Hours: 3

Prerequisite(s): CJS* 101

CJS* 211 - Criminal Law I**3 credits**

Studies the act(s) and mental state(s) that make up the elements of a crime. The analysis of these criminal elements will allow exploration into a wide spectrum of criminal law including felonies and misdemeanors. This is not a course specifically addressing Connecticut laws, although they will be discussed in comparison with other state and federal course decisions. Lecture Hours: 3

Prerequisite(s): CJS* 101 and ENG* 101 with a C- or better

CJS* 213 - Evidence and Criminal Procedures**3 credits**

Provides students with fundamental principles relative to procedures and processes within the criminal justice system as applied to arrest, the use of force, and search and seizure. The course provides the student with an opportunity to examine the various types of evidence and "proof" in regard to kind, degree, admissibility, competence, and weight.

Lecture Hours: 3

Prerequisite(s): CJS* 101 and ENG* 101 with a C- or better

CJS* 220 - Criminal Investigation**3 credits**

Focuses on the fundamental principles and relative theories applicable to criminal investigation. The course includes the consideration of development of information sources, identification of witnesses and suspects, laws and techniques relative to interview and interrogation and admissions, and case preparation techniques. Lecture Hours: 3

Prerequisite(s): CJS* 101 or SOC* 101 with a C- or better

CJS* 225 - Forensic Science**3 credits**

A study of how the disciplines of Biology, Chemistry, Earth Science, Physical Science and Physics meld to form the field of forensic science. Focuses on developing the scientific vocabulary necessary for investigators to communicate with scientists. This course is meant to assist students who are pursuing a career in criminal justice. Emphasis of the course is placed on scientific analysis of data rather than detective work. Students will learn to appreciate how the major fields of science are utilized in solving crimes. Lecture Hours: 3

Prerequisite(s): CJS* 101 and ENG* 101 both with a C- or better

CJS* 280 - Victimology**3 credits**

This comprehensive course is designed to acquaint the student with the many issues faced by victims of crime. Topics covered will include victimology, restorative justice, victims' rights, victim impact statements, costs of victimization and other issues central to crime victim assistance. Students will also gain an understanding of how to address the needs of crime victims and act as advocates for victim issues. Lecture Hours: 3

Prerequisite(s): CJS* 101 with a C- or better

CJS* 294 - Contemporary Issues in Criminal Justice**3 credits**

Students will be exposed to the contemporary issues that impact the functions and organization of criminal justice agencies in the United States. Topics include racial profiling, torture, capital punishment, gender, social stratification, social class, politics, and use of force. The focus and content of the course will change each year to reflect the changes in political and social thought and their impact on public policy. Lecture Hours: 3

Prerequisite(s): CJS* 101 and ENG* 101 both with a C- or better

POL* 210 - Constitutional Law for Criminal Justice**3 credits**

Provides students with an overview of the U.S. Constitution including history and development, focusing on the Fourth, Fifth, Sixth, Eighth, and Fourteenth Amendments related to citizen rights as well as police and court procedures. Procedural due process, states' rights, and civil liberties will be examined. Lecture Hours: 3

Prerequisite(s): ENG* 101 with a C- or better

SOC* 240 - Criminology**3 credits**

Examines the nature and cause of crime, approaches to the study of crime, and its treatment and prevention. The sociology of criminal law and the nature of criminal behavior are also examined. Lecture Hours: 3

Prerequisite(s): ENG* 101 with a C- or better

SOC* 241 - Juvenile Delinquency**3 credits**

Investigates the multifaceted concepts of juvenile delinquency. Explores the relationship between social attitudes and definitions of youthful law violations. Examines some of the popular causal factors of juvenile delinquency. Lecture Hours: 3

Prerequisite(s): CJS* 101 or SOC* 101 with a C- or better

Culinary Arts**HSP* 101 - Principles of Food Preparation****3 credits**

Students will receive a foundation in basic concepts and methods of cooking with exposure to all facets of food service operations. Lecture, demonstrations and hands-on experience in food production will be used. In the food lab, students will learn proper methods in broiling, grilling, sauteing, roasting and baking of meat, fish, poultry and vegetables. Students will learn meat and fish fabrication, proper knife skills, tool and equipment use, weights, measures and recipe conversion. Menu planning, purchasing and the serving of food will be covered. Lecture Hours: 1 Lab Hours: 3

Hours: 1 Lab Hours: 3

Prerequisite(s): Eligibility for: MAT* 095 and ENG* 091. Pre-or co-requisite: HSP* 109 Corequisite(s): HSP* 109

HSP* 103 - Principles of Baking I**3 credits**

Introduces baking and pastry arts with intensive, hands-on laboratory training in a quantity food environment. Concentrates on the production and quality control of baked goods that are used in hotels, restaurants, resorts, and institutions. Laboratory classes emphasize basic ingredients and production techniques for breads, rolls, folded doughs, batters, basic cakes, pies, and creams. Lecture Hours: 1 Lab Hours: 3

Prerequisite(s): MAT* 095 and ENG* 091. Pre- or co-requisite of HSP* 109 . Corequisite(s): HSP* 109

HSP* 107 - Icing Artistry I**3 credits**

Introduces the fundamentals and necessary skills needed for commercial cake decorating. Lecture Hours: 1 Lab Hours: 3

HSP* 109 - Food Safety Certification**1 credits**

Presents sanitation, safety, and maintenance challenges encountered in the food service industry. Investigates causes and prevention of food-borne illnesses. A nationally recognized certificate will be awarded to students who pass the certification exam.

HSP* 112 - Advanced Food Preparation**4 credits**

Emphasizes research of recipes, preparation of food, purchase orders, requisitions, and income and expense summaries for each menu. Students prepare full-course menus in quantity. Students will serve in various positions in the dining room and kitchen areas.

Prerequisite(s): HSP* 101 with a C or better.

HSP* 135 - Service Management**3 credits**

Introduces the students to the basic principles of food and beverage management with a focus on front of the house training and development. Topics include dining room/style, organization, customer relations, staff challenges, serving beverages and modern management techniques. Students will gain experiences in basic set-up, service skills, dining etiquette training and table-side preparation. Training for intervention procedures by servers of alcohol (tips), a Nationally recognized certification program. Sanitary practice and compliance with laws and ordinances of the department of health are enforced. Lecture Hours: 3

HSP* 201 - International Foods**4 credits**

Student teams plan, prepare, and serve full-course international menus. Emphasizes organization, showmanship, and supervision. Requires oral and written reports on food from different countries.

Prerequisite(s): HSP* 112 and HSP* 135 both with a C or better.

HSP* 210 - Buffet Catering**4 credits**

This course is designed to teach the crucial understanding of the advantages and primary considerations in setting up a catering operation and skills needed for on-and-off-premise catering business. Focus will be on the fundamentals and styles of catering operations, menu design, food and beverage pricing, service staffing, equipment and the execution of actual catering events. Students will design, develop and execute a catering event(s) on campus. Lecture Hours: 1 Lab Hours: 5.5

Prerequisite(s): HSP* 112 and HSP* 135 both with a C or better

HSP* 215 - Principles of Baking II**3 credits**

Focuses on the preparation of advanced pastries and classical desserts, including the preparation of petit fours, sugar and chocolate work, ice cream, and European tarts and torts.

Prerequisite(s): HSP* 103 with a grade of C- or higher and HSP* 109.

HSP* 216 - Artisan Bread**3 credits**

Focuses on the formulating, preparation, packaging, and pricing of commercially produced artisan bread. Students will learn how to work with non-yeast ferments, levian, commercial starters, enriched dough, and naturally leavened breads while maintaining a professional work environment. Emphasis will be placed on the science of bread production as well as the 'art of baking.' Whole grain flours, laminated dough, shaping loaves, boules, braids, etc. will be studied.

Prerequisite(s): HSP* 103 with a C- or better

HSP* 225 - Principles of Baking III**3 credits**

Course has both a lecture and laboratory component on the principles, techniques, and materials used in upper level bake shop and competition piece production. Units covered include sculpture of chocolate, sugar, pastillage, marzipan, salt dough, and dessert presentation.

Prerequisite(s): HSP* 215 with a grade of C- or higher

HSP* 296 - Cooperative Education/Work Experience**3 credits**

Offered: Spring

Provides an opportunity for students to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as it relates to their program of study including corporations, institutions, restaurants, hotel and conference settings. The experience should be consistent to the career goals of students. The student must complete a minimum of 150 hours of unpaid internship or 300 hours of work for paid placement in addition to attending classroom sessions.

Prerequisite(s): Minimum GPA of 2.25 and completion of the first semester courses in the plan of study and permission of program coordinator.

Dental Hygiene**DNT* 105 - Introduction to Dental Hygiene I****1 credits**

Provides students with a survey of contemporary issues encountered by health care professionals. Emphasis is placed upon personal oral self care, dental specialties, ethical and legal aspects of dentistry, an introduction to oral pathology, disease transmission, and infection control, principles and techniques of disinfection and sterilization, and an introduction to the dental hygiene treatment appointment.

DNT* 106 - Introduction to Dental Hygiene II**1 credits**

Continues the study of Dental Hygiene I (DNT* 105) and provides students with a survey of contemporary issues encountered by dental health care professionals. Emphasis is placed on professional standards, health promotion, disease prevention, review of dental specialties and ethical issues that are encountered by dental hygienists.

Prerequisite(s): DNT* 105

Diagnostic Medical Sonography

DMS* 100 - Principles of Sonography

4 credits

Introduces the principles of diagnostic medical sonography. Lectures will include sonographic cross-sectional anatomy, medical terminology, professional and ethical behavior, patient care, equipment and controls, basic acoustic physics, and scanning protocols. Students will learn how to recognize anatomy on sonographic images and will perform basic sonographic exams in the on-campus clinical lab.

Prerequisite(s): Acceptance into the DMS Program; BIO* 211, BIO* 212, ENG* 101, MAT* 175, PHY* 111.

DMS* 120 - Abdomen/Small Parts Sonography I

3 credits

Through lab and lecture, this course focuses on the sonographic appearance of disease processes in the abdomen and in superficial organs. Instruction will cover indications for scanning, testing, patient history, laboratory values, a review of normal anatomy, the grayscale and Doppler appearance of pathology, and necessary scanning modifications when pathology is noted. Differential diagnoses, treatments, patient outcomes, and the use of other imaging modalities will also be discussed. Lecture Hours: 2 Lab Hours: 1

Prerequisite(s): DMS* 100. Corequisite(s): DMS* 121 and DMS* 122.

DMS* 121 - Obstetrics and Gynecology Sonography I

3 credits

Through lab and lecture this course will focus on the sonographic appearance of the non-gravid and gravid female pelvis. The appearance of gynecological pathologies and the application of Doppler will be covered. The normal and abnormal developing fetus in the first trimester will be included with a review of embryology. Discussion will include correlation with laboratory findings and related imaging, patient outcomes, and formulation of differential diagnoses. Ultrasound measurements, protocols, and techniques specific to gynecological and obstetrical sonography will be discussed. Lecture Hours: 2 Lab Hours: 1

Prerequisite(s): DMS* 100. Corequisite(s): DMS* 120, DMS* 122.

DMS* 122 - Clinical Practicum I

2 credits

Students will be assigned to a clinical site for approximately 224 hours (two days per week throughout the semester). With supervision, students will assist with patient care, patient interviews, and sonographic exams.

Prerequisite(s): DMS* 100. Corequisite(s): DMS* 120, DMS* 121.

DMS* 123 - Vascular Sonography I

3 credits

Educates the student in the fundamentals of vascular sonography and pathology. Instruction will cover vascular embryology, hemodynamics, color and spectral Doppler, imaging protocols, pathophysiology, etiology of disease, and congenital and acquired variants and abnormalities. Focus will be on extracranial and extremity venous and arterial studies. Students will demonstrate proper techniques while performing vascular testing in the on-campus clinical lab. Lecture Hours: 2 Lab Hours: 1

Prerequisite(s): DMS* 120, DMS* 121, DMS* 122. Corequisite(s): DMS* 124, DMS* 125.

DMS* 124 - Sonographic Physics and Instrumentation I

4 credits

Covers the principles of sonographic physics. Instruction includes sound waves, transducers, processing, recording, resolution, hemodynamics, Doppler principles, artifacts, biological effects, and quality assurance. Students will become proficient in optimizing techniques using the principles of sonographic physics in order to obtain high-quality diagnostic sonographic images.

Prerequisite(s): DMS* 120, DMS* 121, and DMS* 122. Corequisite(s): DMS* 123 and DMS* 125.

DMS* 125 - Clinical Practicum II

2 credits

Students will be assigned to a clinical site for approximately 224 hours (two days per week throughout the semester). Students will perform complete sonographic exams with supervision, optimize the sonographic images, use advanced Doppler functions, and identify when artifacts and/or pathology are present.

Prerequisite(s): DMS* 120, DMS* 121, and DMS* 122. Corequisite(s): DMS* 123, DMS* 124.

DMS* 220 - Clinical Internship I**4 credits**

Students will be assigned to a clinical site for approximately 432 hours (five days per week throughout the course). With supervision, students will independently conduct patient interviews and perform sonographic exams. Students will identify common pathology, describe sonographic findings, and begin to formulate differential diagnoses. Prerequisite(s): DMS* 123, DMS* 124, DMS* 125.

DMS* 221 - Abdomen/Small Parts Sonography II**3 credits**

Through lab and lecture, this course will focus on the sonographic appearance of disease processes in pediatrics, male pelvic organs, the gastrointestinal system, and superficial structures. Instruction will cover indications for testing patient history, laboratory values, a review of normal anatomy, the grayscale and Doppler appearance of pathology, and necessary scanning modifications when pathology is noted. Differential diagnoses, treatments, patient outcomes, and the use of other imaging modalities will also be discussed. After successful completion of the program, students will be eligible to take their sonography credentialing examination. Lecture Hours: 2 Lab Hours: 1 Prerequisite(s): DMS* 120. Corequisite(s): DMS* 222, DMS* 223.

DMS* 222 - Vascular Sonography II**3 credits**

A continuation of Vascular Sonography I and educates the student in advanced vascular sonography and pathology. Didactic and lab instruction will cover intracranial and visceral vascular anatomy and pathophysiology, vascular variants, embryology, pharmacology, etiology of disease, physiological vascular testing, surgical procedures, vascular imaging modalities, analysis of waveforms, and statistics. After successful completion of the program, students will be eligible to take their sonography credentialing examination. Lecture Hours: 2 Lab Hours: 1 Prerequisite(s): DMS* 220. Corequisite(s): DMS* 221, DMS* 223.

DMS* 223 - Clinical Practicum III**CALT: Critical Analysis/Logical Thinking****3 credits**

Students will be assigned to a clinical site for approximately 336 hours (three days per week throughout the semester). Students will review requisitions, conduct patient interviews, and perform advanced sonographic exams with supervision. Students will apply critical thinking skills to identify complex sonographic pathologies, adjust scanning technique and protocol, analyze sonographic findings, and formulate differential diagnoses. Prerequisite(s): DMS* 220. Corequisite(s): DMS* 221, DMS* 222.

DMS* 224 - Clinical Internship II**1 credits**

Students will be assigned to a clinical site for approximately 104 hours (five days per week throughout the course). Students will review requisitions, conduct patient interviews, perform advanced sonographic exams with supervision and apply critical thinking skills to analyze the findings and formulate differential diagnoses. Prerequisite(s): DMS* 221, DMS* 222, DMS* 223.

DMS* 225 - Obstetrics and Gynecology Sonography II**3 credits**

Focuses on the sonographic appearance of obstetrical abnormalities in the second and third trimester. Laboratory values, patient history, differential diagnosis and outcomes will be presented. The role of ultrasound in maternal and fetal management will be discussed. Instruction will include prenatal testing, procedures, fetal monitoring, therapy and Doppler applications. Abnormalities specific to multigestations will also be presented. Students will become skilled in recognizing fetal abnormalities. Prerequisite(s): DMS* 224. Corequisite(s): DMS* 226, DMS* 227.

DMS* 226 - Advanced Sonography Seminar**3 credits**

Explores the advanced uses of sonographic technology, including 3D/4D, elastography, contrast agents, and radiofrequency ablation. Sterile technique and the role of the sonographer in guided interventional procedures will be discussed. Indications, risks, and benefits of procedures will be covered, as well as associated disease processes. Protocols for FAST exams in the Emergency Department will be reviewed and sonography for detection of foreign bodies will be introduced. This course will incorporate journal articles and the student will perform a literature review on an advanced sonographic technology or a new emerging trend for their capstone project. Prerequisite(s): DMS* 224. Corequisite(s): DMS* 225, DMS* 227.

DMS* 227 - Clinical Practicum IV**3 credits**

Students will be assigned to a clinical site for approximately 336 hours (three days per week throughout the semester). With indirect supervision, students will perform a variety of sonographic studies at the clinical site with entry-level competence. Students will consistently obtain high quality diagnostic images in a reasonable timeframe while optimizing all technical controls, documenting all pathology, modifying the standard protocol as needed, and ensuring that all documentation is complete. Students will consistently complete sonographer's worksheets and present cases to the interpreting physician.

Prerequisite(s): DMS* 224. Corequisite(s): DMS* 225, DMS* 226.

Drafting**ARC* 133 - Technical Drafting****3 credits**

Introduces the principles of engineering drawing. Covers the use of drafting instruments, good lettering practices, geometric construction, orthographic projection, sectional and auxiliary views, surface developments, machine screw threads, dimensioning, fits, and tolerances. Introduces geometric dimensioning and tolerancing. Lecture Hours: 2 Lab Hours: 2

Drug and Alcohol Recovery Counselor**DAR* 101 - Public Health Issues: Abuse & Addiction****3 credits**

Students will explore key topic areas in the addictions field such as: models and theories of addiction and recovery; history of legislation and regulation; self-help and evidenced-based approaches to recovery. This course provides a comprehensive overview of public health problems related to substance misuse, abuse and dependence. Study areas include trends in substance use, co-occurring disorders, process addictions, relevant national drug policies, the role of the media, HIV/AIDS and other contagions, domestic violence, fetal alcohol spectrum disorder and costs to society. Students will be introduced to the prevention, harm reduction, and treatment continuum and its application to a public health model.

Prereq/Corequisite(s): ENG* 101.

DAR* 111 - Addiction Counseling I**3 credits**

Students will learn, practice, and develop counseling skills such as attending, reflecting, active listening, and confrontation. This course presents the fundamental theories of addiction counseling and the relationship of theory to skills. Students reflect on their roles as counselors and define the qualities, knowledge, and skills essential to become a competent, ethical, culturally-aware counselor-in-training. Combines didactic and experiential learning.

Prereq/Corequisite(s): ENG* 101

DAR* 112 - Group Counseling: Theory & Techniques**3 credits**

Introduces the concepts and theories of group counseling, group dynamics, and group developmental stages. Students learn about different types of groups and how groups can be used to treat addiction in a multicultural environment. Students learn to distinguish between and work with group processes and content. Students have the opportunity to examine their own performances as group members and facilitators. Combines didactic and experiential learning.

Prerequisite(s): DAR* 111. Prereq/Corequisite(s): ENG* 101 or higher or permission of coordinator.

DAR* 114 - Introduction to Family Systems**3 credits**

Presents an overview of the family. Focuses on families with addictions by investigating the family as a system, the family life cycle, multicultural perspectives of family, and family roles and rules. Introduces family counseling theories, goals, strategies, and techniques. Students learn how to complete a genogram and how to use this tool as a counseling strategy.

Prerequisite(s): DAR* 111. Prereq/Corequisite(s): ENG* 101.

DAR* 117 - Substance Abuse Prevention**3 credits**

Provides a comprehensive overview of the prevention field. The course will explore prevention theory and research, models of prevention, performance domains for prevention certification, ethics, cultural competencies, application of theory and research to program planning.

Prereq/Corequisite(s): ENG* 101 or permission of coordinator.

DAR* 119 - Addiction Counseling in a Correctional Setting**3 credits**

Provides an examination of addiction treatment across the spectrum of correctional settings. Students will understand the link between addiction and criminal behavior as well as the avenues for entering recovery via the correctional system. Focused study will investigate the evidenced-based treatment approaches that addictions counselors in correctional settings must be capable of implementing. Combines didactic and experiential learning opportunities. Prerequisite(s): DAR* 111. Prereq/Corequisite(s): ENG* 101 or higher.

DAR* 158 - Biology of Addiction**3 credits**

Studies how and why drug abuse impacts both the human body and society. Students are introduced to the process of neurotransmission and learn how each class of psychoactive substances alters neurotransmission and homeostasis. The course examines the consequences of short- and long-term substance use, abuse, and addiction on all major bodily systems and the fetus. Prereq/Corequisite(s): ENG* 101.

DAR* 212 - Multicultural Addiction Counseling**3 credits**

Students will be introduced to major concepts essential to the understanding of culture, race, and diversity within the context of addiction counseling. Students will develop awareness of their own and others' cultural communication styles as well as values and beliefs regarding the use of substances. Students will practice conducting culturally competent assessments, recovery plans, and counseling skills for the treatment of substance use disorders. Combines didactic and experiential learning opportunities. Prerequisite(s): DAR* 111. Prereq/Corequisite(s): ENG* 101 or higher or permission of coordinator.

DAR* 213 - Addiction Counseling II**3 credits**

Provides an overview of the major counseling theories and figures, including Gestalt, Reality, Person-Centered, and Rational-Emotive. Addresses the techniques and professional practices related to each theory. Theory and practice will focus on such current evidence-based treatment models as Cognitive-Behavioral, Motivational Interviewing, and Solution-Focused. Students apply basic counseling skills developed in DAR* 111 to a variety of evidence-based models and explore the theories and techniques most appropriate to specific treatment settings, client populations, and cultures. Combines didactic and experiential learning. Prerequisite(s): DAR* 111. Prereq/Corequisite(s): ENG* 101 or higher or permission of coordinator.

DAR* 220 - Co-Occurring Disorders Counseling**3 credits**

Students will be introduced to major concepts essential to the understanding of co-occurring substance use disorders and mental health disorders. Students will develop awareness of the unique challenges that face clients who are struggling with multiple diagnoses. Students will practice conducting competent assessments, recovery plans, counseling skills and continuum of care issues relevant to the recovery process for this special population. Combines didactic and experiential learning. Prerequisite(s): DAR* 111. Prereq/Corequisite(s): ENG* 101 or higher or permission of coordinator.

DAR* 251 - Counseling Internship I**6 credits**

Provides students with the experience of 225 hours per semester in a substance use disorder treatment facility, weekly seminar and other approved activities under the joint supervision of the DARC program and a credentialed supervisor at the facility. Students will observe the treatment process from intake to discharge. Students will observe, practice, and develop competency in the 8 domains of addiction counseling. As students develop increased competence, they will progress from active observers to co-counselors, and then to counselors. To enhance the field experience, students will continue academic study during a weekly seminar. Students will be expected to reflect on their fieldwork, participate in clinical supervision as well as peer group interaction and continue their research in support of counseling theories. Prerequisite(s): DAR* 101, DAR* 111, DAR* 112 and DAR* 158; ENG* 101 with a "C" or better within five years and permission of the program coordinator. Internship classes must be completed in consecutive semesters. If a student is unable to complete DAR* 252 in the spring following DAR 251, DAR 251 will need to be taken again. (This is the selective admission component of the DARC program which begins in the fall semester).

DAR* 252 - Counseling Internship II**6 credits**

Continues DAR* 251; students extend their field placements, working fifteen hours per week in the same substance use disorder treatment facility. Students refine their counseling skills and assume increased responsibility for implementing the 8 domains. During the semester, students function as a primary addiction counselor for one or more clients. The classroom component of this internship prepares students for the certification exam and case presentation and allows ongoing personal reflection and growth.

Prerequisite(s): DAR* 251 and permission of the DARC program coordinator. DAR 252 must be taken in the spring semester immediately following DAR* 251.

Early Childhood Education**ECE* 101 - Introduction to Early Childhood Education****3 credits**

A study of the historical, philosophical and social perspectives of early education and care. The importance of child development from birth to age eight years is emphasized. Students will observe children and early education and care settings. The course acquaints students with trends in educational settings, curriculum planning based on the knowledge of developmentally appropriate teaching practices and explores the role of the teacher in an early childhood learning environment.

Prerequisite(s): Eligible for ENG* 063 or higher.

ECE* 103 - Creative Experiences/Children**3 credits**

Provides a variety of art experiences suitable for young children. Includes experimentation with and the use of various media, techniques, and methods. Emphasis is placed on the role of creative experiences in early childhood development. The selection of and approach to art experiences, media, and materials is related to the conceptual framework of the course. This ensures that the adult students are directly involved in the creative experience and can effectively lead others to it.

ECE* 106 - Music and Movement for Children**3 credits**

Explores young children's musical growth through singing, rhythmic and dramatic play, use of classroom instruments, recorded music, and the study of children's natural fundamental movements. Teaching strategies will be analyzed through videotapes and film.

ECE* 109 - Science and Math for Children**3 credits**

Prepares teachers to introduce science to young children in the classroom and in the field. Teachers also answer questions on the natural world. Approximately one-third of this course consists of field trips. Topics include ecology, geology, astronomy, and meteorology.

ECE* 110 - Using Computers in ECE**3 credits**

Covers the design and use of microcomputers, including the selection of software used in a variety of regular and special education settings.

ECE* 141 - Infant and Toddler Growth and Development**3 credits**

Prepares students to care for and teach infants and toddlers. Topics include typical infant and toddler development, developmental domains, and curriculum development and adaptation.

ECE* 142 - Developmental Interventions for Infants and Toddlers at Risk**3 credits**

Presents typical and atypical infant and toddler development. Current issues and trends in family-centered care will be discussed. Intervention techniques and various applications and environments for intervention will be reviewed.

ECE* 176 - Health, Safety & Nutrition**3 credits**

Examines the relationship between health, safety and nutrition and child development. Emphasis will be on the strategies needed to implement a safe, healthy and nutritionally sound program. Community agencies and resources that benefit children and families will be explored.

ECE* 180 - CDA Credential Preparation**3 credits**

Designed for childcare providers who wish to obtain a Child Development Associate (CDA) Credential. Students study the national standards for evaluation and accreditation by the Council of Early Childhood Professional Recognition and become familiar with the Direct Assessment System. Students analyze the CDA Competencies and Functional Areas and their integration into child development theory and practice. Coursework assists students to develop their professional resource file, complete other necessary documentation, and prepare for the final assessment process. Students will apply for the CDA Credential with one of the following endorsements: center-based preschool, center-based infant/toddler, family day care, or home visitor.

ECE* 181 - CDA Credential Preparation II**3 credits**

Designed for childcare providers who are preparing for their Child Development Associate (CDA) Credential through the Council for Professional Recognition in Washington, D.C. under its present requirements. The student will attend a weekly seminar and a minimum 30 hours of fieldwork in a licensed early childhood setting. Course instructor will conduct onsite observation visits.

ECE* 205 - Creative Activities and Media**3 credits**

Provides teachers of young children an in-depth involvement in the art experience and an understanding of how art is integral to the curriculum for young children. Emphasizes integrating art experiences with number concepts, reading readiness, literature, social studies, science, and music and movement. Trips to an art gallery and an artist's studio supplement classroom experiences.

Prerequisite(s): ECE* 103.

ECE* 206 - Administration and Supervision of Early Childhood Programs**3 credits**

Explains the leadership role in the administration and supervision of private, public, and federally funded schools. Addresses the various philosophies, comprehensive programs, methods of managing staff and effective programs, regulations and efficient means of enforcement, and institutional facilities and equipment in a school.

ECE* 210 - Observations, Participation and Seminar**3 credits**

Promotes objectivity in observing and interpreting children's behavior, allowing observation of developmental characteristics and increasing awareness of typical and atypical patterns of behavior. Observation and participation placements for the study of young children are provided at the GCC Early Learning Center and at area preschools. Students observe and participate in their respective placement locations for sixty hours to gain experience and competency working with young children. Weekly seminars devoted to issues in observing and understanding children's development expand students' observation and participation experiences.

Prerequisite(s): PSY* 122.

ECE* 212 - Administrative Leadership in Early Childhood Programs**3 credits**

Examines the multi-dimensional roles of the early childhood program administrator. Emphasis will be on effective leadership and the impact of communication and interpersonal skills, decision-making and participatory management tools, how to conduct effective meetings, formation of partnerships with families, child welfare advocacy, and strategic approaches to initiating and implementing change.

ECE* 213 - Finance for Early Childhood Program**3 credits**

Focuses on the financial aspects of administering an early childhood program. It will explain and discuss the various aspects of budgeting including tools that are commonly used in all businesses as well as tools that are specific to ECE programs. It will address the "trilemma" inherent to programs with strategies to think about balancing cost, quality and affordability.

ECE* 231 - Early Language and Literacy Development**3 credits**

Introduces language and literacy development in young children. Students explore early childhood language arts curricula, including speaking, listening, writing, and reading skills. The influence of a child's cultural background and experiences on emerging literacy development is explored. The teacher's role in creating and fostering an environment that engages children in developmentally appropriate language arts experiences will be covered. Course content includes specific strategies for teaching reading and other literacy skills, the role of school-family partnerships in developing literacy, identification of students who are at risk, and reading assessment methods.

ECE* 241 - Methods and Techniques for Infant/Toddler**3 credits**

Presents both the theoretical knowledge and practical skills necessary to create an infant/toddler curriculum in an inclusive environment. It provides information on how the playful interaction of infants/toddlers with their surroundings helps them to discover what the world is made of, how it works, and what they can do with their emerging skills. Students learn how the routines and organization of a child's inside-outside environment facilitate a child's learning. The successful student will demonstrate a knowledge of program planning and implementation, and an understanding of the role of the physical environment in creating quality development programs for typical and atypical infants and toddlers.

ECE* 295 - Student Teaching**6 credits**

Provides guided observation of, participation in, and supervised student teaching at NAEYC-accredited centers or kindergartens. The purpose of student teaching is to apply child development theory to a learning environment and to work with children under close supervision. Students will manage a classroom independently and plan, organize, implement, and evaluate classroom activities. Students will complete a minimum of 200 hours of student teaching. Weekly seminars devoted to communicating issues in Early Childhood Education and the teaching experience of students will extend the student teaching experience.

Prerequisite(s): ECE* 101, ECE* 210, ECE* 231, PSY* 122, SOC* 111.

EDU* 201 - Introduction to Teaching Professions**3 credits**

Provides prospective high school, middle school and art teachers with an introduction to the teaching profession. Students are required to spend a minimum of 40 hours of fieldwork in an approved classroom. Emphasis is placed on the human development during the middle and high school years and theories, history, philosophies, and processes relevant to teaching and learning as a profession. Patterns of learning and unique ways of learning will be explored. Focuses on social-economic, political and ecological factors and their impact on student's learning. Students will have opportunities to observe in multicultural and inclusive classrooms and the opportunity to evaluate their readiness and aptitude to be a teacher.

EDU* 202 - Principles of Education**3 credits**

Provides prospective teachers with an introduction to the teaching profession. Students are required to spend a minimum of 40 hours of fieldwork in an approved classroom. Emphasis is placed on the varied roles that teachers play; the history and philosophy of education; current themes in education; learning theories; classroom management issues; relationship between the schools and community. Students will have opportunities to observe in multicultural and inclusive classrooms and the opportunity to evaluate their readiness to be a teacher.

Early Childhood - Special Education**ECS* 107 - Introduction to Exceptional Children I****3 credits**

Familiarizes the student with the trends, issues, psychological and behavioral characteristics of exceptional learners and their education. Emphasis will be placed on classroom practices as well as the history, laws, concepts, practices and terminologies used by professionals in the field. The completion of a portfolio is required. Students are also expected to participate in a 25 hour practicum in a National Association for the Education of Young Children (NAEYC) accredited setting.

ECS* 112 - Introduction to Early Childhood Special Education**3 credits**

Focuses on early intervention for infants and toddlers from birth through age two and on preschool special education for three- to five-year-old children with disabilities, developmental delays, or serrations in development. This course presents successful interventions for various kinds of children and families. Furthermore, it presents federal legislation pertaining to Early Childhood Special Education that provides funding for the services that young children with disabilities and their families need.

ECS* 113 - Creative Art/Play for Exceptional Children**3 credits**

Provides adaptive experiences in two- and three-dimensional art activities using everyday materials with an emphasis on process over product. Emphasizes the integration of art projects with math, reading, literature, social studies, and music. Demonstrations, workshop sessions, and visits to art galleries supplement classroom experiences.

ECS* 121 - First Aid, CPR, and Medication Administration**1 credits**

Trains students to handle many basic medical emergencies and outlines procedures to follow in assisting an injured or suddenly ill person until professional emergency medical services can be obtained. It also familiarizes students with the legal aspects of First Aid, CPR, and Medication Administration. Examples are derived from real life situations.

ECS* 123 - Introduction to Family Support and Respite Care**4 credits**

Provides students with the special needs background, communication skills, attitudes, and techniques that will enable them to provide respite for families in crisis. Students learn the laws and dynamics of working with social services agencies to determine families that can benefit from respite care. Students are required to spend fifty hours demonstrating their proficiency in a practical setting. Students are also required to obtain certification in First Aid, CPR, and Medication Administration.

ECS* 207 - Introduction to Exceptional Children: Seminar II**3 credits**

Introduces the field of early childhood special education and offers an overview of typical and atypical child development including programs for and assessment of young children with special needs. Emphasizes the use of play to facilitate the development of cognitive, language, motor, social, and emotional skills.

ECS* 230 - Student Teaching Special Education**6 credits**

Students will complete a minimum of 200 hours under the supervision of a supervising teaching to develop skills in management, environmental planning, and curriculum development. Student teachers will assume some of the teaching responsibilities for the class as they develop daily activities with individual education plans (IEPs) that include class management and assessment. Students will also be required to attend weekly seminars to explore the relationship between pedagogical theory and research, and their relationship to practice in typical and atypical classrooms. Connections will be drawn in the areas of professionalism; preparing, implementing, and evaluating instructional objectives, educational curricula and strategies; and student engagement and classroom environment. Prerequisite(s): ECS* 107, ECS* 112, PSY* 122; co-requisite: ECS* 207.

Earth Science

EAS* 102 - Earth Science

SK: Scientific Knowledge and Understanding**3 credits**

Introduces the four main branches of Earth Science: Geology (solid earth), Oceanography (oceans), Meteorology (weather), and Astronomy (stars and universe). Investigates the dynamic nature of Earth processes to understand human beings' place in the universe.

EAS* 106 - Natural Disasters

SK: Scientific Knowledge and Understanding**3 credits**

Provides an introduction to the causes, distribution, and consequences of Earth's natural hazards and disasters including: earthquakes; volcanoes; hurricanes; severe storms; floods; extraterrestrial impacts; and events related to global climate change. The course will focus on naturally-occurring disasters and will also consider the role of anthropogenic (human) activities in exacerbating and/or mitigating these processes and events.

EAS* 110 - The Earth Sciences

SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding**4 credits**

Introduces the four main branches of Earth Science: Geology (solid earth), Oceanography (oceans), Meteorology (weather), and Astronomy (stars and universe). Investigates the dynamic nature of Earth processes to understand human beings' place in the universe. Lecture Hours: 3 Lab Hours: 3

Economics

ECN* 101 - Macroeconomics

SP: Social Phenomena/Knowledge and Understanding

3 credits

Presents major topics in macroeconomics: markets, households, business, government and foreign sectors, and the effects of the above on employment and national income. Evaluate fiscal and monetary policies and their impact on economic growth of advanced and developing nations.

Prerequisite(s): ENG* 101, MAT* 085 or higher.

ECN* 102 - Microeconomics

SP: Social Phenomena/Knowledge and Understanding

3 credits

Evaluates the best available tools of economic analysis which explain the pricing mechanism and structure of markets. Emphasizes the contribution and usefulness of the theoretical methods. Discusses supply and demand analysis, the economics of firms, the determination of product and factor prices under varying market structures, the pricing and employment of resources, and market imperfections.

Prerequisite(s): ENG* 101, MAT* 085 or higher.

Electrical Engineering Technology

EET* 103 - Fundamentals of Electricity

4 credits

Surveys basic electricity, including generation, measurement, and analysis of networks involving DC and AC sources. The laboratory component includes electrical experiments in basic DC and AC circuits. Lecture Hours: 3 Lab Hours: 2

EET* 110 - Electric Circuits I

4 credits

Introduces DC and AC circuit fundamentals, including Ohm's Law Kirchhoff's Laws power and energy relationships. Students will learn to analyze DC and AC series, parallel, and series-parallel circuits using basic circuit analysis techniques. Students will also learn the fundamentals of capacitors, inductors and transformers and analyze DC and AC circuits with these components. In the lab, students will learn to use instrumentation including power supplies, analog multimeters, digital multimeters, function generators, counters and oscilloscopes. Students will also construct a variety of circuits and utilize basic circuit analysis techniques to analyze these circuits. Lecture Hours: 3 Lab Hours: 3
Prerequisite(s): MAT 095 or higher or mathematics placement into MAT* 137 or higher.

EET* 114 - Electric Circuits II

4 credits

Presents advanced network analysis techniques for complex DC and AC circuits. Includes advanced network analysis techniques of mesh analysis, nodal analysis, superposition principle, Thevenin's, Norton's, and maximum power transfer theorems. Students will also learn the fundamentals of current sources, bridge circuits, series and parallel resonant circuits, passive filters and three phase systems. In the lab, students will construct a variety of circuits and utilize advanced network analysis techniques to analyze these circuits. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): EET* 110. Corequisite(s): MAT* 175.

EET* 136 - Electronics I

4 credits

Presents a variety of discrete electronic devices, including diodes, BJTs and FETs, and simple integrated circuits along with their operation and applications. Students will learn how to analyze circuits containing these devices. In the lab, students will construct various electronic circuits with the devices studied and will test and verify the circuits' performance and operation. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): EET* 110.

EET* 232 - Electronics II

4 credits

Presents advanced electronic topics and applications including operational amplifiers, voltage regulators, and timer/waveform generators. Students will learn the operation of single- and multi-stage amplifiers, active filters, differential amplifiers, power supplies, and oscillators. In the lab, students will construct various electronic circuits and verify the circuits' performance and operation. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): EET* 136 and MAT* 186.

EET* 241 - Introduction to Fiber Optics**4 credits**

Presents the principles of fiber optics, including light sources, single-mode, multi-mode, graded index fiber and cabling, connectors, photo-detectors, repeaters, and optical fiber sensors. Students will study various voice, data, and image communications systems using fiber optic networks. In the lab, students will perform experiments to gain hands-on experience with fiber optic components, circuits, and systems. Students will also have the opportunity to construct, test, and evaluate fiber optic communication links for analog and digital signal transmission. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): EET* 136 and EET* 252.

EET* 252 - Digital Electronics**4 credits**

Introduces binary and hexadecimal number systems, codes, Boolean algebra, truth tables, logic gates, logic circuitry and Boolean reduction techniques. Students will learn how a variety of digital IC devices operate including flip-flops, one shots, clocks, counters, registers, decoders, encoders, displays, multiplexers and demultiplexers along with their applications. In the lab, students will investigate modern digital applications through hands-on experience. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): EET* 110 or Instructor's permission.

EET* 256 - Microprocessors**4 credits**

Presents the programming fundamentals of a particular microprocessor and its instruction set, as well as how to write programs with this instruction set. Students will also learn the architecture of the microprocessor, including the arithmetic-logic unit, registers, flags, bus structure and timing operations. Interfacing techniques to memory and input/output devices will also be introduced. In the lab, students are introduced to both a microprocessor trainer and a microprocessor simulator and will learn how to use this trainer to write, test and troubleshoot a variety of programs using arithmetic, logic, and branch instructions. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): EET* 252.

EET* 262 - Electrical Machinery and Control**4 credits**

Introduces students to the electrical energy industry with a concentration on the principles of DC and AC magnetic circuits, focusing on electrical machinery, including DC generators and motors, AC single and polyphase alternators and motors, and power transformers. Students will learn basic electrical machine control procedures, including programmable logic controllers and the use of other solid-state control devices. In the lab, students will perform experiments to gain hands-on experience with DC and AC magnetic circuits and basic electrical machines and controls. Students will learn to operate, test, assemble, and disassemble machines, prepare characteristic operating curves, and use programmable logic controllers for industrial control applications. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): EET* 114, EET* 136, and MAT* 186.

EET* 272 - Electronic Communications**4 credits**

Presents modern electronic communications based on an informational and circuit/systems framework. Students will learn the concepts of noise considerations, bandwidth, and propagation requirements, and AM and FM modulation techniques for the transmission and reception of RF signals. In the lab, students will perform experiments to gain hands-on experience in the design, construction, testing, and evaluation of the various circuits and sub-systems that comprise a communications system. Students will also learn how to combine computer simulation with bench experimentation and will learn instrumentation, waveform analysis, and circuit system performance related to modern electronic communications. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): EET* 232.

EET* 296 - EET Internship**3 credits**

Provides first-hand, real-life work experience in the electronics industry. Establishes internships in the fields of electrical energy production and distribution, telecommunications, electronic fabrication and assembly, electrical machinery and controls, and electronic information systems and equipment. Students are matched with internships based on skills, interests, and recommendations. Students report to a worksite once per week during the academic term and complete an Internship Evaluation Form and Narrative Report on their experience.

Engineering Science

EGR* 111 - Introduction to Engineering

3 credits

Introduces students to the fields of engineering through design and graphics and comprehensive engineering projects. Topics include: sketching, charts, graphs, forces, energy, electrical circuits, mechanisms, robotics, manufacturing technologies and fundamentals of engineering economics.

Prerequisite(s): MAT* 137 or Higher with a C or better or higher.

EGR* 131 - Introduction to Nanotechnology

3 credits

Designed to give participants who have little or no knowledge of nanotechnology a broad overview of the field in a nontechnical manner. Lectures will present the fundamental ideas behind nanoscience and nanotechnology. Beginning with the definition of a nanometer, discussions will continue through how nanotechnology will affect business and industry; basic processes that are currently used in nanotechnology; the economic impact of this emerging field; environmental concerns in the near and long-term; NEMS/MEMS; imaging devices; polymers; biomolecules; nanowires; nanotubes; fullerenes; and other carbon nanostructures. Participants will be expected to read the material, share data obtained from the class discussion and prepare additional nanotechnology oriented projects/papers and presentations.

Prerequisite(s): MAT* 095 or higher,ENG* 066 or higher. Corequisite(s): CET* 116.

EGR* 211 - Engineering Statics

3 credits

Presents the fundamentals of statics, including the resolution and composition of forces, the equilibrium of force systems, the analysis of forces acting on structures and machines, centroids, and moment of inertia. Uses vector methods.

Prereq/Corequisite(s): MAT* 268.

EGR* 212 - Engineering Dynamics

3 credits

Presents a basic engineering course in dynamics, covering rectilinear and curvilinear motion, translation, rotation, plane motion, work, energy and power, and impulse and momentum. Applies the principles of dynamics to engineering problems using vector methods and computer applications.

Prerequisite(s): EGR* 211 and MAT* 268.

EGR* 221 - Introduction to Electrical Circuit Analysis

3 credits

Offered: (Course has not been offered in the past two years)

Analyzes electrical networks incorporating passive and active elements through basic laws and techniques. Covers transient and forced responses of linear circuits, periodic excitation, and frequency response. This is a required elective for Engineering Pathway students majoring in either Electrical/Systems Engineering or Computer Science/Engineering.

Prerequisite(s): EGR* 211 and PHY* 221. Corequisite(s): MAT* 285.

Engineering Technology

No active courses available.

English

ENG* 066 - Introduction to Academic Reading, Writing & Scholarship

6 credits

Focuses on the foundational reading, writing and study skills necessary for effective learning and communication. The emphasis is on learning through reading. Students are introduced to various topics, content and forms through creative and expository literature. Students will develop the appropriate academic vocabulary as well as strategies for greater analysis, comprehension and retention of knowledge through reading. The writing component of the course focuses on the organizational and grammatical structure of the paragraph while introducing various rhetorical modes of expression. Instructional seminars by faculty and staff are coordinated with visits to library, computer labs, CES, fitness center, counseling and career offices will also be a component of the course. Placement: Determined by ACCUPLACER score. Exit criteria: C or better qualifies for ENG* 099A/ENG* 101 - ALP placement. A grade of C- qualifies for ENG* 091.

Notes: Credit does not count toward meeting degree requirements. (This course replaces both ENG 043 and ENG 073 as of fall 2014)

ENG* 091 - Introduction to Advanced Reading & Writing**4 credits**

Enhances and refines students' critical writing and reading skills in preparation for ENG* 101. Students will extend their abilities to write clearly, coherently, and fluently by incorporating critical analysis of challenging readings into their writing. They will use in-depth, critical reading strategies to improve their comprehension of college level texts across the curriculum. Vocabulary, outlining, and summary/synthesis/critiquing skills will be reinforced. All of these skills will further prepare students for the demands of college reading and writing in ENG* 101 and beyond.

Prerequisite(s): A grade of C- or better in ENG* 066, instructor recommendation, or ACCUPLACER. Notes: Credit does not count toward meeting degree requirements.

ENG* 099A - Transition to Composition: Accelerated Learning Program (ALP)**3 credits**

Offered as a co-requisite to matching ENG* 101 ALP sections as of fall 2017. Course was previously numbered as ENG* 063). Augments the lessons taught in ENG* 101 while continuing the study of paragraph development. Extends students' abilities to write clear, fluent, and effective multi-paragraph essays in a variety of rhetorical modes. Also incorporates grammar and punctuation rules and reading for critical analysis, modeling, and topic generation.

Prerequisite(s): A grade of C or better in ENG* 066 or C- in ENG* 091. Notes: Credit does not count toward meeting degree requirements.

ENG* 101 - Composition**WC: Written Communication I****3 credits**

Develops strategies for college-level writing through the critical study of various rhetorical modes. Emphasizes the development of carefully reasoned essays that cite appropriate evidence to support conclusions. Develops library and research skills required for composition and communication. Students will write a number of short expository papers and a longer research paper incorporating MLA documentation techniques.

Prerequisite(s): Sufficient score on the placement test or successful completion of ENG* 063, ENG* 091, ESL* 161 and ESL* 178 with a grade of "C" or better (or instructor recommendation). Corequisite(s): (ALP sections must be taken with co-requisites of ENG* 099A ALP).

ENG* 102 - Literature and Composition**WC: Written Communication II****3 credits**

Emphasizes critical reading and writing by surveying such literary genres as poetry, prose, drama, and fiction. Introduces literary techniques, terminology, conventions, and devices. Students will write a number of short critiques in which they respond to, analyze, and interpret selections from a literature anthology. They will also write a longer literary research paper incorporating MLA documentation techniques.

Prerequisite(s): "C" or better in ENG* 101.

ENG* 114 - Children's Literature**3 credits**

Develops students' knowledge of and appreciation for children's literature. Students will explore children's stories and the components of good children's literature by investigating the interrelationship of literary content and form. By developing a personal bibliography, students will investigate the wealth of children's literature available today. This course also assists teachers to promote a comprehensive, creative, and insightful utilization of literary materials in their classes. Examples of incorporating children's literature in learning include choral reading, storytelling, creative dramatization, role-playing, and use of music and movement.

ENG* 200 - Advanced Composition**WC: Written Communication II****3 credits**

Develops and refines the advanced skills in composition that are essential for both academic and professional writing. Emphasis will be on writing from various sources including texts and online material. The focus of student writing will include exposition, argumentation and a research paper using various documentation styles (including but not limited to MLA, APA, CBE and Chicago).

Prerequisite(s): ENG* 101 (minimum of a C grade).

ENG* 202 - Technical Writing**3 credits**

Addresses the conventions of technical writing. Introduces the purposes, developmental strategies, and formats of technical documents. Covers audience analysis and adaptation, document organization and design, graphics, and research documentation methods. Stresses a readable style in all professional writing. Requires a series of short reports, a collaborative project, and a major research paper.

Prerequisite(s): ENG* 101.

ENG* 210 - Fiction**3 credits**

Surveys short stories and novelettes whose themes are not limited by the possible or probable. Focuses on critical literary interpretations, including the characteristics, conventions, and devices of authors ranging from Poe and Hawthorne, through Clarke and Asimov, to LeGuin and Farmer. Stresses logical and supportable reader response in both class discussions and analytical essays. Required reading includes one major novel.

Prerequisite(s): ENG* 101.

ENG* 211 - Short Story**3 credits**

Focuses on representative works by such North American short story writers as Wright, Thurber, Vonnegut, Porter, and Hemingway. Requires writing assignments in response to assigned texts.

Prerequisite(s): ENG* 101.

ENG* 214 - Drama**3 credits**

Surveys dramatic literature from ancient Greece through the modern and contemporary periods. Introduces theatrical terminology, techniques of script analysis, and critical approaches to theatrical productions. Includes screenings of selected cinematic interpretations. Encourages, whenever possible, attendance at area theatrical productions.

Prerequisite(s): ENG* 101.

ENG* 221 - American Literature I**CALT: Critical Analysis/Logical Thinking and AD: Aesthetic Dimension of Humankind****3 credits**

Surveys American literature from its beginnings to the mid-nineteenth century. Examines a variety of forms, including journals, autobiographies, essays, poems, sermons, histories, and statecraft. Includes selections from such authors as Jefferson, Thoreau, Whitman, Dickinson, and Poe.

Prerequisite(s): A grade of C or better in ENG* 101.

ENG* 222 - American Literature II**CALT: Critical Analysis/Logical Thinking and AD: Aesthetic Dimension of Humankind****3 credits**

Surveys American literature from the mid-nineteenth century to the present. Examines the poetry and prose (both fiction and nonfiction) characteristic of the period of expansion and industrialization. Also presents the literature of the twentieth century. Includes selections from such authors as Twain, Cather, Baldwin, and Miller.

Prerequisite(s): A grade of C or better in ENG* 101.

ENG* 231 - British Literature I**CALT: Critical Analysis/Logical Thinking and AD: Aesthetic Dimension of Humankind****3 credits**

Surveys representative works of British literature from the Anglo-Saxon period through the eighteenth century. Includes poetry, prose, drama, and fiction by such authors as Chaucer, Shakespeare, Milton, Pope, and Swift.

Prerequisite(s): A grade of C or better in ENG* 101.

ENG* 232 - British Literature II**CALT: Critical Analysis/Logical Thinking and AD: Aesthetic Dimension of Humankind****3 credits**

Examines representative works of poetry, prose, drama, and fiction from Blake to the present, covering the Romantic, Victorian, Modern, and Contemporary periods of British literature. Includes works by such authors as Wordsworth, Dickens, Tennyson, Woolf, and Larkin.

Prerequisite(s): A grade or C or better in ENG* 101.

ENG* 245 - Early Western Literature

CALT: Critical Analysis/Logical Thinking and AD: Aesthetic Dimension of Humankind**3 credits**

A survey of European literature from ancient Greece and Rome to the Renaissance, studying such works as the epics of Homer, The Bible, the tragedies of Aeschylus and Sophocles, Plato, St. Augustine, The Koran, Dante, and Chaucer.

Prerequisite(s): A grade of C or better in ENG* 101 or instructor's permission.

ENG* 246 - Modern Western Literature**CALT: Critical Analysis/Logical Thinking and AD: Aesthetic Dimension of Humankind****3 credits**

A survey of European literature from the Renaissance to the present. Includes such authors as Montaigne, Cervantes, Goethe Ibsen, Chekhov, and Woolf.

Prerequisite(s): A grade of C or better in ENG* 101 or instructor's permission.

ENG* 251 - African-American Literature**3 credits**

Presents literature about the African-American experience. Focuses on accounts of the colonial slave trade, the plantation experience, the abolition movement, the Reconstruction Era, and the Harlem Renaissance. Includes works by such emerging writers as Walker, Morrison, Gaines, and Jordan.

Prerequisite(s): ENG* 101 or instructor's permission.

ENG* 254 - Modern Arabic Literature**CALT: Critical Analysis/Logical Thinking****3 credits**

An introduction to contemporary Arabic literature in translation including poetry, short stories, drama, novellas and novels. The works of both male and female voices will be explored from many Arab countries including Algeria, Egypt, Lebanon, Jordan, Iraq, Sudan, Saudi Arabia, Syria, United Arab Emirates and Yeman.

Prerequisite(s): A grade of C or better in ENG* 101.

ENG* 262 - Women in Literature**3 credits**

Examines women in literature by both male and female writers throughout the centuries. Approaches various genres from critical, cultural, and historical perspectives. Analyzes the stages, circumstances, and conditions of women's lives in a broad spectrum of literary expression. Includes a critical writing component.

Prerequisite(s): ENG* 101.

ENG* 271 - Film and Literature**3 credits**

Studies the unique forms of film and literature by reading selected novels and plays and by viewing films adapted from them, followed by a critical discussion of both.

Prerequisite(s): ENG* 101 or instructor's permission.

ENG* 272 - History of Film**3 credits**

Surveys the history of film from its beginning to the present. Emphasizes the development of forms and techniques, production methods, and film's relationship to other arts and to social/political currents. Focuses on critical analysis and discussion of selected contemporary films illustrating aesthetic principles that govern cinematic value and meaning.

Prerequisite(s): ENG* 101.

ENG* 281 - Creative Writing**3 credits**

Introduces the major writers of contemporary American Letters. Serves as a cooperative writing workshop to evaluate student writing. Encourages commitment to the writing process: revision, development, discipline, and the satisfaction of accomplishment. Studies each of the writing genres, allowing students to select their own medium for a course project.

Prerequisite(s): ENG* 101.

English as a Second Language

ESL* 139 - Pronunciation III

3 credits

Addresses the problems of pronunciation using the concepts of rhythm, intonation, and thought grouping. Students perform speaking activities, practicing the concepts and integrating exercises for listening practice. Students will perform a final speech exercise involving the basic concepts presented in the class. This course satisfies the Foreign Language requirement. (This course may be taken concurrently with any ESL course.)

ESL* 141 - Integrated Skills IV

3 credits

Develops fluency in the English language. Focuses on reading, writing, grammar, speaking, and listening comprehension on typical topics stressed in class, small groups, and individual practice.

Prerequisite(s): sufficient score on the ESL Placement Test. This course satisfies the Foreign Language requirement. (This course may be taken concurrently with ESL* 139 and ESL* 143).

ESL* 143 - Writing and Reading IV

3 credits

Designed to help students with academic English writing skills on the high-beginning level involving work at the level of sentences and development of a basic paragraph. Early writing assignments will focus on sentence development, development of topic sentences and supporting sentences. Additional assignments will focus on paragraph development and organization. Focus will be the entire writing process; planning, editing, and revising. Students will be able to ask questions about their writing which will lead to improvements.

Prerequisite(s): ESL Placement score of 45-65. Corequisite(s): ESL* 139 or ESL* 141.

ESL* 144 - Pronunciation IV

3 credits

Focuses on studying and applying advanced techniques of American pronunciation using the basic concepts of rhythm, intonation and thought grouping. Students perform speaking activities to achieve an accent which is understandable to others in a professional and academic environment.

Prerequisite(s): ESL* 139. This course satisfies the Foreign Language requirement.

ESL* 151 - Integrated Skills V

3 credits

Refines use of idiomatic expressions while continuing to build fluency in all English language skill areas. Focuses class discussions, presentations, and assignments on multiple themes.

Prerequisite(s): ESL* 141 or sufficient score on the ESL placement Test. This course satisfies the Foreign Language requirement and may also be used as Humanities elective credit toward graduation. (This course may be taken concurrently with ESL* 139, ESL* 159 and ESL* 180).

ESL* 159 - Writing V

3 credits

Improves writing skills for use in both college and the workplace. Writing assignments focus on the writing process through group work and individual conferences with the instructor. The course focuses on computer online writing development of the paragraph to the essay covering various rhetorical modes..

Prerequisite(s): ESL* 141 or sufficient score on the ESL Placement Test. This course satisfies the Foreign Language requirement. (This course may be taken concurrently with ESL* 139, ESL* 141 and ESL* 151).

ESL* 161 - Integrated Skills VI

3 credits

Advances English language skills through small group and individual instruction. Stresses multicultural themes through readings, class discussions, and oral presentations.

Prerequisite(s): ESL* 159, ESL* 180, and ESL* 151, or sufficient score on the ESL Placement Test. Students intending to take ENG* 101 or COM* 173 must receive a grade of "C" or better. This course satisfies the Foreign Language requirement and may also be used as Humanities elective credit toward graduation. (This course may be taken concurrently with ESL* 139, ESL* 144, ESL* 169 and ESL* 180).

ESL* 169 - Writing VI**3 credits**

Improves general writing skills in academic English, involving short essay assignments. Essay writing assignments will focus on essay development and organization. Focuses on computer online writing development of the essay covering various rhetorical modes.

Prerequisite(s): ESL* 159, ESL* 180, and ESL* 151, or sufficient score on the ESL Placement Test. This course satisfies the Foreign Language requirement. (This course may be taken concurrently with ESL* 139, ESL* 144, ESL* 161 and ESL* 180).

ESL* 178 - Advanced Reading and Writing**3 credits**

Designed to focus on the academic reading and writing process. Students will interact with various types of academic texts through reading and writing. Emphasis will be given to critical reading strategies and analysis of texts to help students refine their ability to interpret, analyze, and summarize what they have read through synthesizing ideas in essay development and organization. Focuses on computer online writing development.

Prerequisite(s): Appropriate score on ESL placement or completion of ESL* 161 and ESL* 169 or recommendation of ESL Instructor or Coordinator. This course satisfies the Foreign Language requirement. Students intending to take ENG* 101 or COM* 173 must receive a grade of "C" or better.

ESL* 180 - Reading V**3 credits**

Focuses on reading comprehension skills, including phonics, use of dictionaries, words in context, main ideas, and supporting details in academic texts. Incorporates readings that reflect multiculturalism and the college experience. Focuses on fluency first. Prepares students for degree programs and/or taking the TOEFL exam.

Prerequisite(s): ESL* 141 or sufficient score on the ESL Placement Test. This course satisfies the Foreign Language requirement. (This course may be taken concurrently with ESL* 139, ESL* 144, ESL* 159, ESL* 169, ESL* 151 and ESL* 161).

ESL* 191 - Technical English VI**3 credits**

Integrates technical vocabulary into reading, writing, speaking, and listening comprehension. Concentrates on specific technical subjects.

Prerequisite(s): ESL* 139 or sufficient score on the ESL Placement Test. This course satisfies the Foreign Language requirement. (This course may be taken concurrently with ESL* 139, ESL* 169, ESL* 161 and ESL* 180).

ESL* 250 - TESOL Methodology**3 credits**

Introduces the theories of second language learning and demonstrates practical applications of these theories. Provides the opportunity to learn new techniques for teaching English and to do field work at all levels of ESL. This course satisfies the Connecticut state requirements for ESL Certification K-Adults.

Entrepreneurial Studies**BES* 218 - Entrepreneurship****CALT: Critical Analysis/Logical Thinking****3 credits**

Introduces students to what entrepreneurship is and how to realize the dream of starting a business by developing an entrepreneurial mindset. Emphasis is placed on how and where to start, feasibility and competitive analyses, market research, customer validation, legal forms or organization, capital acquisition, and other start-up issues. Students will learn the business model canvas approach and how to write a business plan. The skills learned can be applied to developing entrepreneurial initiatives for non-profits, social ventures, and entrepreneurial initiatives in existing larger businesses and organizations.

Prerequisite(s): Eligibility for ENG* 101

BES* 219 - Management and Growth – Small Business**3 credits**

Focuses on concepts, processes, and techniques for managing and growing a small business, whether it is a for-profit, non-profit, or social venture. Topics include marketing to attract new customers and keep existing customers, human resource management, and financial management to maintain proper financial records, budgetary decisions, cash flow, and payment of taxes and loans to maintain profitability. Students who want to own and grow their own businesses should take this course.

BES* 239 - Business Plan**3 credits**

Prepares student to launch a business. Builds upon BES* 218 to take their business concept to the next level and develop a model and plan to launch a business. Will be hands-on where the student will take the role of the senior executive of the business. Pre-launch actions in marketing, legal, financial, and operations will be determined. Prerequisite(s): BES* 218. Prereq/Corequisite(s): ACC* 100 or ACC* 113 and BMK* 201.

BES* 295 - Launch a Business**(LAB)****3 credits**

Designed for students who are ready to launch a business, have an established business, or are working in a family-owned business. Students will execute pre-launch plans and build a MVP (Minimum Viable Product or Service), prepare and conduct a marketing campaign, file legal documents, obtain start-up funding, select a location, and operate the business part-time to discover a sustainable business model. The experiential learning approach will be used in this course where the students will create and operate their own small businesses. Students will be mentored by the instructor and other outside business experts.

Prerequisite(s): BES* 218 or permission of the instructor

Environmental Engineering Technology**ENV* 100 - Introduction to Alternative Energy Systems****3 credits**

Prepares students to compare and contrast alternate energy systems and traditional energy systems. Will introduce energy systems terminology, safety, energy sources, alternate energy systems and computer applications (LabVIEW & AutoCAD). Lecture Hours: 2 Lab Hours: 2

ENV* 103 - Challenge of Climate Change**3 credits**

Surveys the causes and destructive consequences of civilizations' use of fossil fuel energy on global climate systems. Examines how the worldwide transition to sustainable operational models based on clean energy, energy efficiency, and environmental remediation present new opportunities for economic expansion and job growth. Reviews federal, state, and local initiatives on climate change and how government incentive programs and public-private partnerships are leading the conversion to a green economy.

ENV* 104 - Sustainable Economic Development**3 credits**

Focusing on new models of sustainable economic development, this course defines green business operations, reviews sustainable economic design that works for all, and provides a 'hands-on', 'minds-on' framework for how to create 'green' public private development partnerships. primary drivers of sustainable economic growth and social changes.

ENV* 110 - Environmental Regulations**3 credits**

Presents a broad view of federal, state, and municipal environmental regulations as they apply to industry, commercial establishments, local governmental facilities, and the individual citizen. Reviews elementary chemistry. Provides a practical approach to regulatory understanding to plan an effective and economically sound compliance program. Course topics also include the Clean Air Act (CAA); the Clean Water Act (CWA); the Water Toxins Program; the Resource Conservation and Recovery Act (RCRA); the Toxic Substance Control Act (TSCA); SARA Title III (Community Right-to-Know); and federal, state, and local regulations covering such topics as hazardous material transportation, in-ground tank storage, and such specific hazardous materials as asbestos and PCBs.

ENV* 181 - Solar Thermal Systems**3 credits**

Introduces the history and principles of solar thermal energy as used for heating air and water in residential applications. Topics include historical uses of the sun, solar fundamentals, site analysis, basic thermal dynamics, simple uses of solar-heated fluids and "hands-on" testing and overview of various system components with an emphasis on workplace safety and best practices used in the installation of solar domestic hot water systems. Format includes classroom lecture, laboratory exercises and field trips to actual installations. Lecture Hours: 2 Lab Hours: 2 Prerequisite(s): MAT* 095 or sufficient score on the placement test.

ENV* 182 - Solar Photovoltaic Systems I**3 credits**

Introduces the history and principles of Photovoltaics (solar electricity) as used in direct-coupled, remote, and grid-tied residential applications. Topics include historical use of the sun, solar fundamentals, site analysis, DC electricity basics and “hands-on” testing and overview of various system components of a basic PV installation with a continual emphasis on workplace safety and electrical code compliance. Format includes classroom lecture, assigned exercises, topical workshops and a field trip to an actual installation. Lecture Hours: 2 Lab Hours: 2

Prerequisite(s): MAT* 095 or sufficient score on the placement test.

ENV* 230 - Environmental Engineering**3 credits**

Develops quantitative solutions to environmental problems concerning public health, air and water pollution, water and wastewater treatment, and solid waste management. Applies engineering methods to environmental preservation and protection.

Prerequisite(s): WWT 110, WWT 112, WWT 114, and WWT 116, or State of Connecticut Wastewater Certification Levels I and II.

ENV* 237 - Pollution Prevention**3 credits**

Offered: (Course has not been offered in two years)

Presents the many steps being taken by governmental, commercial, industrial, and educational facilities to eliminate pollutant discharges. Pollution prevention (i.e., preventing the discharge of pollutants to eliminate the need for treatment and discharge into the air, ground, or water of a “waste stream”) has become a very important part of modern environmental protection. Field trip required.

Prerequisite(s): EVS* 100 or instructor’s permission.

Environmental Science

EVS* 100 - Introduction to Environmental Science

SK: Scientific Knowledge and Understanding**3 credits**

Examines the conceptual basis for today’s environmental programs. Emphasizes water, solid waste, hazardous waste, air pollution, and local land use decisions by focusing on the biological, chemical, and physical aspects of environmental pollution, energy, and relationships between the environment and society. Considers environmental ethics, law, and relationships between environment, economics, and government. Field trips(s) required.

EVS* 114 - Environmental Science**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Examines the scientific, social, and political aspects of environmental problems. Emphasizes water, solid waste, air pollution and local land use decisions by focusing on the biological, chemical, and physical aspects of environmental science. Examines energy sources and the relationships between the environment and society. This course also considers environmental ethics, law, and the relationships between the environment, economics and government. Laboratory exercises expand upon these various topics as they are discussed in lecture. Students who have taken and successfully completed EVS* 100 may not take EVS 114. Lecture Hours: 3 Lab Hours: 3

EVS* 200 - Toxicology**3 credits**

Focuses on toxicological principles, including FDA requirements relating to new drugs. Addresses environmental and other factors affecting the toxicity of therapeutic agents, mechanisms of toxicity, and clinical applications.

Prerequisite(s): EVS* 100 or EVS* 114

EVS* 296 - Environmental Science & Toxicology Internship**3 credits**

This course places students in a suitable, supervised internship in an industry of interest for a minimum of 150 hours of internship work.

Prerequisite(s): CHE* 121 with a C or better

Exercise Science

ENV* 100 - Introduction to Alternative Energy Systems

3 credits

Prepares students to compare and contrast alternate energy systems and traditional energy systems. Will introduce energy systems terminology, safety, energy sources, alternate energy systems and computer applications (LabVIEW & AutoCAD). Lecture Hours: 2 Lab Hours: 2

ENV* 103 - Challenge of Climate Change

3 credits

Surveys the causes and destructive consequences of civilizations' use of fossil fuel energy on global climate systems. Examines how the worldwide transition to sustainable operational models based on clean energy, energy efficiency, and environmental remediation present new opportunities for economic expansion and job growth. Reviews federal, state, and local initiatives on climate change and how government incentive programs and public-private partnerships are leading the conversion to a green economy.

ENV* 104 - Sustainable Economic Development

3 credits

Focusing on new models of sustainable economic development, this course defines green business operations, reviews sustainable economic design that works for all, and provides a 'hands-on', 'minds-on' framework for how to create 'green' public private development partnerships. primary drivers of sustainable economic growth and social changes.

ENV* 110 - Environmental Regulations

3 credits

Presents a broad view of federal, state, and municipal environmental regulations as they apply to industry, commercial establishments, local governmental facilities, and the individual citizen. Reviews elementary chemistry. Provides a practical approach to regulatory understanding to plan an effective and economically sound compliance program. Course topics also include the Clean Air Act (CAA); the Clean Water Act (CWA); the Water Toxins Program; the Resource Conservation and Recovery Act (RCRA); the Toxic Substance Control Act (TSCA); SARA Title III (Community Right-to-Know); and federal, state, and local regulations covering such topics as hazardous material transportation, in-ground tank storage, and such specific hazardous materials as asbestos and PCBs.

ENV* 181 - Solar Thermal Systems

3 credits

Introduces the history and principles of solar thermal energy as used for heating air and water in residential applications. Topics include historical uses of the sun, solar fundamentals, site analysis, basic thermal dynamics, simple uses of solar-heated fluids and "hands-on" testing and overview of various system components with an emphasis on workplace safety and best practices used in the installation of solar domestic hot water systems. Format includes classroom lecture, laboratory exercises and field trips to actual installations. Lecture Hours: 2 Lab Hours: 2
Prerequisite(s): MAT* 095 or sufficient score on the placement test.

ENV* 182 - Solar Photovoltaic Systems I

3 credits

Introduces the history and principles of Photovoltaics (solar electricity) as used in direct-coupled, remote, and grid-tied residential applications. Topics include historical use of the sun, solar fundamentals, site analysis, DC electricity basics and "hands-on" testing and overview of various system components of a basic PV installation with a continual emphasis on workplace safety and electrical code compliance. Format includes classroom lecture, assigned exercises, topical workshops and a field trip to an actual installation. Lecture Hours: 2 Lab Hours: 2
Prerequisite(s): MAT* 095 or sufficient score on the placement test.

ENV* 230 - Environmental Engineering

3 credits

Develops quantitative solutions to environmental problems concerning public health, air and water pollution, water and wastewater treatment, and solid waste management. Applies engineering methods to environmental preservation and protection.
Prerequisite(s): WWT 110, WWT 112, WWT 114, and WWT 116, or State of Connecticut Wastewater Certification Levels I and II.

ENV* 237 - Pollution Prevention**3 credits**

Offered: (Course has not been offered in two years)

Presents the many steps being taken by governmental, commercial, industrial, and educational facilities to eliminate pollutant discharges. Pollution prevention (i.e., preventing the discharge of pollutants to eliminate the need for treatment and discharge into the air, ground, or water of a "waste stream") has become a very important part of modern environmental protection. Field trip required.

Prerequisite(s): EVS* 100 or instructor's permission.

Environmental Science**EVS* 100 - Introduction to Environmental Science****SK: Scientific Knowledge and Understanding****3 credits**

Examines the conceptual basis for today's environmental programs. Emphasizes water, solid waste, hazardous waste, air pollution, and local land use decisions by focusing on the biological, chemical, and physical aspects of environmental pollution, energy, and relationships between the environment and society. Considers environmental ethics, law, and relationships between environment, economics, and government. Field trips(s) required.

EVS* 114 - Environmental Science**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Examines the scientific, social, and political aspects of environmental problems. Emphasizes water, solid waste, air pollution and local land use decisions by focusing on the biological, chemical, and physical aspects of environmental science. Examines energy sources and the relationships between the environment and society. This course also considers environmental ethics, law, and the relationships between the environment, economics and government. Laboratory exercises expand upon these various topics as they are discussed in lecture. Students who have taken and successfully completed EVS* 100 may not take EVS 114. Lecture Hours: 3 Lab Hours: 3

EVS* 200 - Toxicology**3 credits**

Focuses on toxicological principles, including FDA requirements relating to new drugs. Addresses environmental and other factors affecting the toxicity of therapeutic agents, mechanisms of toxicity, and clinical applications.

Prerequisite(s): EVS* 100 or EVS* 114

EVS* 296 - Environmental Science & Toxicology Internship**3 credits**

This course places students in a suitable, supervised internship in an industry of interest for a minimum of 150 hours of internship work.

Prerequisite(s): CHE* 121 with a C or better

Exercise Science**EXS* 101 - Introduction to Exercise Science and Wellness****3 credits**

An introduction to the fitness industry, the various career options available and the analysis of current and future industry trends. Analyzes the history of the field and the role of fitness specialists in society today.

Prerequisite(s): Eligibility for ENG* 101.

EXS* 102 - Seminar in Exercise Science and Wellness**3 credits**

Discusses an ever-changing range of exercise and wellness topics, their effects on the individual, the industry and society.

EXS* 115 - Fitness Management**3 credits**

Presents the development and operations of a successful health and fitness business including management, marketing, sales, human resources, legal issues and more.

EXS* 212 - Exercise Science & Wellness Internship**3 credits**

Refines students' skills in the health evaluations, exercise testing and exercise program development, as well as the management of exercise programming. Students participate in 150 hours of supervised field experience to further develop their knowledge, skills and abilities. Students must possess a current Adult First Aid, CPR, and AED certification that has a practical skills examination component (such as the American Heart Association or the American Red Cross).

Prerequisite(s): EXS* 225 and EXS* 227.

EXS* 225 - Essentials of Strength and Conditioning**3 credits**

Practical application of the scientific principles behind the aerobic and anaerobic adaptations of training and various exercise forms and how they relate to different populations and their fitness goals. Exercise prescription and adaptation with regard to cardiovascular, resistance and specialty training.

Prerequisite(s): BIO* 211. Corequisite(s): BIO* 212.

EXS* 227 - Exercise Testing & Program Design

CALT: Critical Analysis/Logical Thinking**4 credits**

Includes guidelines for laboratory testing used in a health and fitness setting and for exercise programming. Students will analyze the specific needs and concerns of each testing outcomes, and how to best work with each sector.

Prerequisite(s): BIO* 211 and EXS* 225.

EXS* 229 - Human Biomechanics**4 credits**

Applications of the fundamental principles and systematic observations of the quality of human movement and how to best improve performance.

Prerequisite(s): BIO* 211.

EXS* 230 - Exercise Programming for Special Populations**3 credits**

Provides information on exercise testing and programming for people with a wide range of disease and disabilities. Focus on the unique requirements, the effects of exercise training, and recommendations for exercise are covered.

Prerequisite(s): EXS* 227.

EXS* 235 - Exercise Physiology**4 credits**

Focuses on the physiological factors affecting human performance in exercise and activity with special focus on the muscular, cardiovascular and circulatory systems under the effects of exercise through lecture and lab experiences.

Prerequisite(s): BIO* 211, BIO* 212.

Fire Administration**FTA* 100 - Fitness and Health for Firefighters****3 credits**

Overview of fitness for current and prospective firefighters. Includes physical and mental aspects of performance for optimal achievement on fire department agility test and firefighting task.

Prerequisite(s): M.D. physical and clearance to participate in physical fitness activities.

FTA* 101 - Fundamentals of Firefighting I**9 credits**

The first of two courses that provides the essentials of firefighting including fire department operations, firefighting equipment and safety. Emphasis on the chemistry of fire, techniques of firefighting, and utilization of equipment in fire suppression. Physical training is mandatory and is expected daily. The GWCC Certification program is designed to meet all requirements of the State of Connecticut Commission of Fire protection, firefighter I certification.

Prerequisite(s): Acceptance into the GCC Firefighting I and II Certification Academy. M.D. physical and clearance to participate in physical activities, lifting, bending, and carrying up to 30 lbs.

FTA* 102 - Fundamentals of Firefighting II**3 credits**

Continuation of the essentials of firefighting including fire department operations, firefighting equipment, and safety. Emphasis on the chemistry of fire, techniques of firefighting, and utilization of equipment in fire suppression. Physical training is mandatory and is expected daily. The GWCC Certification program is designed to meet all requirements of the State of Connecticut Commission of Fire protection, firefighter I and II certification.

FTA* 103 - Civil Service Test Preparation**1 credits**

Provides preparation for civil service exams given to prospective firefighters. The course covers all aspects of the exam process including written, oral and physical ability testing. Students will review and practice basic concepts and skills in pre-algebra, writing, reading. Practice written test will be used to help the student identify areas for improvement. Also covers oral interviewing skills for fire department civil service exams. Students will be shown and provided preparatory information on candidate physical ability testing for fire departments.

Prerequisite(s): FTA* 101.

FTA* 110 - Fire Ground Hydraulics**3 credits**

Presents the principles of water and water flow, including water supply systems and water flow analysis. Emphasis on the movement of water through fire apparatus, appliances, hose and various nozzles. Covers fire apparatus and pumps, fire streams, fire service pressure calculations, and fixed fire extinguishing systems such as sprinkler and standpipe operations.

Prerequisite(s): FTA* 101.

FTA* 112 - Introduction to Fire Technology**3 credits**

Provides an overview to fire protection and emergency services, culture and history of emergency services, fire loss analysis, organization and function of public and private fire protection services, fire departments as part of local government, laws and regulations affecting the fire service, fire service nomenclature, specific fire protection functions, basic fire chemistry and physics, fire strategy and tactics, and life safety initiatives.

FTA* 116 - Building Construction**3 credits**

Provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures, pre-planning fire operations, and operating at emergencies.

FTA* 118 - Fire Prevention and Inspection**3 credits**

Provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use and application of codes and standards, plans review, fire inspections, fire and life safety education, fire investigation.

Prerequisite(s): FTA* 112

FTA* 122 - Fire Behavior and Combustion**3 credits**

Explores the theories and fundamentals of how and why fires start, spread, and are controlled.

Prerequisite(s): FTA* 112

FTA* 126 - Safety and Survival**3 credits**

Introduces the basic principles and history related to the National firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

Prerequisite(s): FTA* 112

FTA* 210 - Water Supply and Hydraulics**3 credits**

Provides a foundation of theoretical knowledge in order to understand the principles to analyze and solve water supply problems.

Prerequisite(s): FTA* 112, MAT* 115 or higher.

FTA* 212 - Legal Aspects of Emergency Services**3 credits**

Addresses the federal, state, and local laws that regulate emergency services and include a review of National standards, regulations, and consensus standards.

Prerequisite(s): FTA* 112

FTA* 213 - Codes and Standards**3 credits**

Presents fire and building codes as a means to provide reasonable public safety. Introduces code development and adoption processes and code administration. Reviews major regulatory organizations and national standards, emphasizing the Life Safety Code of the NFPA and its referenced standards.

FTA* 216 - Municipal Fire Administration**3 credits**

Introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics, and leadership from the perspective of the company officer.

Prerequisite(s): FTA* 112

FTA* 217 - Occupational Safety & Health for Emergency Services**3 credits**

Introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations.

Prerequisite(s): FTA* 112

FTA* 218 - Extinguishing Systems**3 credits**

Covers wet- and dry-pipe automatic sprinklers, both commercial and residential, as well as preaction and deluge systems, water spray and foam systems. Also discusses standpipes, carbon dioxide, dry chemical, and halon extinguishing and explosion suppression systems. Review appropriate NFPA Standards.

Prerequisite(s): FTA* 210

FTA* 219 - Fire Investigation I**3 credits**

Determines points of origin and causes of fires, discriminating between fires of accidental and intentional origin. Presents managing operations at the fire scene, collecting and preserving evidence, recording information, and scientific aids to investigation.

Prerequisite(s): CHE* 111 and FTA* 116

FTA* 227 - Fire Protection Systems**3 credits**

Provides information relating to the features of design and operation of fire alarm systems, water-based fire protection and portable fire extinguishers.

Prerequisite(s): FTA* 210

FTA* 229 - Fire Investigation II**3 credits**

This course intends to provide the student with advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and courtroom testimony.

Prerequisite(s): FTA* 219

FTA* 230 - Strategy and Tactics**3 credits**

Provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents.

Prerequisite(s): FTA* 112

First Year Experience

IDS 114 - Foundations of Academic Inquiry

3 credits

Introduces students to academic inquiry and the academic environment through the exploration of a current event/issue/controversy. The thematic approaches may include current topics in politics, the environment, technology, social justice, popular culture and more. Through the academic investigation of the theme, students will learn skills necessary for success in college and beyond.

Foreign Languages

FRE* 101 - Elementary French I

3 credits

Presents the essentials of grammar and reading with practice in speaking and writing basic French. Open to students with little or no experience in French.

FRE* 102 - Elementary French II

3 credits

Improves language skills with further study of grammar, pronunciation, and basic speech patterns. Provides additional practice in reading and writing.

Prerequisite(s): FRE* 101.

FRE* 201 - Intermediate French I

3 credits

Develops audio-lingual skills. Reviews basic principles of the language, including grammar with an emphasis on reading, writing, and speaking.

Prerequisite(s): FRE* 102.

FRE* 202 - Intermediate French II

3 credits

Offers a thorough drill of grammar, typical speech patterns, and diction. Stresses conversation and composition, based on class readings, to develop mastery of the language.

Prerequisite(s): FRE* 201.

ITA* 101 - Elementary Italian I

3 credits

Presents the essentials of grammar and reading with practice in speaking and writing simple Italian. Stresses pronunciation. Open to students with little or no experience in Italian.

ITA* 102 - Elementary Italian II

3 credits

Emphasizes aural comprehension, pronunciation, and basic conversation. Continues practice in speaking and writing. Stresses the basic structure of Italian grammar.

Prerequisite(s): ITA* 101.

ITA* 201 - Intermediate Italian I

3 credits

Reviews and deepens knowledge of Italian grammar with more emphasis on reading and vocabulary building. Intensifies practice in speaking and some reading of contemporary prose.

Prerequisite(s): ITA* 102.

ITA* 202 - Intermediate Italian II

3 credits

Stresses conversational patterns and practices. Presents Italian literature and culture. Provides the skill training required to read and translate Italian.

Prerequisite(s): ITA* 201.

SPA* 97 - Basic Spanish I

3 credits

Familiarizes students with key aspects of the Spanish language. Facilitates a solid foundation and builds confidence for higher level courses. Developed for those who have not had experience with the language and responds to the changing academic, occupational, technological, and cultural needs of a diverse population. Daily conversations and use of the language will be the key for success in this course. (Credit does not count toward degree requirements).

SPA* 101 - Elementary Spanish I**3 credits**

Presents the essentials of grammar and reading with practice in speaking and writing basic Spanish. Develops conversational skills. Open to students with little or no experience in Spanish. (Native speakers of Spanish are strongly discouraged from registering for this course.) Placement in this course is determined by score from the placement exam.

SPA* 102 - Elementary Spanish II**3 credits**

Emphasizes aural comprehension, basic conversation, and pronunciation. Emphasizes principles of grammar to improve reading, writing, and speaking.

Prerequisite(s): SPA* 101 or appropriate score on placement test.

SPA* 201 - Intermediate Spanish I**3 credits**

Introduces conversational Spanish through a presentation of Spanish civilization. Emphasizes written reports, readings of Spanish prose, and lectures on important literary figures.

Prerequisite(s): SPA* 102 or appropriate score on placement test.

SPA* 202 - Intermediate Spanish II**3 credits**

Emphasizes advanced composition and conversation. Discusses readings and reports on literary, artistic, and political figures of Spanish and Spanish-American civilization.

Prerequisite(s): SPA* 201 or sufficient score on the placement test.

SPA* 221 - Introduction to Puerto Rican Studies I**3 credits**

Surveys Puerto Rican literature: prose, drama, poetry, and essays from colonial times to the present.

Prerequisite(s): ENG* 101, SPA* 202 or instructor recommendation.

SPA* 222 - Introduction to Puerto Rican Studies II**3 credits**

Examines the process and consequences of cross-cultural contact and cultural changes in Puerto Rican society. Discusses historical, political, and sociological issues central to an understanding of the Puerto Rican culture.

Prerequisite(s): ENG* 101, SPA* 202 or instructor recommendation.

SPA* 232 - Spanish Composition for Professionals**3 credits**

This computer/classroom online course provides students with the basic knowledge to communicate appropriately in written Spanish by learning to write clearly, simply, and effectively and by using technology to develop writing ability.

Prerequisite(s): SPA* 202 or equivalent or sufficient score on the placement test.

General Studies

No active courses available.

Geography**GEO* 101 - Introduction to Geography****3 credits**

Presents natural, cultural, and political environments, enabling students to better understand the world. Examines various professional opportunities in the field of geography and various habitats of the physical world, e.g., mountains, deserts, and plains, with particular emphasis on the relationship of place and self.

History**HIS* 101 - Western Civilization I****HK: Historical Knowledge and Understanding****3 credits**

Presents the basic forces that have shaped Western tradition, from the Neolithic age to the Renaissance and Reformation periods. Emphasizes the economic and political aspects of ancient, medieval, and early modern history.

HIS* 102 - Western Civilization II**HK: Historical Knowledge and Understanding****3 credits**

Examines the development of the mind from medieval to modern, with particular attention on trade, urban communities, and the commercial and manufacturing centers that altered economic, social, and political thinking.

HIS* 201 - U.S. History I**HK: Historical Knowledge and Understanding****3 credits**

Presents a special treatment of the social, economic, political, and cultural development of the American people, beginning with the Age of Discovery and Colonial settlement and continuing through the Civil War. Topics include Puritanism, Hamiltonianism, and Sectionalism.

HIS* 202 - U.S. History II**HK: Historical Knowledge and Understanding****3 credits**

Provides a topical, rather than a chronological, approach to the Reconstruction in the South, from 1865 to the present. Applies the same approach in the same time span to other topics, such as labor, agriculture, business, foreign affairs, and progressivism. Topics are based on a contemporary problem, taking into account its historical perspective.

HIS* 216 - African-American History I**3 credits**

Demonstrates the significant role African-Americans have played in history. Starting in Africa, stresses such topics as slave trade and slavery. Continuing through the Colonial and antebellum periods to the Reconstruction and segregation eras, places the African-American in the proper perspective within the fully dimensional picture of America.

HIS* 217 - African-American History II**3 credits**

Studies the African-American experiences from the Post-Reconstruction era through modern times. Illustrates some of the many success stories of African-Americans and identifies the obstacles that were placed in their way. Covers the Harlem Renaissance, Brown vs the Board of Education, the Civil Rights Movement, the Black Power Movement, and the Great Society.

HIS* 233 - 20th Century Russia**3 credits**

Offered: (Course has not been offered in the past two years)

Examines the intellectual, political, and socioeconomic changes in twentieth century Russia. Investigates post-revolutionary problems, both political and economic, during the consolidation of power by the Soviet dictatorship. Also addresses Glasnost, Perestroika, and the collapse of the Soviet Union.

HIS* 253 - History of Human Rights**3 credits**

Examines the origin and development of the concept of human rights in the modern world. It will examine three major areas of human rights: political, social and economic, and cultural rights through the study of theoretical material and case studies. The main focus will be on Latin American and the United States.

Hospitality Management**HSP* 100 - Introduction to the Hospitality Industry****3 credits**

Examines the scope, components, and development of the hospitality and tourism industries. Overview of specialized fields and careers relating to the management of food service, lodging, and tourism operations. Covers the relationship between components of hospitality and meeting planning.

HSP* 117 - Beverage Management**3 credits**

Offered: Spring

Introduces the identification, use, and service of wines and other alcoholic beverages with an in-depth analysis of the various elements of beverage operations, including purchasing, control, legalities, merchandising, and bar management.

HSP* 134 - Hospitality Customer Relations**3 credits**

Introduces the concept and principles of treating customers as guests and create a “wow” experience for them. Explores the intricacies of quality guest service with solid and proven concepts across the hospitality industry. Students will develop communication and problem-solving skills and learn the art of cordiality, how to exceed guest expectations, handle difficult guests, resolve conflict, and analyze guest feedback to improve performance.

HSP* 211 - Food and Beverage Cost Control**3 credits**

Offered: Fall

Presents cost control methods, cost/volume/profit relationship, and purchasing as they relate to the food and beverage industries. Food and beverage cost determination, inventory, turnover, menu, and portion costing and forecasting will be discussed.

Prerequisite(s): MAT* 095

HSP* 212 - Equipment Design and Layout**3 credits**

(Course has not been offered in the past two years) Presents the concepts of equipment and layout and their interrelationship in a well-organized food service facility. Considers equipment selection based on menu, volume, and budget requirements. Focuses on equipment design and layout methodology.

Prerequisite(s): HSP* 101 and HSP* 109.

HSP* 231 - Hospitality Law**3 credits**

Offered: Fall

Introduces the basics of hotel, motel, restaurant, and travel law. Covers the fundamental laws, rules, regulations, and contracts applicable to the hospitality and meetings industries. The hotel-guest relationship laws regarding food and beverage service, negotiation, mediation, and contract relationships between management and vendors will be discussed.

HSP* 232 - Restaurant Management**3 credits**

Focuses on the important elements involved in the successful operation and how they interrelate. The process of creating a concept, developing a menu, budgeting, controlling costs, staffing, purchasing food and equipment, bar and beverage management, daily operations, and developing a marketing plan will be covered.

HSP* 237 - Hospitality Marketing**3 credits**

Focuses on marketing and sales as they apply to the hospitality industries, especially methods of marketing a hotel, restaurant, and destination. Topics include marketing basics, the marketing plan, sales promotion, and special challenges in this industry. The relationship of sales and marketing to the meetings and conventions industry will be discussed.

HSP* 241 - Principles of Tourism and Travel**3 credits**

(Course has not been offered in the past two years) Introduces the tourism field, highlighting goals of the tourism profession and providing a guideline for achieving individual and collective success. Covers market analysis and conceptual planning of site development, transportation, accommodations, and support industries. Presents a comprehensive view of the field, dramatically bringing to the forefront the immense propositions of world tourism, examining its past and present, and providing a direction for the future.

HSP* 244 - Meetings, Conventions, and Special Events Management**3 credits**

Introduces methods of creating successful meetings, conventions, and special events. Topics include setting objectives, program design, site selection, budgeting, negotiations, room setups, audio visual, travel arrangements, and contracting for services.

HSP* 246 - Hotel Accounting and Front Office Management**3 credits**

Emphasizes accounting procedures and functions of the front office, including internal control procedures, guest services, housekeeping, and reservations. Places attention on the needs of management and the application of accounting concepts and techniques to managerial decision making. Explores the interaction of the front office and other areas of the hotel in relationship to customer service.

HSP* 249 - Food Writing**3 credits**

Students will find a way to express their culinary sensibilities in the form of reviews, essays, blogs, media presentations, cook books, and recipe writing. Much of the course will be devoted to analyzing both professional and student work.

HSP* 295 - Hospitality Management, Internship/Work Experience I**3 credits**

Provides an opportunity to gain experience in a hotel, restaurant, food service, travel or hospitality-related business. This must be a new experience to the student. Requires completion of 120 internship hours at a site conducive to the student's career goals which is designated by the instructor.

Prerequisite(s): Program coordinator's permission, a minimum GPA of 2.50, completion of 18 earned HSP credit hours and a GPA of 2.75 in HSP classes.

HSP* 298 - Hospitality Management Internship/Work Experience II**1 credits**

Provides an opportunity for students to gain experience in a hotel, restaurant, foodservice, travel or hospitality-related business. The student is responsible for seeking paid employment in the hospitality industry. A total of 280 hours must be completed and documented with paystubs between June 1 and August 10.

Prerequisite(s): HSP* 295, Program coordinator's permission, a minimum GPA of 2.50, completion of at least half of their program and earned at least 18 HSP credit hours and a GPA of 2.75 in HSP classes.

Human Services**HSE* 101 - Introduction to Human Services****3 credits**

Introduces the history, philosophy, ethics, and values of the human services field. Compares the variety of structures, goals, and methods of service delivery, focusing on the human service network of New Haven.

HSE* 151 - Introduction to Therapeutic Recreation**3 credits**

Presents the history, philosophy, and concepts of Therapeutic Recreation services in community and institutional settings. Students will learn how special population groups use and benefit from the skills of therapeutic recreation specialists.

HSE* 152 - Programming in Therapeutic Recreation**3 credits**

Offered: Fall

Teaches the purpose of recreational services, how to use the methods and materials. Describes the rehabilitation process and how to apply the correct programs to specific groups.

HSE* 153 - Methods and Materials for Therapeutic Recreation**3 credits**

Offered: Spring

Explains in a concentrated form the methods and materials used in various recreational settings. Assesses the physical, mental, emotional, and social abilities of clients who need therapeutic recreation services. Presents group activities that incorporate, among other methods, crafts, drama, dance, and music to create well-rounded therapeutic recreation programs.

Prerequisite(s): HSE* 152.

HSE* 212 - Mediation**OC: Oral Communication****3 credits**

Designed to introduce mediation philosophies, approaches, applications, and skills for all types of third-party conflict interventions. Provide students with opportunities to effectively use nonviolent communication strategies, evaluate and critique conflict situations and generate alternative dispute solutions in different environments: these include local businesses, nonprofit organizations, primary and secondary schools, and public health institutions. At the completion of the course, students will be able to observe, volunteer, co-mediate, and participate in specialized trainings at mediation centers around the state.

Prerequisite(s): ENG* 101 (or higher).

HSE* 228 - Youth Work Seminar**3 credits**

Students enrolled in the youth worker certificate program and who are also concurrently enrolled in either HSE* 281 or HSE 282 will meet for this small group seminar. At these seminars, agencies will present ways in which they serve youth by implementing the youth worker philosophy in their provision of services. Students will learn to apply theoretical concepts to their practice specialty through direct experience and supportive seminar learning experiences.

Corequisite(s): HSE* 281 or HSE 282.

HSE* 247 - Supervisors' Seminar**3 credits**

Offered: Spring

Focuses on concepts, principles, and methods of supervising new professionals and/or paraprofessionals. Focuses on issues confronting the supervisor in traditional settings. Intended for administrators, managers, teachers, and professionals who work in human service agencies and organizations.

HSE* 271 - Field Work Seminar I**3 credits**

Presents how to integrate and process knowledge and theory learned in foundation courses with experiences gained at the field site. The seminar acts as a forum for sharing field experiences and as a peer support group. Focuses on developing the skills necessary for human services practice, i.e., observation, human relations, interviewing, self-awareness, and leadership.

Corequisite(s): HSE* 281.

HSE* 281 - Human Services Field Work I**3 credits**

Provides prospective human services workers with an opportunity to learn experientially at a human services agency in the community. Focuses on how an agency functions through direct experience in a part of that agency. Requires a minimum of eight hours a week at the placement agency.

Corequisite(s): HSE* 271.

Interdisciplinary Peace, Collaboration, & Conflict**HUM* 125 - Introduction to Peace and Conflict Studies****CALT: Critical Analysis/Logical Thinking****3 credits**

Presents an interdisciplinary study of the concepts of positive and negative peace, nonviolence, human rights, justice, truth and reconciliation, peacebuilding, peace makers and peace keeping as they relate to economic, sociological, psychological, historical, political, technological, cultural, ideological, geographical, and environmental factors.

Prerequisite(s): Eligibility for ENG* 101.

IDS 292 - Peace/Conflict Service Learning Internship**3 credits**

Designed to provide students a professional employment environment where they can apply skills in conflict resolution, resolving ethical conflicts, and the use of mediation developed through the Interdisciplinary Peace, Collaboration and Conflict Certificate coursework. Students focus on career paths and continued study at institutions of higher learning. This course provides opportunities for extended training, research projects and presentations for workshops and conferences. Requires 60 hours with a minimum of 6 hours a week at placements and/or extended trainings.

Prerequisite(s): HUM* 125, PHL* 111, HSE* 212, and 3 credits of restricted electives.

Liberal Arts and Sciences

No active courses available.

Manufacturing Engineering Technology

MFG* 102 - Manufacturing Processes

3 credits

Provides theoretical concepts of manufacturing and develops the knowledge and skills required in the manufacturing process. The laboratory portion introduces common metal cutting tools, lathe operations, and associated precision measuring tools and instruments. Labs will involve set-up and preparation of milling machines, lathes, grinders, and drill presses. Lecture Hours: 2 Lab Hours: 3

Corequisite(s): ARC* 133.

MFG* 108 - Computer Aided Manufacturing

4 credits

Focuses on the process of manual and automated preparation of computerized manufacturing system programs. The laboratory portion provides experience in the manual and automated preparation of computerized manufacturing system programs. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MFG* 102.

MFG* 116 - Quality Assurance Organization and Management

4 credits

Develops the concepts of a Total Quality System (TQS), including policies, objectives, and organization. Reviews such topics as cost of quality, planning, improvement techniques, reliability, supplier relations, and evaluations. Addresses inspection, measurement, and process control techniques. Covers customer and consumer relations.

MFG* 204 - Advanced Computer Aided Manufacturing

4 credits

Builds on the skills learned in CAM I with sharper focus on the integration of CAD and CAM for fast prototyping and design for manufacturing. The laboratory portion introduces practical applications for automated CAM systems.

Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MFG* 108.

MFG* 208 - Process Engineering

4 credits

Introduces the principles and techniques used to design the most efficient method of product manufacturing, establish the best sequence of operations, select the proper machines to perform the operations, evaluate the need for special tooling, and provide conceptual sketches of special tools. The laboratory portion consists of workshop problems that prepare the student for an entry-level position in manufacturing process design. Exercises cover such conventional machine tools as turn, drill, mill, broach, CNC, grind, and miscellaneous processes. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MFG* 102.

MFG* 210 - Materials of Engineering

4 credits

Studies the structure and properties of engineering materials. Discussed materials selection, processing and heat treatment. Addresses the changes in structure and properties during forming, machining and heat treating operations. The laboratory portion uses selected experiments to demonstrate the effects of processing including heat treatment on the properties of engineering materials. Standard materials tests are also performed. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MFG* 102.

MFG* 216 - Tool Designing

4 credits

Covers the theory of metal cutting tools design. Presents the principles, practices, tools, and commercial standards of single point, jig, fixture, and die design through lectures, visual aids, and individual projects and design work. The laboratory portion provides practice in the design of metal cutting tools. Lecture Hours: 2 Lab Hours: 4

Prerequisite(s): CAD* 108 and MFG* 102.

MFG* 228 - Computer Integrated Manufacturing I**4 credits**

Covers computer generated CNC programming, robot programming, analog programmable logic control programming, and interfacing of robots, controllers and machine tools. Discussed part families, CAD/CAM and Flexible Manufacturing Systems. The laboratory portion provides practice in writing computer generated CNC programs, robotic programming and interfacing and analog programmable logic controller programming. A flexible manufacturing system is programmed. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): CAD* 108, MFG* 108.

MFG* 230 - Statistical Process Control**3 credits**

Presents a practical management aid adapted from the science of statistics. Presents topics ranging from basic statistical concepts to techniques for cost and quality control, emphasizing control by charting and acceptance sampling. Uses the computer as an aid in calculation and control chart preparation.

Prerequisite(s): MFG* 102.

MFG* 239 - Geometric Dimensioning and Tolerancing**3 credits**

Focuses on the industrially accepted ANSI Specification Y14.5-1973 and ANSI Y14.5M-1982. The ANSI Y14.5 specification creates a unified language that specifies engineering requirements related to the actual function of and relationship between parts. Includes the application of form, profile, orientation, runout, and location types of geometric characteristics, including the application of the feature control frame and tolerance and datum modifiers.

MFG* 296 - Manufacturing Internship**3 credits**

Provides practical experience in the manufacturing field. The assignment can involve one or more of the subjects relevant to manufacturing engineering technology, including drafting, manufacturing processing, CAD, CAM, quality control, and tool design.

Prerequisite(s): Good academic standing and the consent of the academic advisor or the Manufacturing Program Coordinator.

Mechanical Engineering Technology**MEC* 104 - Mechanics - Statics****3 credits**

Analyzes the forces acting on various types of two- and three-dimensional structures in static equilibrium. Studies the composition and resolution of forces acting on beams, trusses, frames, and machines. Also covers centroids, distributed forces, moments of inertia, and friction. The laboratory portion provides problem-solving applications of the theory learned in the classroom, emphasizing engineering analysis and the preparation of written reports.

Lecture Hours: 3

Prerequisite(s): MAT* 175 or PHY* 121 or sufficient score on the mathematics placement test.

MEC* 234 - Electromechanical Controls**4 credits**

Introduces the student to the fundamentals of electric circuits and electrical machinery emphasizing DC/AC single and polyphase motors and generators. Presents electrical methods of manual and automatic control of mechanical systems. The laboratory portion covers motors, control systems, digital logic, and applications. Emphasizes the organization, report, and interpretation of test data in a written report for each experiment. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MAT* 095 or sufficient score on the mathematics placement test.

MEC* 240 - Fundamentals of Thermodynamics**4 credits**

Presents the thermodynamic principles of heat, work, non-flow and steady flow processes, and thermodynamic cycles. Stresses the fundamental principle of energy conversion and the use of thermodynamic data tables and charts.

Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MEC* 104. Corequisite(s): MAT* 186

MEC* 250 - Strength of Materials**3 credits**

Covers the principles involved in the analysis of stresses in machine and structural elements under various types of loads. Analyzes these stresses in thin-walled cylinders and spheres, riveted and welded joints, beams, columns, cast sections, couplings, and shafts. The laboratory portion investigates material strength and the intelligent use of existing references. In the lab, students work in small groups to conduct their own measurements of the mechanical properties of common materials. Uses microcomputers to analyze experimental data and prepare final reports. Lecture Hours: 2
Lab Hours: 3

Prerequisite(s): MEC* 104. Corequisite(s): MAT* 175.

MEC* 265 - Materials Science**4 credits**

Introduces the internal structure of metallic, polymeric, and ceramic solids and their physical, mechanical, electrical, and chemical properties in engineering applications. The laboratory portion investigates the reactions that take place in materials subjected to a variety of tests. Introduces students to ASTM standards and procedures. Lecture Hours: 3
Lab Hours: 2

Corequisite(s): PHY* 121.

MEC* 271 - Fluid Mechanics**4 credits**

Introduces fluid mechanics, basic fluid characteristics, hydrostatics, pressure, center of pressure, and pressure measuring devices. Demonstrates the application of the general energy equation to fluid in motion. Also demonstrates the modifications necessary to analyze the effect of viscosity and friction of fluid flow, pressure heads, and pumping calculation. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MEC* 104. Corequisite(s): MAT* 186 .

MEC* 283 - Design of Machines**4 credits**

Presents the concept of Mechanical Design, from concept to specifications. Covers the procedures, data, and techniques necessary to design such mechanical components as gears, springs, bearings, belt and chain drives, clutches, brakes, fasteners, shafts, and screws. Emphasizes the use of computers in the design process. The laboratory portion combines all previous study dealing with machine elements. Uses computer-aided design solutions and requires a design project. This project includes an analysis of individual components, assembly, and detail drawings. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): MEC* 250, MEC* 265, and CAD* 108.

MEC* 296 - Mechanical Engineering Internship**2 credits**

Provides Mechanical Engineering Technology students with a semester of external related career experiences designed to enhance the student's preparedness for an intended career with business, industry or government agency. A comprehensive written report on the Internship practice is required. To be eligible for the internship, a student must be of good academic standing and have program advisor approval.

Mathematics**MAT* 079 - Quantitative Literacy Prep****3 credits**

Provides students with the skills necessary to be successful in a quantitative literacy or elementary statistics course through a study of vocabulary, unit conversions and dimensional analysis, personal finance applications, and the development of calculator skills. Lecture Hours: 3

Prerequisite(s): Instructor/Department Permission Required

MAT* 085 - Elementary Algebra Foundations w/Pre-Algebra**6 credits**

Embeds additional support into the MAT* 095 topics to present an introductory course in Algebra including a concentrated arithmetic review. Topics include whole numbers, signed numbers, decimals, fractions, ratios, proportions, percent, estimation, geometry, linear equations and inequalities in one variable, graphing linear equations and inequalities in two variables, formulating equations of lines in two variables, an introduction to functions, solving systems of linear equations, rules of integral exponents, and operations on polynomials. Credit does not count toward degree requirements or graduation. A Graphing Calculator is required: TI-83 or TI-84 family is strongly recommended.

MAT* 095 - Elementary Algebra Foundations**3 credits**

A study of the basic properties and theorems of real numbers, including the manipulation of polynomials and expressions containing rational and radical terms as well as integer exponents. Topics also include linear equations in one and two variables, systems of linear equations in two variables, and an introduction to functions. There is an emphasis on real world applications in both algebra and geometry. Credit does not count toward degree requirements or graduation. A graphing calculator is required—TI-83 or TI-84 family is strongly recommended. Prerequisite(s): A grade of C or better in MAT 075 or MAT* 085/MAT* 097 or sufficient score on the mathematics placement test.

MAT* 109 - Quantitative Literacy**3 credits**

Introduces the language of mathematics. Topics include consumer mathematics, percent, personal loans and simple interest, compound interest, installment buying, buying a house with a mortgage, annuities and sinking funds. A brief study of the history of mathematics, including early numeration systems. A basic introduction to game theory and voting and apportionment. This course may be used to satisfy the mathematics requirement for graduation. Prerequisite(s): MAT* 085, MAT* 095, MAT 095A, B, and C, MAT* 097 with a grade of D or better or sufficient score on the mathematics placement test.

MAT* 115 - Mathematics for Science and Technology**3 credits**

Presents basic mathematical concepts needed in the science and technology fields. Includes scientific notation, English and metric systems, solutions to first- and second-degree equations, systems of equations, logarithms, elementary geometry, statistics, graphing, and trigonometry. Introduces the scientific calculator. Prerequisite(s): A grade of C or better in MAT* 085, MAT* 095, MAT 095 A, B, or C, MAT* 097 or sufficient score on the mathematics placement test.

MAT* 117 - Introduction to Finite Mathematics**3 credits**

Presents various mathematical topics, including a review of basic algebraic concepts, mathematics of finance, systems of linear equations and matrices, linear inequalities and linear programming, probability, and game theory. Prerequisite(s): A grade of C or better in MAT* 085, MAT* 095, MAT* 095 A, B, or C, MAT* 097 or sufficient score on the mathematics placement test.

MAT* 123 - Elementary Statistics**3 credits**

Considers fundamental concepts of probability and statistics including mean, median, mode for grouped and non-grouped data, permutations, combinations, applications of distributions, hypothesis testing, and confidence intervals. Prerequisite(s): A grade of C or better in MAT* 085, MAT* 095, MAT* 095 A, B, or C, MAT* 097 or sufficient score on the mathematics placement test.

MAT* 137 - Intermediate Algebra**3 credits**

Presents a study of linear, radical, rational, quadratic, and exponential functions represented by tables, graphs, words, and symbols. Focus is on the manipulation of expressions and the solving of equations using multiple methods. There is emphasis on modeling and applications for all topics. A graphing calculator is required. Prerequisite(s): A grade of C or better in MAT* 095 or MAT* 095C, or sufficient score on the mathematics placement test.

MAT* 137A - Intermediate Algebra for Advanced Studies**4 credits**

Presents a study of functions represented by tables, graphs, words, and symbols. Focus is on the manipulation of expressions and the solving of equations that are radical, rational, exponential, and quadratic. Additional topics include first and second degree and absolute value inequalities, systems of non-linear equations, and dimensional analysis. There is an emphasis on modeling and applications for all topics. A graphing calculator is required. This course is intended for students who will need higher level Mathematics courses (MAT* 172 or MAT* 175). Prerequisite(s): A grade of C or better in MAT* 095 or MAT* 095C, or sufficient score on the mathematics placement test.

MAT* 137C - Intermediate Algebra w/Embedded Elementary Algebra**4 credits**

This course embeds additional support into the MAT* 137 course to present an intermediate course in Algebra including a concentrated review of the algebra fundamentals. Offers a study of linear, radical, rational, quadratic, and exponential functions represented by tables, graphs, words, and symbols. Focus is on the manipulation of expressions and the solving of equations using multiple methods. There is emphasis on modeling and applications for all topics. This course is recommended for students who have some knowledge of elementary algebra but require reinforcement. A graphing calculator is required for this course.

Prerequisite(s): A minimum grade of C or better in MAT* 085 or MAT* 097, or a minimum grade of D in MAT* 095 or MAT* 095C or sufficient score on the mathematics placement test.

MAT* 142 - Mathematics for the Natural Sciences**QR: Quantitative Reasoning****3 credits**

Presents the numerical and algebraic manipulation of data, curve sketching, and curve fitting. Solutions to problems with a calculator, using examples from the natural sciences. This course may be used to satisfy the mathematics requirement for graduation.

Prerequisite(s): A grade of C or better in MAT* 137, Higher, or MAT* 137C or sufficient score on the mathematics placement test.

MAT* 143 - Mathematics for Elementary Education: Algebra/Number Systems I**QR: Quantitative Reasoning****3 credits**

Presents mathematical reasoning for problem solving sets, whole numbers, numeration systems, number theory, and integers. Required of all students in and working toward certification in elementary education. This course may be used to satisfy the mathematics requirement for graduation.

Prerequisite(s): A grade of C or better in MAT* 137, Higher, or MAT* 137C or sufficient score on the mathematics placement test.

MAT* 144 - Mathematics for Elementary Education: Geometry and Data**3 credits**

Presents geometry, measurement, rational numbers, irrational numbers, ratio, proportion, percent, problem solving, mathematical reasoning and connections, probability, and statistics. This course may be used to satisfy the mathematics requirement for graduation.

Prerequisite(s): A grade of C or better in MAT* 143.

MAT* 146 - Mathematics for the Liberal Arts**QR: Quantitative Reasoning****3 credits**

Intended for the student whose major field of study requires no specific mathematical preparation. This course examines logical structures, patterns and method of abstractions as they occur in a variety of basic mathematical topics such as set theory and number theory. Some historical aspects of mathematics are considered.

Prerequisite(s): A grade of C or better in MAT* 137, Higher, or MAT* 137C or sufficient score on the mathematics placement test.

MAT* 151 - Mathematics of Finance**QR: Quantitative Reasoning****3 credits**

Presents the basic mathematical operations of finance. Includes allocation of depreciation and overhead costs, financial statements and ratios, inventory evaluation, trade and case discounts, simple interest and bank discount, multiple payment plans and various compound interest calculations. Introduces and expands upon certain topics in the accounting sequence.

Prerequisite(s): MAT* 137, Higher, or MAT* 137C.

MAT* 158 - Functions, Graphs, & Matrices**QR: Quantitative Reasoning****3 credits**

Presents selected topics from contemporary mathematics with applications for students in business, economics, and social science. Topics include concepts of functions and rate of change, a review of algebraic and graphical aspects of polynomial functions, a study of exponential and logarithmic functions, mathematical modeling, and operations on systems of linear equations including matrix operations. A graphing calculator is used throughout the course.

Prerequisite(s): A grade of C or better in MAT* 137, MAT* 137A, or MAT* 137C or sufficient score on the mathematics placement test. Corequisite(s): Eligibility for ENG* 101.

MAT* 166 - Principles of Business Statistics**QR: Quantitative Reasoning****3 credits**

Presents statistical techniques appropriate for analyzing and solving problems in business and social science. Students will learn statistical concepts and methods of solving statistical problems. Introduces the following: data presentation in tabular and graphic forms, measures of central tendency and dispersion, time series, probability, statistical inference, hypothesis testing, analysis of variance, regression and correlation analysis, and decision-making theory. Uses computing statistical software such as Excel with add-ins and/or technology as needed or appropriate. This course is for business majors only.

Prerequisite(s): A grade of C or better in MAT* 137 or higher and CSA* 135 or BBG* 115.

MAT* 167 - Principles of Statistics**QR: Quantitative Reasoning****3 credits**

Introduces the concepts of collecting and compiling data. Reviews data presentation in tabular and graphic forms, bivariate data and its presentation, probability and probability structures, inferential statistics, analysis of variance, and hypothesis testing. Uses statistical computing software.

Prerequisite(s): MAT* 137, Higher, or MAT* 137C.

MAT* 172 - College Algebra**QR: Quantitative Reasoning****3 credits**

Briefly reviews the algebraic operations of real numbers. Offers an intense study of logarithms, exponential and logarithmic functions, systems of equations, determinants and matrices, and complex numbers.

Prerequisite(s): A grade of C or better in MAT* 137A or sufficient score on the mathematics placement test.

MAT* 175 - College Algebra and Trigonometry**QR: Quantitative Reasoning****3 credits**

Covers the basic manipulation of algebraic expressions, equations, and inequalities. Introduces factoring, trigonometry, exponents, radicals, and graphing. Uses the graphing calculator.

Prerequisite(s): A grade of C or better in MAT* 137A or sufficient score on the mathematics placement test.

MAT* 185 - Trigonometric Functions**QR: Quantitative Reasoning****3 credits**

Studies trigonometric functions, identities, and conditional trigonometric equations. Includes multiple angle functions, radian measure, and selected applications of trigonometry.

Prerequisite(s): MAT* 172 or MAT* 175.

MAT* 186 - Precalculus**QR: Quantitative Reasoning****4 credits**

Covers symmetry and transformation, polynomial and rational functions, exponential and logarithmic functions and equations, trigonometric functions, trigonometric identities, inverse functions and equations. Addresses advanced trigonometry and applications. Includes such topics as partial fractions, conic section, and non-linear systems of equations and inequalities in preparation for Calculus I. Uses the graphing calculator.

Prerequisite(s): A grade of C or better in MAT* 172 or MAT* 175 or permission of instructor.

MAT* 210 - Discrete Mathematics**3 credits**

Provides an introduction to set theory, logic, number theory, and methods of proof. Relations and functions, mathematical induction, recursion, graph theory, and algorithms will be discussed. Lecture Hours: 3

Prerequisite(s): MAT* 186 with a grade of C or better or permission from the department.

MAT* 230 - Applied Calculus with a Modeling Approach**3 credits**

Presents selected topics from calculus with applications in business, economics, and social science. Students will learn the fundamental concepts of calculus and how to apply them to real-life problems. A major goal is to develop conceptual understanding (rather than algebraic manipulation) through the use of graphing calculators and through the consideration of graphical, numerical, and algebraic perspectives. The major conceptual focus is on rates of change and their interpretations within the problem context. The definition of integral, the fundamental theorem of calculus, some selected application of integration and some integration techniques are included. A TI-83+/TI-84+ graphing calculator is required and used throughout.

Prerequisite(s): A grade of C or better in MAT* 158 or higher and eligibility for ENG* 101.

MAT* 254 - Calculus I**QR: Quantitative Reasoning****4 credits**

Applies limits, continuity, differentiation, antidifferentiation, and definite integrals to the physical and engineering sciences. Includes use of graphing calculators and/or computer laboratory activities.

Prerequisite(s): A grade of C or better in MAT* 185, MAT* 186.

MAT* 256 - Calculus II**QR: Quantitative Reasoning****4 credits**

Applies transcendental functions, formal integration, polar coordinates, infinite sequences and series, vector algebra, and geometry to the physical and engineering sciences. Includes use of graphing calculator and/or computer laboratory activities.

Prerequisite(s): A grade of C or better in MAT* 254.

MAT* 268 - Calculus III: Multivariable**QR: Quantitative Reasoning****4 credits**

Covers two- and three-dimensional vector algebra, calculus of functions of several variables, vector differential calculus, and line and surface integrals.

Prerequisite(s): A grade of C or better in MAT* 256.

MAT* 272 - Linear Algebra**3 credits**

A comprehensive introduction to linear algebra and its applications, including matrix algebra and reduction techniques, vector spaces, linear transformations, and Eigenvalue theory. Graphing calculators and computer software will be used.

Prerequisite(s): A grade of C or better in MAT* 268 or departmental permission.

MAT* 285 - Differential Equations**QR: Quantitative Reasoning****3 credits**

Introduces ordinary differential equations and their applications, linear differential equations, systems of first order linear equations, and numerical methods.

Prerequisite(s): A grade of C or better in MAT* 268.

Music**MUS* 101 - Music History and Appreciation I****AD: Aesthetic Dimension of Humankind****3 credits**

Surveys the biographies of composers and styles of music literature from the Medieval, Renaissance, Baroque, Classical, and Romantic eras. Emphasizes historical fact, listening skills, and music vocabulary for enjoyment. Requires attendance at one concert.

MUS* 115 - Music Theory I**3 credits**

Develops skills in music reading, ear training, and melodic and harmonic analysis. Analyzes composition through counting, reading, and pitch notation in the classroom and laboratory.

MUS* 116 - Music Theory II**3 credits**

Builds on skills learned in MUS* 115 - Music Theory I. Includes analysis of form, structure, and compositional techniques.

Prerequisite(s): MUS* 115 or instructor's permission.

MUS* 126 - 20th Century/Modern Music**3 credits**

Surveys twentieth century composers, their musical styles, and influences from the Post-Romantics. Includes such composers as Schoenberg, Stravinsky, Bartok, and Copland. Discusses some contemporary compositions in jazz, rock, country, and new musical styles.

Prerequisite(s): MUS* 101.

MUS* 141 - Guitar I**AD: Aesthetic Dimension of Humankind****3 credits**

A guitar course for students with no previous guitar experience. Students must provide their own instruments and supplies.

MUS* 150 - Class Piano I**AD: Aesthetic Dimension of Humankind****3 credits**

Provides a foundation in piano performance and musicianship for beginning students. The comprehension of rhythmic, melodic, and chordal music notation is achieved by playing various styles of piano music in at least two keys.

Nuclear Medicine Technology**NMT* 101 - Introduction to Nuclear Medicine****3 credits**

Introduces the student to the healthcare environment and the field of nuclear medicine technology. Topics covered include: patient care, medical ethics, medicolegal issues, radiation safety and protection and an introduction to radiopharmacy.

Prerequisite(s): Acceptance into the Nuclear Medicine Technology Program and full attendance during freshman orientation. Corequisite(s): NMT* 111.

NMT* 102 - Nuclear Medicine Procedures I**3 credits**

Introduces basic nuclear medicine technology procedures.

Prerequisite(s): Acceptance into the Nuclear Medicine Technology Program and full attendance during freshman orientation. Corequisite(s): NMT* 111.

NMT* 111 - Clinical Practicum I**1 credits**

Introduces the clinical setting and general nuclear medicine areas through simulated labs and hands-on training.

Prerequisite(s): Acceptance into the Nuclear Medicine Technology Program and full attendance during freshman orientation. Corequisite(s): NMT* 101 and NMT* 102.

NMT* 112 - Clinical Practicum II**1 credits**

Emphasizes, through simulated labs and hands-on training, the handling and positioning of patients and the application of clinical nuclear medicine procedures.

Prerequisite(s): NMT* 113 for NMT AS degree students only. Corequisite(s): NMT* 121.

NMT* 113 - Clinical Internship I**0.5 credits**

Students attend clinical training Monday through Friday, eight hours per day.

Prerequisite(s): NMT* 111.

NMT* 121 - Physics in Nuclear Medicine**3 credits**

Introduces the physics of nuclear medicine as a framework for the principles behind nuclear composition, energy concepts, and units of radioactive decay. Stresses radiation level calculation and understanding the process by which radiation interacts with matter.

Prerequisite(s): PHY* 111. Corequisite(s): NMT* 112.

NMT* 126 - Clinical Internship II**3 credits**

Students attend clinical training Monday through Friday, eight hours per day, minimum of 400 clinical hours.

Prerequisite(s): NMT* 112.

NMT* 201 - Nuclear Medicine Procedures II**3 credits**

Covers nuclear medicine procedures, emphasizing anatomy, physiology, and pathology as they pertain to oncology, infection/inflammation, skeletal, cardiovascular and respiratory systems. Students perform Internet searches and present oral reports on findings pertinent to current nuclear medicine procedures. Students also present a case study that relates to one of the organ systems being studied.

Prerequisite(s): NMT* 102. Corequisite(s): NMT* 112.

NMT* 202 - Nuclear Medicine Instrumentation**3 credits**

Examines the processes of converting radiation interactions into electrical signals for counting and measuring by nuclear probes and cameras. Assesses and investigates Nuclear Medicine camera systems and their physical imaging characteristics in hands-on experiments.

Corequisite(s): NMT* 211.

NMT* 203 - Radiopharmacy**3 credits**

Covers the pharmacological basis, preparation, and quality control of radiopharmaceuticals used in nuclear medicine.

Prerequisite(s): CHE* 111. Corequisite(s): NMT* 211.

NMT* 211 - Clinical Practicum III**2 credits**

Continues to develop competencies gained in Clinical Practicum II. Through simulated labs and hands-on training, students will achieve competency in advanced imaging procedures and equipment use.

Prerequisite(s): NMT* 121 and NMT* 126. Corequisite(s): NMT* 203.

NMT* 212 - Clinical Practicum IV**2 credits**

Introduces a sophisticated use of nuclear medicine technology and instrumentation. Students build on competencies achieved in Clinical Practicum I, II, and III.

Prerequisite(s): NMT* 216. Corequisite(s): NMT* 221.

NMT* 216 - Clinical Internship III**0.5 credits**

Students attend clinical training Monday through Friday, eight hours per day.

Prerequisite(s): NMT* 211.

NMT* 221 - Nuclear Medicine Procedures III**3 credits**

Builds on the procedures and organ systems presented in Nuclear Medicine Procedures I, including pharmacological intervention, the central nervous, endocrine, gastrointestinal, genitourinary systems and radionuclide therapies. Students will examine case images and present findings pertinent to nuclear medicine procedures.

Prerequisite(s): NMT* 201. Corequisite(s): NMT* 212.

NMT* 222 - Introduction to Computers and Nuclear Medicine Applications**3 credits**

Introduces the use of computers in Nuclear Medicine Technology. Concentrates on computer hardware and acquisition, data analysis, and interpretation of computer studies in Nuclear Medicine.

Prerequisite(s): NMT* 202. Corequisite(s): NMT* 212.

NMT* 223 - Nuclear Medicine Seminar**CALT: Critical Analysis/Logical Thinking****3 credits**

Reviews quality control procedures, state and federal regulations, radiation safety, radiobiology, marketing and management of nuclear medicine technology departments, and career and professional development skills.

Corequisite(s): NMT* 212.

Nursing**NUR* 101 - Introduction to Nursing Practice****8 credits**

Focuses on concepts basic to nursing practice. Emphasis is placed on application of the nursing process, communication, and skill acquisition. Clinical and laboratory experiences offer opportunities to integrate theoretical principles and demonstrate caring and competence in beginning professional role development. 180 (clinical)

Lecture Hours: 60

NUR* 102 - Family Health Nursing**8 credits**

Focuses on providing holistic nursing care to families across the lifespan. Students focus on issues that effect the family, including childbearing, childrearing, geriatric care and intermediate health care needs. In addition, the course includes, selective adult, child and adolescent psychiatric disorders. Students will have clinical rotations that provide experience caring for the childbearing family as well as caring for medical surgical clients across the lifespan. 180 (clinical)

Lecture Hours: 60

NUR* 103 - Pharmacology for Families Across the Life Span**1 credits**

Focuses on the principles of pharmacology and its nursing application to family health care needs and selective psychiatric disorders. 180 (clinical)

Lecture Hours: 60

NUR* 132 - LPN to RN Transition I**2 credits**

This course is the final component of the Connecticut League for Nursing LPN to RN Articulation plan for the Connecticut Community Colleges Nursing Program (CT-CCNP) which prepares LPNs to enter the CT-CCNP in the second year of study. Students enrolling in this course have been accepted for admission into the (CT-CCNP) and have chosen the option to enter the third semester.

Prerequisite(s): Connecticut Community Colleges BIO* 211 - Anatomy and Physiology I, BIO* BIO* 212 - Anatomy and Physiology II, BIO* 235 - Microbiology, ENG* 101 - Composition, PSY* 111 - General Psychology I, PSY* 201 - Life Span Development, SOC* 101 - Principles of Sociology; Charter Oak State College NUR 190: LPN to RN Articulation Bridge Course.

NUR* 201 - Nursing Care of Individuals and Families I**CALT: Critical Analysis/Logical Thinking****9 credits**

Focuses on holistic care of individuals and families with a variety of health care needs across the lifespan with a variety of health care needs. The needs of the clients experiencing endocrine, respiratory, gastrointestinal, cardiovascular conditions and selected mental health disorders are examined. Bioterrorism as a health care issue will be addressed. Clinical laboratory experience provides the student and opportunity to administer care to a diverse population of clients in a variety of acute care and community health care settings. The student will utilize critical thinking, caring, professionalism, and communication skills in the care of the client. Emphasis is placed on provision of safe and competent care and development of the professional role as a member of a multidisciplinary health care team. During the semester, the student is increasingly challenged in the clinical area with more complex client assignments. 225 (clinical)

Lecture Hours: 60

Prerequisite(s): NUR* 102, NUR* 103, PSY* 201, SOC* 101. Corequisite(s): NUR* 202, ENG* 102.

NUR* 202 - Pharmacology for Individuals and Families with Intermediate Health Care Needs **1 credits**

Focuses on the principles of pharmacology and its nursing application to individuals and families with intermediate health care needs and selective psychiatric disorders. (1 credit: 15 hours theory) Lecture Hours: 15

NUR* 203 - Nursing Care of Individuals and Families II**8 credits**

Focuses on providing holistic care to individuals, families, and groups with complex health care needs. It examines the effect of multi-system alterations and selected mental health disorders. The student will incorporate critical thinking, caring behaviors, professionalism and communications skills when providing care. Clinical experiences are provided in acute care, mental health care and community settings with an emphasis on managing multiple clients. 225 (clinical) Lecture Hours: 45

NUR* 204 - Pharmacology for Individuals, Families, and Groups with Complex Health Care Needs **1 credits**

Focuses on the principles of pharmacology and its nursing application to individuals and families with intermediate health care needs and selective psychiatric disorders. Lecture Hours: 15

NUR* 205 - Nursing Management and Trends**2 credits**

Focuses on the transition into the profession and the nurse's role in contemporary nursing practice. Professionalism is emphasized. Students will explore management principles and delegation of client care. Students will participate in critical thinking to evaluate current trends and contemporary issues in nursing. Lecture Hours: 30

Nutrition & Dietetics**NTR 106 - Culinary Nutrition****2 credits**

Provides a basic understanding of nutrition and its relationship to health. Provides an overview of nutrients, digestion, absorption, and metabolism. This course will also provide information on good food sources of the nutrients, purchasing, cooking methods and menu planning.

NTR* 101 - Introduction to Dietetics**3 credits**

Discusses career and educational pathways for dietetic technicians and registered dietitians. Introduces students to the health care team concept and describes the roles of health professionals. Covers ethical issues in health care and nutrition.

NTR* 102 - Nutrition I: Principles of Nutrition**3 credits**

Investigates the basic nutrients and current guidelines for healthy food preparation and selection.

NTR* 103 - Nutrition Therapy I**3 credits**

Applies the principles of nutrition assessment, menu planning, and the nutrition care process to meet the needs of individuals and groups with a variety of nutritional requirements.

Prerequisite(s): A grade of C or better in NTR* 102.

NTR* 104 - Life Cycle Nutrition**3 credits**

Covers the study of the life cycle. Introduces the study of therapeutic nutrition. Provides a background for understanding the physiology relating to specific medical disorders so that the student may design and explain common therapeutic diets to clients. The study of medical terminology is introduced.

Prerequisite(s): A grade of C or better in BIO* 115 and NTR* 102.

NTR* 105 - Food Management Systems**3 credits**

Introduces principles of institutional food service management. Includes fundamentals of menu planning, recipe standardization, purchasing, production, equipment, quality control, marketing, and use of computers in food service.

Prerequisite(s): MAT* 095 or higher.

NTR* 120 - Foods**3 credits**

Presents and applies basic food preparation, basic food science, cooking equipment, menu planning, developing and testing quality food products.

Prerequisite(s): MAT* 095 or higher. (HSP* 101 may be substituted for NTR 120 with permission from the Program Coordinator.)

NTR* 201 - Community Nutrition Education**3 credits**

Provides a community approach to nutrition education. Students will develop skills in presenting nutrition education programs to small groups or classes.

Prerequisite(s): NTR* 103 and COM* 173.

NTR* 202 - Nutrition Therapy II**3 credits**

Focuses on the physiological principles and nutritional needs of more complex conditions. Increases medical terminology vocabulary.

Prerequisite(s): A grade of C or better in NTR* 103 and NTR* 104.

NTR* 205 - Management in Dietetics**3 credits**

Focuses on the management principles utilized in nutrition and dietetics including the overview of management; tools for managers; human resources management; managing financial resources and new directions in management.

Prerequisite(s): NTR* 105.

NTR* 210 - Nutrition Internship I**3 credits**

Offered: Summer

Introduces basic skills and competencies in the delivery of food and nutrition care through classroom theory, clinically supervised practice and simulations/hands-on lab. Students are required to complete 150 hours of supervised practice in food service, clinical and/or community nutrition programs.

Prerequisite(s): NTR* 103, NTR* 120, and HSP* 109.

NTR* 212 - Nutrition Internship II**3 credits**

Offered: Fall

Refines student skills and competencies in the delivery of food and nutrition care through classroom theory, clinically supervised practice and simulations/hands-on lab. Students are required to complete 150 hours of supervised practice in food service, clinical and/or community nutrition programs.

Prerequisite(s): NTR* 210.

NTR* 214 - Nutrition Internship III**CALT: Critical Analysis/Logical Thinking****3 credits**

Offered: Spring

Refines student skills and competencies in the delivery of food and nutrition care through classroom theory, clinically supervised practice and simulations/hands-on lab with a focus on the development of professional skills. Students are required to complete 150 hours of supervised practice in food service, clinical and/or community nutrition programs.

Prerequisite(s): NTR* 212.

Philosophy**PHL* I131 - Logic****CALT - Critical Analysis/Logical Thinking****3 credits**

An introduction to both formal and informal logic. Topics include: inductive reasoning, informal fallacies, statistical traps, categorical syllogisms, and truth tables for arguments. Lecture Hours: 3

Prerequisite(s): ENG* 101 Notes: Recommended for students who intend to take the LSAT.

PHL* 101 - Introduction to Philosophy**CALT: Critical Analysis/Logical Thinking****3 credits**

Introduces philosophical thinking and life perspectives. Applies philosophical analysis and criticism to moral, social, and religious issues.

Prerequisite(s): Eligibility for ENG* 101.

PHL* 111 - Ethics**CALT: Critical Analysis/Logical Thinking****3 credits**

Provides an overview of the formation and expression of Western philosophical thinking. Explores some of the views and concepts supporting ethical values in the contemporary social, political, and economic environment. Considers ethical problems as they relate to current ideologies.

Prerequisite(s): ENG 101 or higher.

PHL* 131 - Logic**Critical Analysis/Logical Thinking (CALT)****3 credits**

An introduction to both formal and informal logic. Topics include: inductive reasoning, informal fallacies, statistical traps, categorical syllogisms, and truth tables for arguments. *Recommended for students who intend to take the LSAT. Lecture Hours: 3

Prerequisite(s): ENG* 101 Corequisite(s): ENG* 101

Physics**PHY* 101 - Physics for Today****SK: Scientific Knowledge and Understanding****3 credits**

Emphasizes conceptual understanding of the underlying principles of physics as applied to topics of current interest. Uses arithmetic and simple algebra. Includes classroom demonstrations.

PHY* 109 - Fundamentals of Applied Physics**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Introduces the principles of physics, including measurement, motion, forces in one dimension, concurrent forces, work and energy, simple machines (including mechanical advantage), rotational motion, and nonconcurrent forces. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MAT* 115 or higher.

PHY* 111 - Physics for the Life Sciences**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Applies the principles of physics to health science. Basic algebra and trigonometry are used. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): MAT* 115 or MAT* 137 or MAT* 137S or higher or placement in MAT* 142 or higher.

PHY* 121 - General Physics I**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Presents the basic principles of physics using algebra and trigonometry. Studies translational and rotational motion, static equilibrium, work and energy, mechanical vibrations and waves, and the thermal properties of matter. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): MAT* 137 or MAT* 137S or higher or sufficient score on placement test

PHY* 122 - General Physics II**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

A continuation of PHY* 121. Studies electricity, magnetism, light, relativity, and atomic and nuclear physics. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): PHY* 121.

PHY* 221 - Calculus-Based Physics I**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Presents principles of physics. Uses elementary concepts of calculus. Addresses classical dynamics, rigid-body motion, harmonic motion, wave motion, acoustics, thermal properties of matter. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): Secondary school physics, MAT* 254.

PHY* 222 - Calculus-Based Physics II**SR: Scientific Reasoning and SK: Scientific Knowledge and Understanding****4 credits**

Studies thermodynamics, electric and magnetic fields, electromagnetic waves, basic geometrical optics, wave properties of light, and quantum effects; introduces atomic physics, wave mechanics and special relativity. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): PHY* 221 and MAT* 256

Political Science**POL* 102 - Introduction to Comparative Politics****3 credits**

Examines comparative politics as a traditional and significant component of the political science curriculum. Illustrates the diversity and similarity that exist among the world's major foreign powers and the emerging "Third World" nations.

POL* 111 - American Government**3 credits**

Studies the structure and framework of American government and the interrelationship of politics on the national, state, and local levels. Emphasizes the political, legislative, judicial, and administrative processes of government. Analyzes the basic philosophy of American government and political beliefs.

POL* 208 - American Public Policy**3 credits**

Investigates the policy-making process in the United States. Using a functional approach, analyzes public policy in a sequential manner, from the initial identification of a problem to its solution, including the assessment and appropriate revision or termination of policy. Examines case studies and analyzes current policy issues.

POL* 250 - Theory of Human Rights**3 credits**

Offered: (Course has not been offered in two years)

Provides the theoretical grounding, both historical and conceptual, for further studies about the role of human rights in contemporary politics and social life. Explores the historical development and present discussions of the concept of human rights as well as its role in a variety of contemporary issues within domestic and international politics and culture.

POL* 280 - New Haven and The Problem of Change in the American City**3 credits**

Offered in cooperation with Yale University. Examines the rapid transformation of New Haven and other American cities over the past century as case studies of urban change and urban policy. Themes include the planning and policy implications of the emigration of higher income populations from the inner city.

POL* 295 - Political Science Internship**6 credits**

Assigns interns to individual legislators to assist in analyzing legislative proposals, monitoring committee and floor action, tracking, drafting news releases and speeches, research, constituent casework, etc. The internship includes orientation sessions, seminars, and written papers.

Psychology**PSY* 104 - Psychology of Adjustment****3 credits**

Offered: (Course has not been offered in the past two years)

Includes both theoretical and practical learning through the laboratory method of "experience, analysis, and projection." Provides a clear and basic framework for analyzing individual and group behavior. Groups of students define their own terms for existence and then use these terms to gain further insight and knowledge about themselves, their future roles, and their learning goals. Establishes the need for skill development in human relations and presents foundations for developing those skills.

PSY* 105 - Group Dynamics**3 credits**

Examines current theories about and research into group process and leadership. Examines students' own performance as group members and leaders. Combines didactic and experiential learning situations. Prereq/Corequisite(s): PSY* 111 or instructor's permission.

PSY* 111 - General Psychology I**SP: Social Phenomena/Knowledge and Understanding****3 credits**

Provides the student with a general introduction to fundamental topics and areas in the field of psychology. Students will learn about the history of psychology, various scientific methods for research, neurological underpinnings of behavior and mental processes, and diverse subjects relevant to the field, including sensation and perception, learning, memory, and social psychology.

Prerequisite(s): Eligibility for ENG* 101.

PSY* 112 - General Psychology II**3 credits**

A survey course that is a continuation of PSY* 111. Topics include health psychology, human development, psychological disorders, states of consciousness and motivation and emotion. This is the second part of a two-semester sequence and it is recommended that students take both semesters (PSY* 111 and 112).

Prerequisite(s): PSY* 111. Corequisite(s): ENG* 101.

PSY* 122 - Child Growth and Development**3 credits**

Covers child development, from birth through adolescence, emphasizing the preschool child. Considers the physical, emotional, mental, and social characteristics of the child at various stages of development. Views life stages in terms of a variety of theoretical frameworks: Freud, Erickson, Piaget, and representative behaviorists. Requires each student to do twenty hours of fieldwork and observation in a preschool or approved alternative setting.

Prerequisite(s): Eligible for ENG* 063 or higher.

PSY* 201 - Life Span Development**3 credits**

Provides an overview of the physical, cognitive, and psychosocial development of humans from birth to death. There is an emphasis on distinct periods such as the development of fetus; infancy; early, middle and late childhood; adolescence; and the phases of adulthood. It views life stages from a variety of theoretical frameworks; Freud, Erikson, Piaget, Vygotsky, and other representative behaviorists. It also looks at cultural and historical influences on development.

PSY* 209 - Psychology of Aging**3 credits**

Offered: Spring

Presents aging within a psychological framework. Students will develop an understanding of normal, healthy aging and the emotional problems of the aged. Emphasizes the emotional and behavioral aspects of aging and effective techniques for communicating with the elderly.

PSY* 210 - Death and Dying**3 credits**

Examines death and dying with regard to the individual, the family, the caretakers, and society at large.

PSY* 233 - Theories, Methods and Practice of Counseling and Therapy**3 credits**

Offered: Spring

Addresses the basic tenets of existing behavioral, cognitive and humanistic counseling theories. Case studies will be used to address how primary goals, strategies and anticipated outcomes are developed during the therapeutic process of counseling individuals with diagnosed mental health problems.

Prerequisite(s): A grade of C or better in both PSY* 111, PSY* 245.

PSY* 234 - Expressive Methods in Counseling**3 credits**

Focuses on the therapeutic techniques used in counseling including: the overview of expressive counseling strategies used with child and adolescent populations; visual art techniques; music and movement methods; creative drawing and writing methods. Includes experiential practice with various therapeutic techniques through in-class demonstrations, small group exercises and dyadic role play.

Prerequisite(s): PSY* 111.

PSY* 240 - Social Psychology**3 credits**

Considers basic principles of human behavior encompassing the social milieu. Focuses on socialization, communication, and intergroup relations as they are influenced by individual personality factors and social structures. Analyzes values and group organization and function in determining methods used in social psychology.

PSY* 245 - Abnormal Psychology**3 credits**

Surveys a broad range of psychological disorders, their symptoms, etiology, and treatments. An introduction to the historical treatment of persons with mental illnesses provides context to understand current trends. Students will investigate major diagnostic categories including mood disorders, anxiety disorders, psychotic disorders including schizophrenia, personality disorders, and other diagnostic categories.

Prerequisite(s): ENG* 101 and PSY* 111 (both with a C or better).

PSY* 247 - Industrial and Organizational Psychology**3 credits**

Offered: (Course has not been offered in the past two years)

Applies psychological principles to business and industry. Includes discussion of job evaluation and analysis, management relations, and individual and group relations.

PSY* 257 - Statistics for the Behavioral Sciences**3 credits**

Provides the foundational understanding in descriptive and inferential statistics necessary to reading research articles and to conducting research in the behavioral sciences. Students will learn about the management and analysis of behavioral sciences data using SPSS. Will cover measures of central tendency and variability, frequency distribution, probability, and hypothesis testing. Particular emphasis will be applied to the computation of t-tests, correlation, ANOVA, and non-parametric measures including chi-square. A statistical or scientific calculator will be required. Course will be held in a computer lab.

Prerequisite(s): ENG* 101, MAT* 137 or higher, PSY* 111 (all with a C or better).

PSY* 258 - Behavior Modification**3 credits**

Examines and implements basic psychological learning principles. Includes the academic and psychological aspects of learning, including the basic stimulus-response application of behavior modification.

Radiation Therapy**RDT* 101 - Introduction to Radiation Therapy I****3 credits**

Introduces the field of Radiation Therapy. Focuses on quality assurance, basic dosimetry concepts, radiographic anatomy, clinical objectives, and medical and technical terminology. Also includes the fundamentals of radiography, film construction, processing, and x-ray generation. Other topics include professional ethics, patient care procedures, pharmacology, nutrition, and oncology.

Prerequisite(s): Admission to the program and full attendance during freshman orientation. Corequisite(s): RDT* 111

RDT* 102 - Radiation Therapy II**3 credits**

Builds on basic dosimetry skills. Includes dose calculations for external beam, radiation therapy equipment, practical treatment planning, and brachytherapy applications.

Prerequisite(s): RDT* 101 and RST 200. Corequisite(s): RDT* 112 and RST* 213.

RDT* 111 - Clinical Practicum I**1 credits**

Introduces the clinical setting and the basics of radiation therapy. Through supervised direct patient care and phantom work, provides experience in technical and patient care skills. Students must spend two days a week in the affiliate hospital, mastering clinical competency levels one and two.

Prerequisite(s): Admission to the program and full attendance during freshman orientation. Corequisite(s): RDT* 101.

RDT* 112 - Clinical Practicum II**1 credits**

Through supervised direct patient care and phantom work, students master patient care skill levels one and two. Students are evaluated on basic set-up competencies. Students must spend two days a week in the affiliate hospital, mastering technical competency levels one, two, and three.

Prerequisite(s): RDT* 111. Corequisite(s): RDT* 102 and RST* 213.

RDT* 113 - Clinical Internship I**1 credits**

Students attend clinical training Monday through Friday, eight hours per day.

Prerequisite(s): RDT* 111 and RDT* 101.

RDT* 126 - Clinical Internship II**CALT: Critical Analysis/Logical Thinking****3 credits**

Students attend clinical training Monday through Friday, eight hours per day.

Prerequisite(s): RDT* 112.

RDT* 201 - Radiation Oncology I**3 credits**

Reviews anatomy and physiology, methods of diagnosis, etiology, epidemiology, staging, aim of radiation therapy, dose, and fractionation principles of specific tumor sites.

Prerequisite(s): BIO* 211 and BIO* 212. Corequisite(s): RDT* 202, RDT* 205 and RDT* 211.

RDT* 202 - Radiation Therapy III**3 credits**

Addresses radiographic and cross-sectional anatomy, simulator techniques, and treatment planning through lectures and laboratory experiments. All setup techniques work in conjunction with diseases covered in Oncology I.

Prerequisite(s): RDT* 102. Corequisite(s): RDT* 211, RDT* 201 and RDT* 205.

RDT* 203 - Radiation Oncology II**3 credits**

Builds on skills learned in RDT* 201. Reviews anatomy and physiology, methods of diagnosis, etiology, epidemiology, staging, aim of radiation therapy, dose, and fractionation principles of specific tumor sites.

Prerequisite(s): RDT* 201. Corequisite(s): RDT* 204 and RDT* 212, RDT* 222, RDT* 223, RDT* 224.

RDT* 204 - Radiation Therapy IV**3 credits**

Builds on skills learned in RDT* 202, focusing on radiographic anatomy, cross-sectional anatomy, simulator techniques, and treatment planning through lectures and laboratory experiments. Addresses all diseases introduced in Oncology II.

Prerequisite(s): RDT* 202 and RDT* 205. Corequisite(s): RDT* 203, RDT* 212, RDT* 222, RDT* 223, RDT* 224.

RDT* 205 - Dosimetry and Computer Assisted Treatment Planning**3 credits**

Introduces computers, principles of operation, and application theory. Emphasizes basic and advanced concepts of clinical dosimetry and treatment planning by computers through laboratory experience. Includes such advanced dosimetry concepts as dose calculations, construction of tissue compensators and custom molds, dose measurement, brachytherapy, sources applicators, implant methods, and dose verification.

Prerequisite(s): RDT* 102, RDT* 112, and PHY* 111. Corequisite(s): RDT* 201, RDT* 202 and RDT* 211.

RDT* 211 - Clinical Practicum III**2 credits**

Through supervised direct patient care and phantom work, the student refines patient care skill levels one and two. Evaluation of mandatory set-up competencies continues. Students must spend three days a week in the affiliate hospital, refining technical competency levels one, two, and three.

Prerequisite(s): RDT* 112. Corequisite(s): RDT* 201, RDT* 202 and RDT* 205.

RDT* 212 - Clinical Practicum IV**2 credits**

Through supervised direct patient care and phantom work, students must demonstrate proficiency in mandatory clinical objectives and competencies and dosimetry. Students are expected to complete all required set-up competencies.

Prerequisite(s): RDT* 205 and RDT* 211. Corequisite(s): RDT* 203, RDT* 204, RDT* 222, RDT* 223 and RDT* 224.

RDT* 218 - Clinical Internship III**1 credits**

Students attend clinical training Monday through Friday, eight hours per day.

Prerequisite(s): RDT* 211.

RDT* 222 - Radiobiology and Protection**3 credits**

Introduces biological responses to radiation and factors influencing radiation effects, tissue sensitivity, tissue tolerance, and clinical applications. Also includes a study of radiation protection principles, units of measurement, surveys, methods of protection, brachytherapy, personnel monitoring, and regulatory agencies and regulations.

Prerequisite(s): RDT* 211. Corequisite(s): RDT* 203, RDT* 204, RDT* 212, RDT* 223 and RDT* 224.

RDT* 223 - Radiation Physics II**3 credits**

Builds on skills learned in RST* 213. Emphasizes x-ray production, x-ray properties, gamma rays, electrons, and their respective interactions with matter. Other topics include the measurement of radiation, radioactivity, and particulate radiation. Presents brachytherapy, including radioactive sources, exposure rate, implant dosimetry, and remote afterloading units.

Prerequisite(s): RST* 213. Corequisite(s): RDT* 203, RDT* 204, RDT* 212, RDT* 222 and RDT* 224.

RDT* 224 - Radiation Therapy Senior Seminar**2 credits**

A one semester course characterized by the active role expected of students in the field of research. This will include investigation, preparation, presentation, and discussion of clinical areas. The course requires a working knowledge of radiation therapy. It prepares senior students for successful entry into the field of radiation therapy and improves their critical thinking skills. Theoretical and practical studies are integrated through research and application. Students are also required to define, compare, analyze and assess medical practice in health care delivery.

Prerequisite(s): RDT* 201, RDT* 202, RDT* 211. Corequisite(s): RDT* 203, RDT* 204, RDT* 212, RDT* 222, RDT* 223.

Radiography**RAD* 104 - Introduction to Radiography****3 credits**

Introduces factors influencing radiographic quality and patient protection, basic equipment components and elementary principles of exposure. Through classroom lectures and laboratory study, the student will gain the basic knowledge to function as an entry level student radiographer in the clinical practicum and be able to advance in a progressive manner.

Prerequisite(s): Acceptance into the Radiography Program. Corequisite(s): RAD* 105, RAD* 193.

RAD* 105 - Radiographic Anatomy and Procedures I**3 credits**

Emphasizes task objectives and competencies in general radiographic procedures and related anatomy, medical terminology, film critiquing, and selection of technical factors.

Prerequisite(s): Acceptance into the Radiography Program. Corequisite(s): RAD* 104, RAD* 193.

RAD* 116 - Physics in Radiography**3 credits**

Introduces students to basic radiation physics and its effects on image quality, parameters of radiographic technique and equipment operation and maintenance. The purpose, components and practical application of radiographic imaging systems are presented and discussed. The x-ray circuit, concepts of x-ray production, emission, and interaction with matter will be covered.

Prerequisite(s): MAT* 172, RAD* 104. Corequisite(s): RAD* 204.

RAD* 187 - Clinical Internship I**0.5 credits**

First year students attend clinical training Monday through Friday

Prerequisite(s): RAD* 104, RAD* 105, and RAD* 193.

RAD* 188 - Clinical Internship II**4 credits**

Students attend clinical training Monday through Friday. Students will work on Level II task objectives while mastering Level I objectives. A total of approximately 360 clinical hours will be performed over 12 weeks.

Prerequisite(s): RAD* 116, RAD* 194, and RAD* 204.

RAD* 193 - Clinical Practicum I**2 credits**

Introduces the clinical setting and general radiographic areas of Diagnostic Imaging through supervised clinical training. Students must spend two days per week in the clinical setting working on Level I training objectives and mastering basic competencies. A total of 180 clinical hours will be performed over 15 weeks.

Prerequisite(s): Acceptance into the Radiography Program. Corequisite(s): RAD* 104, RAD* 105.

RAD* 194 - Clinical Practicum II**2 credits**

Provides the student with the opportunity to master Level I task objectives and competencies. Students must spend two days a week in the clinical setting working on Level I training objectives and mastering basic competencies. A total of approximately 180 clinical hours will be performed over 15 weeks.

Prerequisite(s): RAD* 104, RAD* 105, RAD* 193. Corequisite(s): RAD* 204

RAD* 196 - Radiographic Anatomy and Procedures III**3 credits**

Through classroom lecture and clinical practice, students will learn advanced imaging procedures including contrast studies, age specific considerations and cranial imaging. In addition, students will be responsible for presenting a professional presentation based on research of a specific disease and related case study.

Prerequisite(s): RAD* 187, RAD* 188, and RAD* 204. Corequisite(s): RAD* 291.

RAD* 203 - Principles of Radiographic Exposure I**3 credits**

Focuses on radiographic definition, contrast, and quality. Addresses digital exposure factors, exposure table composition, special exposure techniques, and general radiographic techniques. Lecture Hours: 3 Lab Hours: 3

Prerequisite(s): RAD* 116. Corequisite(s): RAD* 196 and RAD* 291.

RAD* 204 - Radiographic Anatomy and Procedures II**3 credits**

Introduces more complex radiographic procedures, anatomy, equipment, and medical terminology, while refining image critique and patient care skills.

Prerequisite(s): RAD* 105, RAD* 193. Corequisite(s): RAD* 194 and RAD* 116.

RAD* 205 - Computers in Medical Imaging: Advanced Practice**3 credits**

Covers the functionality of computers in medical imaging. Topics include the history of computers and their use in medical imaging, digital imaging, conventional and digital fluoroscopy, the digital image including artifacts and QC, and PACS. The clinical practicum will continue to reinforce this didactic content.

Prerequisite(s): RAD* 196, RAD* 203, and RAD* 291. Corequisite(s): RAD* 206, RAD* 218, and RAD* 292.

RAD* 206 - Quality Assurance**CALT: Critical Analysis/Logical Thinking****3 credits**

Introduces evaluation of the radiographic systems and images to assure consistency in the production of quality imaging. Discusses radiographic quality assurance concepts necessary for identifying diagnostic quality. Presents test and procedures to evaluate these standards through practical application. Review State and Federal regulations.

Prerequisite(s): RAD* 196, RAD* 203, and RAD* 291. Corequisite(s): RAD* 205 and RAD* 292.

RAD* 215 - Radiographic Pathology**3 credits**

Provides an overview of different pathologic conditions that are demonstrated through diagnostic imaging. Lecture material will include the cause and treatment of disease as well as imaging factors and variations relating to the disease.

Prerequisite(s): RAD* 188, RAD* 204. Corequisite(s): RAD* 292, RAD* 203.

RAD* 218 - Senior Seminar**3 credits**

This course is the culmination of all radiographic anatomy and procedures courses in the Radiography Program. The course requires a good working knowledge of Radiography. Through critical thinking exercises, research projects and in class presentations, the course prepares students for successful entry into the field of radiography. More advanced imaging modalities including but not limited to CT, MRI, 3D Imaging, Interventional and Cardiovascular imaging are introduced at this time.

Prerequisite(s): RAD* 196, RAD* 203, and RAD* 291. Corequisite(s): RAD* 292.

RAD* 222 - Radiobiology and Protection**3 credits**

Covers the fundamental principles of radiobiology; molecular and cellular response, both direct and indirect; interaction with matter; protection in radiology; and health physics. Presents sensitivity and cell recovery with the OER, LET, and RBE. Focuses on exposure and dose in radiology, the workplace, and in the general population. Federal, state and local regulations and guidelines will be identified and their roles defined.

Prerequisite(s): RAD* 116, RAD* 203, and RAD* 291. Corequisite(s): RAD* 203 and RAD* 291.

RAD* 286 - Clinical Internship III**0.5 credits**

Students attend clinical training Monday through Friday.

Prerequisite(s): RAD* 196, RAD* 203, and RAD* 291.

RAD* 291 - Clinical Practicum III**3 credits**

Enables the completion of Level II task objectives and allows the students to continue to refine the skills learned up to this point. More sophisticated imaging procedures and equipment are introduced and performed through supervised training. Students must spend three days per week in the clinical setting working on Level II training objectives. A total of 270 clinical hours will be performed over 15 weeks.

Prerequisite(s): RAD* 188 and RAD* 204. Corequisite(s): RAD* 196 and RAD* 203.

RAD* 292 - Clinical Practicum IV**3 credits**

Focuses on level III task objectives and continues to introduce more sophisticated imaging procedures and equipment use through observation and supervised training. Students must spend three days per week in the clinical setting working on level III training objectives. A total of 270 clinical hours will be performed over 15 weeks.

Prerequisite(s): RAD* 196 and RAD* 291. Corequisite(s): RAD* 205, RAD* 206, RAD* 218.

Radiologic Science Technology**RST 200 - Cross Sectional Anatomy****3 credits**

This course emphasizes the physical relationships of anatomic structures to one another. It develops a three-dimensional understanding of anatomy. Computer-generated sectional images will be used to display the relational anatomy in multiple planes, such as axial (transverse), sagittal, and coronal. It emphasizes the body's natural boundaries and spaces. Bony structures and soft tissue will be investigated. To demonstrate the application of this knowledge, supplemental information on pathology will be included.

Prerequisite(s): BIO* 211 and BIO* 212.

RST* 110 - Introduction to Radiology**3 credits**

Introduces the field of radiology and develops the necessary skills of a health care professional. Emphasizes radiography, nuclear medicine, and radiation therapy by incorporating lectures with field site visits. Addresses the role of an allied health professional in the hospital and community setting. Explores career potentials and alternatives. Includes clinical site visits.

RST* 213 - Radiation Physics**3 credits**

Introduces the concept of radiation, its sources, and its interaction with matter. Introduces electricity and magnetism, the x-ray machine, circuits, components, and practical application.

Prerequisite(s): RAD* 104 or RDT* 101, RDT* 111, and PHY* 111, MAT* 115. Corequisite(s): RAD* 204 or RDT* 102.

RST* 217 - Clinical Pathology**3 credits**

Investigates the various aspects of human disease. Covers diseases pertinent to radiology. Topics include general concepts of disease; inflammation and repair; neoplasms; and diseases of the immune, cardiovascular, respiratory, digestive, urinary, endocrine, musculoskeletal, reproductive, and nervous systems. A brief review of anatomy and physiology precedes lectures on specific pathological processes. Also presents the medical terminology of pathology.

Prerequisite(s): BIO* 211 and BIO* 212.

RST* 250 - Methods of Teaching in a Clinical Setting**3 credits**

Intended for clinical instructors/supervisors in secondary and post secondary allied health occupational programs. Presents the skills needed to teach, supervise, and evaluate students/trainees in the clinical setting. Focuses on the role of clinical instructors/supervisors, developing measurable objectives, assessing learning styles, and using appropriate evaluation instruments. Upon completion of this course, participants will be granted a certificate of attendance and can apply for CEUs to their respective accrediting agencies.

Prerequisite(s): Program director's permission.

Railroad Engineering Technology**RET* 101 - History of Railroading****3 credits**

Covers the history and traditions of railroading and the industry's role in the North American economic development. Corequisite(s): ENG 043/073 or placement into ENG* 063 or higher.

RET* 110 - Careers in the Railroad**2 credits**

Provides information about technical careers in railroading to assist students to choose suitable career paths. Requires field trips that will demonstrate the relationships among technical work groups in day to day railroad operations.

Prereq/Corequisite(s): RET* 101.

RET* 120 - Railroad Rules, Regulations, Standards & Practices**3 credits**

Provides participants with an overall understanding of governmental rules, regulations, standards, and practices as they apply to a railroad operation. Study includes a review of Code of Federal Regulations, Part 49, Railroad Standards and Practices Manual (AREMA) and various railroads' book of rules.

Prereq/Corequisite(s): RET* 101.

RET* 220 - Safety in the Railroad Workplace**3 credits**

Covers the principles and policies governing railroad safe work practices. Upon successful completion of this course, the student should be able to describe safety policies, including the application of team processes, use and care of personal protective equipment, lockout/tag out procedures, and hearing conservations.

Prerequisite(s): RET* 120.

RET* 230 - Reading and Interpreting Railroad Diagrams**2 credits**

Provides participants with an overall understanding of how to read and interpret railroad electrical diagrams. Course topics will include a review and discussion of the following: ladder diagrams, contractors, motor starters, motors, programmable logic controller, railroad electrical symbols.

Prereq/Corequisite(s): EET* 110.

RET* 240 - Railroad Pneumatics and Hydraulic Controls**4 credits**

Introduces participants to the basic components, controls and functions of railroad pneumatics and hydraulics. Course topics include standard symbols, pumps, control valves, control assemblies, actuators, maintenance procedures and switching and control devices. Lecture Hours: 3 Lab Hours: 2

Prereq/Corequisite(s): MEC* 234.

RET* 242 - Railroad HVAC Systems**4 credits**

Provides participants with an overview of HVAC systems used on railcars. Basic hand and specialty tools and equipment will be covered as well as basic laws of heat transfer, thermo-dynamics and heat load. The study of the basic refrigeration cycle and its components will be introduced. In addition, students can qualify to obtain certification on the proper handling of refrigerants to include their effects on the environment. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MEC* 234.

RET* 244 - Railroad Electro-mechanical Troubleshooting**4 credits**

Introduces participants to the tools, methods and techniques for troubleshooting electro-mechanical problems in machines and rolling stock equipment (trains). Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MEC* 234.

RET* 250 - Railroad Signaling & Switching**4 credits**

Provides participants a basic understanding of a railroad signal system, including track circuits and applicable federal laws/guidelines. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): EET* 110 and RET* 120.

RET* 252 - Railroad Communications**4 credits**

Introduces participants to a basic understanding of railroad communications. Course topics include frequency and pulse modulation, AM and FM transmitters and receivers, electromagnetic radiation, digital data communication, and applicable laws and regulations. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): RET* 250.

RET* 254 - Railroad Maintenance, Troubleshooting and Repair**4 credits**

Introduces students to the tools, methods and techniques for troubleshooting signal and communication problems in switch machines and communication equipment. Lecture Hours: 3 Lab Hours: 2

Prerequisite(s): MEC* 234.

RET* 270 - Practicum in Passenger Railroad Technology**1 credits**

Provides students with experience in electric traction motors, catenary wire systems, signaling and track repair using APTA (American Public Transportation Association) standards. Students will complete at least 50 hours of supervised practicum.

Prerequisite(s): RET* 220.

RET* 271 - Practicum in Passenger Railroad Technology**1 credits**

Provides students with experience in diesel-electric engines, freight railroading logistics and intermodal services, signaling upgrades and track renewal using laser-guided tamping equipment all in accordance with Northeast Operating Rules Advisory Committee (NORAC) standards. Students will also regularly inspect and help with ongoing maintenance of the rail line.

Prerequisite(s): RET* 220.

Retail Management/Fashion Merchandising/Entrepreneurial**BMK* 103 - Principles of Retailing****3 credits**

Explores the fundamentals of retailing and its scope and significance in our marketing system. Among the topics covered are the distinguishing characteristics of retailing, store classification, operations planning, location analysis, layout and design, the retail price, future trends, and retailing careers.

BMK* 220 - Sales**3 credits**

An introduction to the principles, methods, and techniques of selling and the application of these principles through individual sales demonstrations. Topics include creating value in the buy-seller relations, prospecting, sales call planning, communicating the message, closing the sale, as well as how to motivate, compensate and train sales people.

BMK* 230 - Advertising and Promotion**3 credits**

Discusses special practices in retail advertising and sales promotion. Includes strategic promotional planning, preparing a media-wide retail promotional campaign, visual merchandising, and publicity. Discusses effective techniques in the preparation of retail copy.

BMK* 241 - Principles of Advertising**3 credits**

Provides an overview of advertising and promotion from an IMC (integrated marketing communications) perspective. The economic, social and legal aspects of advertising will be covered. Focus will be on market research, market segmentation, media strategy planning, promotional messages, advertising media selection and metrics.

Prereq/Corequisite(s): BMK* 201.

BMK* 242 - Retail Buying**3 credits**

Introduces the basic principles of buying merchandise for resale, sources of supply, determining and selecting suitable merchandise, negotiating for merchandise, basic buying considerations, and other related activities.

BMK* 255 - Fashion Analysis**3 credits**

Analyzes the economic, psychological, and sociological factors in the development of fashion. Students obtain a knowledge of fashion terminology, fashion designers, color, line, design, and the stages in the fashion cycle. Studying the historical development of costume, from the Egyptian period through the twentieth century, helps the student interpret and discuss fashion trends.

BMK* 257 - Textiles**3 credits**

Provides a background in and selling information for various textile products. Discusses standards for identifying high quality products and how to care for them. Focuses on materials, construction, methods of manufacturing, and basic styles in order to analyze the appeal of merchandise to customers.

BMK* 285 - Current Marketing Topics**3 credits**

Designed to provide students with an understanding of the fundamentals of social media marketing and how it has grown into a powerful tool for marketers. Surveys the landscape of social media and how it can be used effectively and efficiently. Topics include social media platforms, social media marketing strategies, social media marketing mix, social communities, social publishing, social entertainment, social commerce, social media for consumer insights, and social media metrics.

Prereq/Corequisite(s): BMK* 201.

BMK* 295 - Field Experience I**3 credits**

Provides opportunity for students to gain experience in the fashion and retail industries, knowledge of a store's, manufacturer's, or other organization's policies, systems and job responsibilities and ethics. Students will be required to spend a minimum of 6 hours per week at their work site (paid or unpaid) as well as online and in-class discussions. Prerequisite(s): Eligibility for ENG* 101, minimum GPA of 2.5 and instructor's permission.

BMK* 296 - Field Experience II**3 credits**

Provides the opportunity for students to build on the experience gained in Field Experience I or gain new experience in the fashion and retail industries. Gain knowledge of a store's, manufacturer's, or other organization's policies, systems, and job responsibilities and ethics. Students will be required to spend a minimum of 6 hours per week (approximately 90 hours total) at their work site (paid or unpaid) as well as online and in-class discussions.

Prereq/Corequisite(s): BMK* 295, minimum GPA of 2.5 or instructor permission.

Science**SCI* 102 - Perspectives in Natural Science****3 credits**

Offered: (Course has not been offered in two years)

Surveys physics, chemistry, astronomy, and biology. Intended for students with a limited science background. Credit does not count toward meeting degree requirements.

Sign Language**SGN* 101 - Sign Language I****3 credits**

An introduction to American Sign Language, the language used by the Deaf Community in the United States. Covers the fundamental structure of ASL grammar, introduces basic information about the deaf community and deaf culture. This is the first course in a four-course sequence that satisfies the foreign language requirement of the associate in arts degree.

SGN* 102 - Sign Language II**3 credits**

Offered: Spring

Builds on skills learned in American Sign Language I. Reinforces the fundamentals of ASL grammar and presents more information about the deaf community and deaf culture.

Prerequisite(s): SGN* 101.

Sociology**SOC* 101 - Principles of Sociology****SP: Social Phenomena/Knowledge and Understanding****3 credits**

Introduces the philosophy, methods, and problems of sociology. Emphasizes culture, society, and how social arrangements infringe upon personality and group behavior.

Prerequisite(s): Eligibility for ENG* 101.

SOC* 106 - Technology and Society**3 credits**

Focuses on the role of various art forms (e.g., painting, sculpture, and architecture) in pre-industrial and post-industrial societies. Develops students' visual, verbal, and cultural literacy.

SOC* 109 - Society of Women**3 credits**

Analyzes the socialization of women into the female sex role. Examines the traditionally female roles in marriage and the family. Explores economic and political roles women have played in American society during the colonial and frontier periods, slavery, the abolitionist movements, the trade union movement, and the women's rights and suffrage movements. Concludes with a study of current women's groups and their different ideologies, concerns, and platforms for change.

SOC* 111 - Child, Family, School and Community**3 credits**

An in-depth look at the child, family, and the relationship between the function of school, community, and the family. Will review the socialization process and the development of the child as a social being. An understanding of the young child and age-appropriate guidance for the young child will be examined. This course will address the role culture, diversity, and theory partner with families and community. An understanding of how to effectively communicate with families will also be explored. An understanding of how society and education partner in the socialization process for children from birth to age eight.

SOC* 114 - Sociology of Aging**3 credits**

Offered: Fall

Studies aging people and the world around them. Examines elderly peoples' social lives, societal roles, personal adjustments, dependence, independence, and how society responds to their needs. A field project may be assigned in which students participate in a community activity involving the elderly.

SOC* 115 - Nutrition and Aging**3 credits**

Offered: (Course has not been offered in the past two years)

Explores the nutritional needs and special problems during various stages of the life cycle from infancy to old age. Includes presentations by professionals and others involved in the preparation and planning of nutritional programs; major emphasis is placed on the nutritional needs of the elderly and counseling techniques appropriate to elderly people.

SOC* 131 - Social and Environmental Issues**3 credits**

Introduces the philosophy, methods, and problems of environmental sociology. Emphasizes sustainability, the affects of social arrangements on humanity's interaction with the environment, population control, endangered species, and ethics.

SOC* 176 - Methods of Social Research and Change**3 credits**

Introduces change-agent skills and the skills needed for conducting elementary research projects. Students must design and execute a change project and carry out a number of field projects. Develops data gathering skills, skills in designing data gathering tools, and methods of strategy evaluation.

SOC* 201 - Contemporary Social Issues**3 credits**

Presents a detailed analysis of major social problems in American society. Problems including population, ecology, poverty, race and ethnic relations, urbanization, the role of the media, criminal activity, aging, health, and housing will be evaluated. Emphasis is on American society but some international issues and situations will be examined. Community awareness and involvement will be stressed as students evaluate local issues as well.

SOC* 210 - Sociology of the Family**3 credits**

Presents a sociological evaluation of modern marriages and family life. Topics include preparation for marriage, dating, courtship, marriage-career analysis, married life, parent-child relations, and sexual adjustments.

SOC* 220 - Racial & Ethnic Diversity**3 credits**

A study of the history and culture of various racial and ethnic groups in the United States including an investigation into institutionalized racism, prejudice, discrimination, and other issues of diversity related to power and privilege.

SOC* 224 - Caribbean Culture and Society**3 credits**

Presents an overview of the economic systems, history, and social-cultural dimensions of the countries of the Caribbean Basin, focusing on the island-nations of the Greater Antilles (Cuba, Dominican Republic, Haiti, Jamaica, and Puerto Rico). Also examines the ever-evolving relationship between the United States and the Caribbean, including issues of migration.

SOC* 230 - The City**3 credits**

Offered: (Course has not been offered in two years)

Analyzes social stratification in large urban centers, emphasizing sociological, economic, and racial differences. Considers the role of conflict as it affects group relations. Examines social disorder and the law, the problems of life in the ghetto, the role of power, racial ideology, and social changes. Considers the future of large cities and population movements.

Technology

No active courses available.

Water Management Technology**WMT* 101 - Water Treatment and Distribution****6 credits**

Covers water sources and uses, storage, pipes, pumps, motors, water quality parameters and standards, and treatment techniques, including iron and manganese removal, pretreatment, coagulation/flocculation, sedimentation, filtration, fluoridation, corrosion control, disinfection, sludge handling, and plant maintenance. Presents the mathematics necessary for operators of water treatment and distribution plants.

WMT* 102 - Special Topics in Water Treatment**3 credits**

Covers required and recommended drinking water standards; proper sample collection; preservation and storage techniques; proper physical, chemical, and microbiological analytical techniques; and the relationship between analyses, unit process control, and the quality of treated water in the distribution system.

WMT* 103 - Special Topics in Water Distribution**3 credits**

Covers applied hydraulics; water tanks; mains; valves; services; hydrants and meters; cross connections; pumps; instrumentation; maps and drawings; and local, state, and national laws. Devotes special attention to operational and maintenance procedures designed to protect the quality of water in the system

WMT* 105 - Water Utility Management**3 credits**

Introduces areas of Water Utility Management, including organization, planning, regulations, finances, operations, infrastructure maintenance, safety, and public relations. Considers contemporary technological developments, management problems, and challenges that public water utilities must cope with.

DIRECTORY

ADMINISTRATION AND COLLEGE SERVICES

Academic Advising	285-2124
Admissions - Applications	285-2010
Athletic Office	285-2213
Alumni Association	285-2617
Bookstore	865-5614
Business Office	285-2009
Cafeteria	285-2248
Career Services/Job Placement	285-2110
Center for Educational Services	285-2217
CT College of Technology	285-2452
Counseling & Student Success Center	285-2090
Dean of Academic Affairs	285-2077
Dean of Administrative Affairs	285-2021
Dean of Development & Community Partnerships	285-2296
Dean of Workforce Development & Continuing Education	285-2408
Dean of Student Affairs	285-2210
Distance Learning	285-2570
Early Learning Center (Child Care)	285-2131
Educational Technologies	285-2221
Evening Administrator	285-2300
Facilities and Events Management	285-2223
Financial Aid	285-2030
Foreign Student Information	285-2010
Gateway Community College Foundation, Inc.	285-2617
Gender Equity Center	285-2151
General Information	285-2000
Human Resources	285-2537
Immunization	285-2275
Information Technology	285-2040
Institutional Advancement	285-2296
Institutional Research	285-2415
Library & Learning Commons	285-2057
Mail Room	285-2239
Payment of College Charges	285-2009
President	285-2061
Public Affairs and Marketing	285-2065
Purchasing	285-2524

Registrar	285-2020
Security	285-2246
Student Development and Services Associate	285-2033
Student Activities and Leadership	285-2209
Student Development	285-2318
Student Disability Services	285-2314
Student Government	285-2242
Transcripts	285-2020
Tutoring	285-2217
Veterans Affairs	285-2110
Voice Mail System	285-2200
Weather Information	285-2049
Website	GatewayCT.edu
Workforce Development & Continuing Education	285-2300
Writing Center	285-2245

ACADEMIC DEPARTMENTS CHAIRS AND DIRECTORS

Allied Health / Nursing	Sheila Solernou	285-2393
Arts / Humanities	Chester Schnepf	285-2205
Automotive	Daniel Fuller	285-2370
Business	Richard Rees	285-2178
College Advancement Studies	Michelle Breaker	285-2119
Engineering Technologies	Eric Flynn (Interim)	285-2371
Mathematics / Science	Robert Tremblay	rtremblay@gatewayct.edu
Social Science	Jonah Cohen	285-2289

PROGRAM COORDINATORS/CONTACTS

Art	Nicholas Halko	285-2241
Automotive (General Motors ASEP)	Daniel Fuller	285-2370
Automotive (Honda PACT)	Scott McFarland	285-2405
Aviation Maintenance	Eric Flynn	285-2371
Biomedical Engineering	Thomas McGrath	285-2378
Business	Richard Rees	285-2178
Business Office Technology	Sheri Valentin	285-2169
Clean Water Management	Eric Flynn (Interim)	285-2371
Computer Engineering	Eric Flynn (Interim)	285-2371
Computer Science	Stacy Walker	285-2462
CT College of Technology	Susan Spencer	285-2452
Culinary Arts	Vacant	
Diagnostic Medical Sonography	Cara Case	285-2383
Drug and Alcohol Recovery Counselor	Cher Shannon	285-2321

Early Childhood Education	Carmelita Valencia-Daye	285-2172
Early Childhood Special Education	Carmelita Valencia-Daye	285-2172
Electrical Engineering	Eric Flynn	285-2371
English	Alex Boateng	285-2284
Entrepreneurial Studies	Rose Bednarz-Luglio	285-2198
Environmental Science & Toxicology	Robert Tremblay or John Mullane	285-2185 or 285-2095
Food Service Management	Stephen Fries	285-2175
General Studies	Jonah Cohen	285-2289
Hotel Management	Stephen Fries	285-2175
Hospitality Management	Stephen Fries	285-2175
Human Services	Kim Shea	285-2116
Liberal Arts & Sciences	Lauren Doninger	285-2601
Manufacturing Engineering	Eric Flynn (Interim)	285-2371
Mathematics	Saverio Perugini	285-2195
Mechanical Engineering	Cyprian Ukah	285-2375
Nuclear Medicine	Annmarie Alcala	285-2381
Nursing	Sheila Solernou	285-2393
Nutrition and Dietetics	Marcia Doran	285-2390
Online/Distance Learning	Lynn Roller	285-2295
Radiation Therapy	Gina Finn	285-2392
Radiography	Julie Austin	285-2382
Railroad Engineering Technology	Richard Halkyard (Interim)	285-2311
Retail Management/Fashion Merchandising	Rose Bednarz-Luglio	285-2198
Science	Robert Tremblay	285-2185
Solar Technology	Eric Flynn (Interim)	285-2371
Water Management	Eric Flynn (Interim)	285-2371

PERSONNEL

Faculty – Full-Time

Norman Abell (1988) Professor Biology, D.P.M., Ohio College of Podiatric Medicine; B.S. Villanova University.

Ann Marie Alcalá (2017) Assistant Professor, Program Coordinator of Nuclear Med Technology. M.B.A., M.S., Albertus Magnus College, B.A., Albertus Magnus College, A.A., Gateway Community College

Julie Austin (2000) R.T. (R) (M) Professor, Program Coordinator Radiography. M.A., B.S., Albertus Magnus College; A.S., Gateway Community Technical College.

Catherine Babbitt (2015) Assistant Professor Developmental English. M.S., Southern CT State University; B.S., Charter Oak State College; A.S., Gateway Community College.

Vincent Baldassano (2004) Professor Art. M.F.A. University of Oregon; B.A. Wagner College

Claudia Bedoya-Rose (2000) Professor English as a Second Language and Spanish. Ed.M., Harvard Graduate School of Education; B.S., Albertus Magnus College; A.S., Albertus Magnus College.

Tracy Blanford (2004) Professor Nursing. M.S.N. University of Connecticut; B.S.N. Central Connecticut State University; A.S. Quinnipiac College.

Alex Boateng (2004) Associate Professor English, Academic Coordinator. M.A. Yale University; B.A. University of Ghana.

Michelle Breaker (2010) Associate Professor, Department Chair, College Advancement Studies (CAS) Math. M.S., B.S., Purdue University.

James Wesley Brogan (1993) Professor English. Ph.D., M.A., Indiana University; B.A., University of Iowa.

Mark S. Bruno (1994) Professor General Science. M.S., University of Connecticut; B.S., Southern Connecticut State University.

James Brunt (2010) Associate Professor English. M.A., B.A., Southern Connecticut State University.

Carol Brutza (1988) Professor Peace & Conflict Studies, English as a Second Language. M.A., New York University; B.A., University of Arizona; Certificate, Peace Education, Columbia University.

Mary M. Burns (1974) Professor English. M.A.T., Brown University; B.A., University of Connecticut; A.A., South Central Community College; Certificate, E.S.L., University College, Dublin, Ireland.

John Callaghan (2006) Associate Professor Mathematics. M.A. Central Connecticut State University; B.S., Trinity College.

Veronica Cardinale (2010) Associate Professor Radiation Therapy Technology, Clinical Coordinator. B.S. Albertus Magnus College; A.S. South Central Community College.

Cara Case (2013) Associate Professor, Program Coordinator Diagnostic Medical Sonography, Program Coordinator. B.S. University of Hartford; A.S., Middlesex Community College; RDMS, RDCS

Susan Chenard (2006) Professor English, Program Coordinator ESL Program. M.A. Mills College; B.A. Central Connecticut State University.

B. Christine Cherry (2017) Full Time Lecturer Electrical Engineering Technology. M.S., B.S. Southern Connecticut State University

Jonah Cohen (2004) Professor Sociology, Department Chair Social Sciences. M.S., Central Connecticut State University; B.A., Trinity College.

Robert Costanzo (1994) Professor Automotive Technology. B.S., Central Connecticut State University.

Tara Daly (2016) Assistant Professor Nursing. M.S.N., Sacred Heart University.

Susan DeBarge (2008) Associate Professor Nursing. M.S. Nursing-Midwifery, Yale University; B.S., Nursing, UMASS, Boston.

Todd Degree (2007) Professor, Program Coordinator Exercise Science & Wellness. MBA Georgia State University; B.S., Sports Management, UMASS Amherst.

Megan DeLivron (2010) Associate Professor-Chemistry. Ph.D., Biochemistry, University of Connecticut; B.S., Biochemistry, University of New England.

Lauren Doninger (2001), Professor of Psychology, Program Coordinator Liberal Arts & Science. Ed.D. Johnson & Wales University; M.A., Central Connecticut State University; B.S., Nasson College; LADC, LPC

Marcia Swan Doran (1998) Professor Nutrition and Dietetics, Program Coordinator. M.S., University of Bridgeport B.S., University of Connecticut; R.D.N.

Franz T. Douskey (1977) Professor English. M.A., B.A., Goddard College.

- Andrea Eckels** (2016) Full Time Lecturer Nursing. M.S.N., Benedictine University.
- Thomas M. Fahy** (2004) Professor Psychology. Psy.D. University of Hartford; M.A., B.A. Tufts University.
- Gina Finn** (1999) Professor Radiation Therapy, Program Coordinator, M.A. Albertus Magnus College; B.S. Central Michigan University; A.S., Gateway Community College; R.T. (T).
- Eric Flynn** (2010) Instructor Electrical Engineering Technology, Interim Department Chair Engineering Technology. Ph.D., Electrical Engineering, University of Connecticut; M.S., B.S., University of Connecticut; A.S., Gateway Community College.
- Stephen Fries** (1986) Professor Accounting, Program Coordinator Hospitality Management Program. M.S., University of Massachusetts Amherst; B.S., State University of New York at Albany.
- Germaine C. Frosolone** (2001) Professor Nuclear Medicine, Clinical Coordinator. B.A., Western Connecticut State University; A.S., South Central Community College; C.N.M.T., R.T.N.
- Daniel Fuller** (2011) Professor Automotive, Department Chair. B.S. Excelsior College; A.A.S., Greater New Haven State Technical College.
- Howard Fuller*** (2015) Full Time Lecturer Automotive. Certificate Vocational Technical Institute; Central Connecticut State University.
- Renee Gaines** (2008) Associate Professor English. EdM Suny Buffalo; B.A. Brooklyn College.
- Beata Gebuza** (2008) Professor Math. M.S. Southern CT State University; B.S. Quinnipiac University; A.S. Gateway Community College.
- Claudia Haekel** (2004) Professor Nursing. M.S. University of Connecticut; B.S. Southern Connecticut State University.
- Nicholas F. Halko** (1994) Professor, Program Coordinator Studio Arts. M.F.A., Hartford Art School/University of Hartford; B.A. Southern Connecticut State University; B.A., A.S. Charter Oak College.
- Richard B. Halkyard, Jr.** (1999) Professor, Interim Program Coordinator Railroad Engineering Program. M.P.A., University of New Haven; B.S., Quinnipiac College; A.S. Quinnipiac College; A.S. Greater New Haven State Technical College.
- Martha Hayes** (1996) Professor English. M.A., B.A., Southern Connecticut State University; A.S., Housatonic Community College.
- Marilyn Jacobi** (1994) Professor College Advancement Studies (CAS) Mathematics. M.S., University of Bridgeport; B.A., SUNY College at Oneonta.
- Raj Jain** (1988) Professor Biology. Ph.D., Lucknow University (India); M.S., Rajasthan University; B.S., Delhi University.
- Elizabeth H. Keefe** (2012) Associate Professor, Academic Coordinator College Advancement Studies (CAS) English. M.S./TESOL Certification, Southern Connecticut State University; M.A., Fairfield University; B.A., College of the Holy Cross.
- Karen L. Kessler** (2002) Professor Nursing. M.S., University of Wisconsin–Madison; B.S.N., Hunter College; A.A.S., Kingsborough Community College.
- Susan Levine** (2007) Professor Nursing. M.S.N., University of Hartford; B.S.N., Central Connecticut State University.
- Lorraine Li** (2004) Professor Economics. M.S. Columbia University; B.A. Columbia University.
- Elaine Lickteig** (2010) Associate Professor, Clinical Coordinator, Nutrition and Dietetics. M.S., University of Connecticut; B.A. Michigan State University; R.D.N.
- Michael Loteczka** (1984) Professor Chemistry/Physics. M.S., B.S., University of Connecticut.
- Rose Bednarz Luglio** (1992) Professor Business, Program Coordinator Entrepreneurial Studies, Retail Management/Fashion Merchandising. M.B.A., C.A.G.S., University of Bridgeport; M.A., B.S., University of Connecticut.
- Mark D. Lynch** (1998) Professor Chemistry. Ph.D., Iowa State University; M.S., Southeastern Massachusetts University; B.S., Boston College.
- Enrico Mastronardi** (2008) Assistant Professor College Advancement Studies (CAS) English. M.A., Fairfield University; B.A., Boston College.
- Joseph Maynard** (2000) Associate Professor History. M.A., Trinity College; B.A., Southern Connecticut State University; A.S., South Central Community College.
- Barbara McFarland** (2006) Associate Professor Nursing. M.S.N., University of Hartford; B.S., Florida International University.
- Scott McFarland** (2008) Professor, Program Coordinator Automotive Technology. B.A., University of Massachusetts.
- Thomas McGrath** (1981) Professor, Program Coordinator Biomedical Engineering Technology. M.S., Biol.E., University of Connecticut; B.S.E.E., University of New Haven; A.S., Waterbury State Technical College.
- Jessica Shoneck McLawhon** (2016) Instructor Early Childhood Education. M.A., East Carolina University; B.S., East Carolina University.
- Eric Meyers** (2007) Associate Professor Biology. University of Bridgeport; B.A., University of Steubenville.
- Victoria Morse** (2004) Professor Foreign Languages. M.A., Middlebury Graduate School of French; B.A., Vassar College.

- Kathleen H. Murphy** (1996) Professor Business. M.S., B.S., University of New Haven; A.S., South Central Community College; A.R.R.T. (N), C.N.M.T.
- Linda Nevins** (2009) Associate Professor, Nursing. M.S.N., B.S., University of Connecticut.
- Lauren O’Leary** (2016) Instructor Developmental English. M.F.A., University of Nebraska; M.A., Wesleyan University; B.A., Quinnipiac University; TESOL Certification, University of California, San Diego.
- Sam Osei** (2016) Assistant Professor Nursing. M.S.N., University of Hartford.
- Lynette Palm** (2012) Assistant Professor Nursing. M.S.N., B.S.N., Rand Afrikaans University.
- Daniel Palmquist** (2014) Assistant Professor Culinary Arts. A.O.S., Manchester Community College; A.O.S. Johnson & Wales University.
- Kititakone Panasy** (2016) Full Time Lecturer Manufacturing Technology. M.S., Fairfield University.
- Saverio Perugini** (1993) Professor Mathematic, Academic Coordinator. Ed.D., Teachers College, Columbia University; M.S., B.S., Central Connecticut State University.
- Louise A. Petroka** (1994) Professor Biology. M.A., B.S., Central Connecticut State University.
- Janice B. Potochney** (1981) Professor Accounting. M.B.A., University of Bridgeport; B.S., University of Connecticut; C.M.A.
- Deborah Raimondo** (1998) Professor English as a Second Language. A.B., Gordon College; M. Div., Eastern Baptist Theological Seminary; M.A., Central Connecticut State University.
- Myra Randall** (2008) Assistant Professor Nursing. M.S.N., University of Hartford; B.S.N., Southern Connecticut State University.
- Andrew V. Randi** (1997) Professor Culinary Arts. M.S., B.S., University of New Haven; A.S., Johnson & Wales College.
- Richard Rees** (2002) Professor Business, Department Chair. M.C.S.E., Microsoft; M.B.A, University of New Haven; B.S. Central CT State University; A.S. Middlesex Community College.
- Anthony Rish** (2004) Assistant Professor Automotive. B.S., Central Connecticut State University; A.A.S., Gateway Community College.
- Lynn Roller** (2008) Professor Diagnostic Medical Sonography; Coordinator, Distance Learning. B.S., Charter Oak State College; St. Vincent’s Medical Center; Certificate, Ultrasonography, Radiologic Technology.
- Wilfredo Rosado** (2010) Associate Professor Computer Science. MSCIT, Sacred Heart University
- Eileen Russo** (2010) Associate Professor DARC., M.A., St. Joseph College.
- Teresa Russo** (1992) Professor Psychology. M.S., Southern Connecticut State University; B.A., University of Connecticut; Licensed Professional Counselor (L.P.C.).
- Heidi Rydene** (1993) Professor Biology. M.S., Southern Connecticut State University; B.S., University of Rhode Island.
- Rachel Schettenhelm** (2004) Professor College Advancement Studies (CAS) Mathematics. M.S., University of Toledo; B.S., Michigan State University.
- Chester H. Schnepf** (1984) Professor and Department Chair Humanities. C.A.G.S., Trinity College; M.A., Hofstra University; B.F.A., New York Institute of Technology.
- John H. Scott, III, Esq.,** (1998) Professor Business. J.D., Hofstra University School of Law; M.Div., Harvard University School of Divinity; B.A., SUNY at Stony Brook; A.A., Suffolk County Community College.
- Colena Sesanker** (2017) Instructor Philosophy. M.B.A., B.S., A.S.
- Cheryl Shannon** (2007) Professor, Program Coordinator Drug and Alcohol Recovery Counselor. MHSA., Antoich New England Grad School; B.S., New Hampshire College; A.A.S., Norwalk Community College; LADC. (Licensed Alcohol and Drug Abuse Counselor)
- Kim Shea** (1994) Assistant Professor Human Services, Program Coordinator. M.S.W., B.S.W., Southern Connecticut State University.
- Tinkang Shen** (2006) Professor Mathematics. M.S., M.A., Ball State University; B.S. Shanghai University.
- Kimberly Sorrentino** (2015) Full Time Lecturer Diagnostic Medical Sonography. M.S., C.E.C.S, Health Care Improvement, Dartmouth College; B.A. Boston University; Certifications in Echocardiography and Diagnostic Medical Sonography; RDMS, RDCS, RVT.
- Susan Spencer** (2010) Associate Professor, Program Coordinator, College of Technology. M.S., B.S., Southern Connecticut State University.
- Daniel Sullivan** (1992) Professor Biology, Microbiology contact faculty. Ph.D., Walden University; M.P.H., University of Connecticut; M.S., Rutgers University; B.S., Ramapo College.
- Amanda Sweeney** (2012) Associate Professor Developmental Mathematics. M.S., B.S., University of Connecticut.
- Richard Thayer** (2016) Assistant Professor Radiography. M.Ed., Southern CT ST University; B.A., Albertus Magnus; A.S., Gateway Community College.
- Robert E. Tremblay (1987)** Professor Physics, Department Chair Math/Science. 6th year degree, M.S., B.S., Southern Connecticut State University.

Cyprian Ukah (1986) Professor Mechanical Engineering Technology, Program Coordinator. M.S.M.E., University of New Haven; B.S.M.E., Trinity College.

Carmelita Valencia-Daye (2004) Professor, Program Coordinator Early Childhood Education. M.Ed. University of North Carolina, Chapel Hill; B.S. University of Philippines.

Sheri Valentin (2010) Associate Professor, Program Coordinator Business Office Technology. M.S., University of New Haven; B.S., Sacred Heart University.

Jaye Viola (2007) Professor Radiography. B.S., Albertus Magnus College; A.S., Gateway Community College; R.T. (R).

Donald Walker (2012) Associate Professor Computer Science, Coordinator Distance Learning. M.B.A., Southern Connecticut State University; B.S., New York University.

Stacy Walker (2012) Associate Professor Computer Science, Program Coordinator. M.S., Colorado Technical University; M.S., B.S., Quinnipiac University; A.S., Gateway Community College.

Anne Williams (2007) Professor Business. PHD, Business Administration, Walden University; M.B.A. Temple University; B.A., University of Connecticut C.P.C.U., C.E.B.S.

Wesley Winterbottom, (1994) Professor Chemistry. M.B.A., University of Connecticut; M.S., Cornell University; B.S., Lehigh University.

Virginia A. Woolums (1986) Professor English. M.Ed., Temple University; M.S., Southern CT State University, English; B.A., Beaver College.

Faculty – Part-Time

Lawrence Baldino, M.S., M.B.A., Southern Connecticut State University and University of New Haven

Kathleen Bavelas, M.A.L.S, Wesleyan University

Patricia Bissell, M.Music 6th yr, Yale School of Music

Ronald Blevins, M.A., Fairfield University

Rosemary Boone, M.ME, University of Hartford

Lisa Breuninger-Tenny, Ph.D., Drexel University, PA, Graduate Medical Science

Diane Calello, M.S., Quinnipiac University

Vincent Carrano, M.S., 6th yr; Southern Connecticut State University

Toni D. Cates, M.A., Wesleyan University, Fairfield University

Dino Ciaburri, Ed.D., Nova Southeastern; M.A.L.S., Wesleyan University; B.S., Southern Connecticut State University; three Fellowships from Yale University; First Doctorate Hunter College, Yale University; UCONN.

Moshe Cohen, M.S., University of New Haven

Patricia Colandrea, M.B.A., Housatonic Community College, Fairfield University, University of New Haven

Victor Collazo, M.D., University of Puerto Rico

Daniel Corr, M.M., Cornish College, Yale University

Daniel J. Courcey, Jr. A.B., Providence College; M.A., Southern Connecticut State University; C.A.G.S., Fairfield University

Amy Davison, M.A., Central Connecticut State University, University of Connecticut

Michelle DellaCamera, M.S., Certificate, Albertus Magnus College, Southern Connecticut State University

Corinne Fisher, M.B.A., C.P.C.

Susan Foss, M.S., 6th yr; Southern Connecticut State University

Lois Fucci, M.A., University of Hartford, University of Pennsylvania, Fairfield University

Vincent Ginnetti, M.S., Southern Connecticut State University

Janet Greenberg, B.S., M.A., Central Connecticut State University, University of Hartford

Twanda Grey, M.S.W.; Southern Connecticut State University

Catherine Hall, M.A., Southern Connecticut State University, University of New Haven

Lawrence D. Hally, M.S., Southern Connecticut State University

Robert Hubbard, M.B.A.; University of Connecticut

Jean Incampo, M.A. Ed Specialist Degree; University of New Hampshire, Nova Southeastern University

Stanley Kapinos, M.A., Fairfield University, Southern Connecticut State University
Joan Krall, BME, M.S., University of Hartford, Central Connecticut State University
Susan Landino, B.S., M.S., Southern Connecticut State University
Bart Lombardi, M.S.E.E., MBA, Dartmouth College, NYU Graduate School of Business Administration
Raja Mani, Ph.D., University of Wyoming
Elizabeth McCormack, B.A., M.A., Southern Connecticut State University, University of Connecticut
Robert Mitchell, M.A.L.S.; Wesleyan University
Mary Moore, B.S., M.S., University of Bridgeport, Central Connecticut State University, University of Connecticut
Robert Novotny, B.A., M.A., Sacred Heart University, Western Connecticut State University
Thomas O'Neil, B.A., M.A., College of the Holy Cross, Southern Connecticut State University
Barbara Puglisi, M.A.; Southern Connecticut State University
Thomas Ragozzino, B.S., M.A., Fairfield University, Trinity College
Susan Reinhart, B.A., M.F.A., Vassar College, Tyler School of Art
Virginia Robey, B.A., University of Hawaii, M.S., Southern Connecticut State University
Margaret Rogers, M.B.A.; University of New Haven
Joan Ryan, M.A., Southern Connecticut State University
Anthony Solli, B.S., M.S., University of Notre Dame, Quinnipiac College, Southern Connecticut State University, Fairfield University, Yale University
Todd Solli, M.S., Quinnipiac University
Joseph A. Spadaro, B.S., M.S., Trinity College, University of New Haven
Jean Tencza, B.A., M.S., Southern Connecticut State University, University of New Haven
Kimberly Thomas, B.S., M.S., Ph.D., University of Rhode Island, St. Joseph College, Southern Connecticut State University
Susan Traudt, B.S., M.S., University of New Haven, Quinnipiac University
Paul Turtola, M.S., with certification; Southern Connecticut State University
Susan Weldon, B.S., MRP, University of Massachusetts, University of Vermont
Jeanne Whalen, B.S., M.S., Southern Connecticut State University
Narinder Whitehead, B.S., MPH, Southern Connecticut State University, Nairobi University
Brendan Williams, B.A., University of Connecticut, MBA Rensselaer Polytechnic Institute
Leon Yacher, B.A., M.A., University of New Mexico; Ph.D., Syracuse University

Administration

◆ President's Office

Paul Broadie II, Ph.D. (2017) President (Interim), Ph.D., Colorado State University; M.B.A., Long Island University; B.S., Mercy College
Christina Scillia-Rivera (2004) Secretary. A.S., Gateway Community College.

❖ Human Resources

Lucille E. Brown (1999) Director. J.D., Notre Dame University; B.A., Jackson State University.
Christie Higney (1997) Human Resources Associate. B.S., Quinnipiac College.
Mary-Lynn Labonty (2010) Payroll Officer. B.A., A.S., Post University.
Patricia Boyne (2010) Fiscal Administrative Officer. A.S., Gateway Community College.
Mark Magnotti (2012) Office Assistant.
Melissa Sirois* (2011) EA Human Resources.

❖ Dean of Development and Community Partnerships

Mary Ellen Cody (2008) Dean. B.A., George Washington University.
Susan K. Swirsky (1983) Administrative Assistant. Diploma for Executive Secretary, Academy for Business Careers; A.S., Gateway Community College.

❖ Public Affairs and Marketing

Evelyn Gard (2001) Director. M.A.Ed, Loyola Marymount University; B.A., Mount St. Mary's University.
Mari Walker (1983) Office Assistant. B.A., Charter Oak State College; A.S., South Central Community College.
Allen Gales (1979) Public Relations Associate. B.S., Charter Oak State College; A.S., South Central Community College.
Amie Fanning (2012) Coordinator of Publication Services. B.A., Southern Connecticut State University.

◆ Administrative Services Division

Dean of Administrative Affairs

Rose Ellis (2017) Dean (Interim). Ph.D., Capella University; M.L.S., Wayne State University; B.S., Wayne State University
Brenda Haase (1998) Administrative Assistant.

❖ Business Office

Jill McDowell (2002) Director of Finance and Administrative Services. M.B.A., University of Connecticut; B.S., University of Connecticut.
Carol Mason (1993) Assistant Accountant.
Carrol Lewis (2005) Assistant Accountant. M.B.A., Sacred Heart University; B.S., Sacred Heart University, A.S., Norwalk Community College.
Yomaira Melendez* (2011) EA Business Office. A.S., Gateway Community College.
Analia Pilco Corona* (2011) EA Business Office. A.S., Gateway Community College.
Katherine Jackson (2015) Accountant.

• Purchasing

Kelly Anne Levinson (1998) Fiscal Administrative Officer. MBA University of New Haven; B.S. University of New Haven; A.S., Gateway Community College.
Kim Diaz - Accountant. B.S., Albertus Magnus.
Jaimie Cornell* (2012) EA Purchasing Office

❖ Facilities and Events Management

Lucian Simone (2010) Director. M.S., Environmental Science, University of New Haven; B.S., Mechanical Engineering, Roger Williams College.
Sandra Garde (1999) Secretary II.
Brian Higney (2007) Facilities Services Coordinator. A.S., Gateway Community College.
Michael Martone (1998) Office Assistant.
Cary Broderick (2012) Campus Police Sergeant.
Charlene Thomas (1988) Office Assistant. Diploma for Secretarial Science, Stone Business School.

- **Maintenance**

Rodney Carr* (2014) Custodian.
Richard Catenza (2010) Qualified Craft Worker-Electrician. Diploma New England Technical Institute.
Edward Chavis (2007) Custodian.
Charles Cole (2007) Lead Custodian.
Christine Crawford (2012) Custodian.
James D'Angelo (2012) Custodian.
Leroy Deberry (2012) Supervising Custodian.
Denay Emery (2012) Part-time Custodian.
Brian Ferraro (2012) Qualified Craft Worker-HVAC-R.
John Fulton (2014) Custodian.
Mohammed Hudu (2014) Custodian. Certificate, O'Reilley Senior Secondary School, Ghana.
Maribel Lugo (2001) Lead Custodian.
Joel Medina (2012) Custodian.
Hedwig Molka (2008) Custodian. A.S., Goodwin College.
Lucas Ortiz (2007) Custodian.
Mark Perez (2012) Custodian.
Joseph Prince (1984) Building Superintendent I.
Franklin Sharpe (2016) Custodian.
Luis Soler (2007) Custodian.
Clara Zuluaga (2007) Custodian. American Business School Columbia.

- ❖ **Information Technology**

Lawrence Salay (2005) Director. M.B.A., University of Phoenix; B.S. Mercy College.
John Desrosiers (1996) Assistant Director of Information Technology. B.S., American Intercontinental University; A.S., Gateway Community College.
William Miklos (1998) Network Manager. B.S., Charter Oak; A.S., Gateway Community College.
Dean Ferro (2006) Technician II. B.S., Central Connecticut State University.
Derek Fries (2009) Network Manager. MIS, B.S., Central Connecticut State University; A.S., Tunxis Community College.
Urfi Agolli (2015) Information Technology Tech II. A.S., Gateway Community College.
Jeff Becker (2015) Information Technology Tech II. B.A., Quinnipiac University.
Gladis Reyes (2015) Help Desk Coordinator /Information Technology Tech 1. B.A., Southern Connecticut State University; A.S., Gateway Community College.
George Sacal (2015) Information Technology Tech II. B.S., University of Bucharest, Romania.

- ❖ **Institutional Research**

Vincent Tong (2000) Director of Institutional Research. Ph.D., Yale University; M.A., University of Michigan; B.A., New York University.
Tanya Gibbs* (2017) EA Institutional Research.

- ◆ **Academic Affairs Division**

- Dean of Academic Affairs**

Mark Kosinski (2006) Dean. Ph.D., M.A., Bowling Green University; B.A. Alliance College.
Angela Richter (1998) Assistant to the Dean of Academics. M.M., University of Phoenix; B.S., University of Bridgeport; A.S., Gateway Community-Technical College; ARRT(T).
Shelly Frosolone (2004) Administrative Assistant. Academic Affairs Division; A.S., Gateway Community College.
Virginia E. Blackmon (1980) Office Assistant. A.A., Southern New England Regional Bible School; Diploma for Secretarial Science, New Haven Academy of Business; Certificate, Essex County College; Certificate, Newark Manpower Training Skills Center.
Wilhelmenia Parsons (2009) Office Assistant. A.S., Gateway Community College.
Celia Carvalho* (2013) Health/Life Sciences Grant Program Assistant. B.A., University of Sao Francisco.
Bridget Mullaly (2014) Instructional Support Specialist. B.A., Southern CT State University.

❖ **Academic**• **Allied Health and Nursing**

Sheila B. Solernou (2002) Academic Division Director Allied Health/Nursing. M.S.N., University of Hartford; B.S.N., Mount St. Mary College; R.N.

Dean Tinari* (2016) Instructor Exercise and Fitness. B.S.

Mary Beth Banks (2004) Enrollment Services Assistant. M.P.A., University of New Haven, M.S., University of New Haven; B.A., Merrimack College.

Alice M. Pandolfi (1999) Administrative Coordinator. M.P.H., Southern Connecticut State University; B.A., The Catholic University of America.

Linda Scott (2009) - Office Assistant.

Paul Fontanez (2016) Nurse Advisor. M.B.A., M.S., A.A.

• **Automotive**

Edward Barlage (2016) Automotive Program Facilitator. B.A., Michigan State University.

• **Early Learning Center**

Sarah Chambers (2016) Director of Child Development Center. M.S., Eastern Connecticut State University; B.A., Plymouth State College.

Mary Palermo (1998) Secretary II. B.G.S., University of Connecticut; A.S., Gateway Community College.

Marion Williams (1983) Child Development Teacher. B.S., New Hampshire College; A.S., South Central Community College.

Linda Alston (1998) Child Development Teacher. B.A., Connecticut College.

Stella Okparanta (1990) Child Development Teacher. M.A., University of New Haven; B.A., Albertus Magnus; A.S., South Central Community College.

Annmarie Rosario (2001) Child Development Assistant Teacher. A.S., Gateway Community College.

Marie Helene N'Guessan (2005) Child Development Assistant Teacher. A.S., Norwalk Community College.

Leasa Moon* (2010) Child Development Assistant Teacher. A.S., South Central Community College.

• **Educational Technologies**

Alfonzo Lewis (2001) Educational Technologies Specialist. B.A., University of Connecticut.

Taylor Rajaniemi* (2017) EA Acting Media Specialist. B.S., A.S.

• **Engineering and Applied Technologies**

Donna Bruno (1986) Office Assistant. Diploma for Executive Secretary, Stone School of Business; Certificate, Gateway Community College.

• **Library & Learning Commons**

Clara Ogbaa (2008) Director. Ed.D., University of Bridgeport; MLS, B.A., University of Texas.

Michael J. Cifferelli (2003) Librarian. M.L.S., Southern Connecticut State University; B.A.; Trinity College; A.A., Gateway Community College.

Martha Lipowski (1993) Librarian. M.L.S., B.S., Southern Connecticut State University.

Jianxin Yang (2006) Librarian. M.S., Texas Tech, M.L.S., Southern Connecticut State University; B.S. University of Heliangjiang.

Lillian Maisfehl (2004) Library Associate. B.A., University of Massachusetts.

Shauna DeStefano (2004) Librarian. M.L.S., B.S., Southern Connecticut State University.

Todd Hampton (2013) Librarian. M.L.S., Southern CT State University; B.S., Eastern Connecticut State University.

Conor Perreault* (2016) EA Systems Librarian. M.L.S., Southern Connecticut State University; B.S., Northeastern University.

• **Math/Science**

Belinda Petrovic (2012) Academic Associate. B.S., Central Connecticut State University; A.A., Gateway Community College.

• **Middle College**

Donnell Hilton* (2016) GCC Middle College Coordinator and Dual Enrollment. M.S., B.A., A.S.

◆ **STUDENT SERVICES DIVISION**

Dean of Students Affairs

Wilson Luna (1985) Dean. Ed.D., Nova Southeastern University; M.S., University of Bridgeport; B.A., Southern Connecticut State University; A.A., Norwalk Community College.

Amy DeFigueiredo (2006) Administrative Assistant. B.S., Southern Connecticut State University.

❖ **Center for Educational Services**

Clara Mena (2005) Director. Academic Support Center. M.S., Southern Connecticut State University; B.A., Charter Oak State College; A.S., Gateway Community College.

◆ **ENROLLMENT MANAGEMENT**

❖ **Admissions**

J.A. Tony Carberry (2015) Director of Enrollment Management. E.M.B.A., University of New Haven, B.A., Elmhurst College, IL.

Wanda Edwards (1999) Secretary II. CPI Certificate Data Entry, Bridgeport, A.S., Gateway Community College.

Elizabeth Vega (2003) Associate Director of Admissions. B.S.W., Southern Connecticut State University; A.S., Gateway Community College.

Jeanette Rivera-Epps (2017) Assistant Director Admissions. B.S.

Sansanee Bijananda (2000) Office Assistant. Certificate, Gateway Community College.

Monica Garcia (2006) Office Assistant. A.S., Gateway Community College.

Lisa Barletta (2008) Office Assistant.

Michelle Fraser (1998) Associate Director of Admissions. M.S.M., Albertus Magnus College; B.S., University of New Haven; A.S., Gateway Community College.

Janet Parker (2008) Office Assistant. B.A., Columbia University.

❖ **Registrar**

Maribel Lopez (2005) Registrar. M.B.A., University of New Haven; B.S., Southern Connecticut State University.

Teresa DelValle-Sadler (2016) Office Assistant

Jamaine Linton (2016) Office Assistant

Susan Moscato (1999) Associate Registrar. B.S., Charter Oak State College; A.S., Gateway Community College.

Abdul Alsamraie (2013) Assistant Registrar. A.S. Gateway Community College.

• **Financial Aid**

Raymond R. Zeek (1994) Director. M.S., Southern Connecticut State University; B.A., Franklin & Marshall College.

Lavanda Bryant (2008) Financial Aid Assistant. M.S., B.S., Southern Connecticut State University; A.S., Gateway Community College.

Omar Livingston (2013) Associate Director of Financial Aid. B.S., Albertus Magnus; A.S., Norwalk Community College.

Linda Li (2012) Accountant. M.S., University of Hartford; B.S., Xian University of Technology.

◆ **STUDENT ENGAGEMENT AND CAREER SERVICES**

Kellie Byrd Danso (2004) Director of Student Engagement and Career Development. M.Ed., North Carolina State University, NCC-National Certified Counselor; B.A., University of Connecticut.

Earle Lobo (2017) Student Development Coordinator.

Leigh Roberts (2015) Student Engagement & Career Development Associate. M.A., Albertus Magnus College.

Richard Palinko* (2013) EA Veteran Affairs. A.S., Gateway Community College.

• **Student Activities and Leadership Programs**

Marc Hartmann* (2017) Acting Director Student Activities M.A., B.S.

◆ **COUNSELING/STUDENT SUCCESS**

Michael Buccilli (2010) Director of Counseling and Student Success. M.S.W., Southern Connecticut State University; B.S., University of Vermont.

Lisa Corbeil (2005) Secretary II. B.S. Charter Oak State College; A.S. Middlesex Community College, Certification-Paralegal Litigation

John Mullane (2008) Counselor. M.S., Central Connecticut State University; B.A., University of New Hampshire.

Kathleen Ahern (2013) Counselor. M.S., Southern Connecticut State University; B.S., University of Rhode Island; NCC Certified.

Licella Arboleda (2015) Counselor. M.S., B.A., Southern Connecticut State University; A.S., Gateway Community College.

Roberta Prior (2004) Student Retention Specialist. M.S., Western Illinois University; B.A., Central Connecticut State University.

Sandra Williams-Eskridge (2001) Student Development and Services Associate. M.S., B.A., Fort Valley State College.

• **Student Disabilities Services**

Ronald Chomicz (2012) Learning Disabilities Specialist. Sixth Year, M.A., Southern Connecticut State University; B.A., Central Connecticut State University.

Samantha Kusiak (2012) Learning Disabilities Specialist. M.S., Southern Connecticut State University; B.A., Eastern Connecticut State University; A.A., Northwestern Community College.

Workforce Development & Continuing Education

Victoria L. Bozzuto (1994) Dean. M.Ed., Cambridge College, B.S., Southern Connecticut State University; A.S., South Central Community College; A.R.R.T. (T).

Erika Lynch (2012) Coordinator, Continuing Education. B.S., Quinnipiac University.

Marianne Lippard (2010) Administrative Assistant. B.A., Clemson University.

Pamela Walsh (2015) Continuing Education Associate. B.S., SUNY, Brockport NY.

Merilee Baker Roussat (2015) Continuing Education Coordinator. M.S.M., Albertus Magnus College; B.S., University of Connecticut.

Kaitlyn Kos* (2014) Coordinator of Adult Education. M.S., Southern Connecticut State University; B.A., Central Connecticut State University.

Victoria Dancy* (2016) Today's Youth Tomorrow's Career's Program Manager. M.B.A., University of New Haven; B.S., Albertus Magnus College.

• **Step Forward**

Jaime French* (2004) Director, Step Forward. M.A., University of Utah; B.A., SUNY, Albany.

Adamil Rivera* (2017) EA SNAP E&T Program Coordinator

* Denotes Full-Time Educational Assistant

Emeriti

Thomas M. Adams (1983-2011) Professor Emeritus of Computer Engineering Technology
Carol Annette (1998-2017) Early Childhood Education Accreditation Facilitator Emerita
Frank D. Archangelo (1981-2003) Associate Professor Emeritus of Chemistry/Math/Physics
John Argento (1983-2009) Professor Emeritus of Chemistry, Math and Physics
Margaret Bauer (1978-2009) Dean Emerita of Research and Development
Mary P. Birdsey (1978-2003) Professor Emerita of Business Office Technology
William F. Celotto, PE (1979-1999) Professor Emeritus of Mechanical Engineering Technology
Lisa Cherhoniak (1998-2017) Associate Fiscal Administrative Officer Emerita
Michele N. Cone (1981-2007) Director Emerita of Library
Arthur Corda (1976-2009) Director Emeritus of Facilities and Events
Daniel J. Courcsey, Jr. (1969-2011) Professor Emeritus of Social Sciences
Francis E. Crowley (1986) Professor Emeritus of English
Lou D'Antonio (1998-2017) **Dean Emeritus of Administrative Affairs**
Jesse Davis (1971-2011) Professor Emeritus of Psychology
William J. Dean (1977-2003) Professor Emeritus of Social Science
Diana P. Duarte (1972-2003) Professor Emerita of Business Office Technology
Roy Francis (1979-2005) Director Emeritus of Engineering and Applied Technologies
Frank Gallagher (1985 - 2009) Professor Emeritus of Computer Science
Russell Gaudio (1991-2014) Professor Emeritus of English
G. J. Gerard (1982 - 2009) Professor Emeritus of Electrical Engineering Technology
Martha M. Hirsch (1986-1997) Associate Professor Emerita of Gerontology
Joyce Donen Hirschhorn (1969-1991) Professor Emerita of Human Communication
L.C. Hopes (1972-1992) Professor Emeritus of Sociology
Marsha Janik (1990 - 2009) Professor Emerita of Business Office Technology
Edith G. Jaquiere (1980-1992) Dean Emerita of Academic Affairs
Dr. Dorsey Kendrick (1998-2017) President Emerita
Dr. Earnestine Kirkland (1998-2017) Professor and Program Coordinator Emerita of Early Childhood Special Education
Susan Moore Lincoln, (1969-1997) Dean Emerita of Students
Susan Logston (1998-2017) Professor and Chairperson Emerita of Social Sciences
Dominic Longo (1979-1992) Associate Dean Emeritus of Instruction
Mr. Donald Lostritto (1998-2017) Professor and Program Coordinator Emeritus of Electrical Engineering Technology
Joseph E. Magyar (1968-1997) Associate Dean Emeritus of Community Services
Julie Perego Mangini (1989) A.R.R.T. (R). Professor Emerita-Radiography
Ann B. Manner (1977-1992) Professor Emerita of Chemistry/Math/Physics
Stuart J. McEnerney (1970-1989) Professor Emeritus of Mathematics
Mr. Mohsin Mehtar (1998-2017) Professor Emeritus of Biomedical Engineering Technology
Carol Guerrero McHugh (1970-2014) Executive Assistant Emerita to the President
Tina McHugh (1978-2011) Director Emerita of Counseling
Victor C. Medina (1998-2014) Professor Emeritus of Sociology
Donald Mei (1972-2009) Professor Emeritus of Accounting and Political Science
Luis F. Melendez (1990-2013) Director Emeritus of Center for Educational Services
Robert A. Miles (1972-2009) Director Emeritus of Career Services
Richard S. Muir, PE (1982-2003) Assistant Professor Emeritus of Electrical Engineering Technology
Maria Torres-Nosel (1998-2017) Counselor Emerita
Karl S. Paecht (1977-1992) Associate Professor Emeritus of Manufacturing Engineering Technology
Lee Panagoulas (1998-2017) Professor Emeritus of Electrical Engineering Technology
Bonnie A. Pease (1979-2003) Librarian Emerita of Library
Cheryl A. Pegues (1986-2009) Director Emerita of Student Development/Services
Albert Pesticci (1981-2009) Professor Emeritus of Math and Science
David Pettigrew (1990-2011) Professor Emeritus of Automotive Technology
Ann G. Robinson (1972-1999) Professor Emerita of Psychology
Kenneth R. Robinson (1970-1988) Professor Emeritus of Sociology
Irving Rosenthal (1971-1990) Professor Emeritus of Sociology and Anthropology
Wendy Samberg (1998-2017) Director Emerita of Instructional Design & Middle College Programs
John Scippa (1972-2011) Professor Emeritus of Media, Film and Human Communication
Edmund L. Sobolewski (1977-1987) Dean Emeritus of Students
Catherine E. Surface (1993-2015) Director Emerita of College Transition
David M. Swirsky (1982-2011) Registrar Emeritus of Records
William E. Thumbek (1970-2003) Professor Emeritus of Mathematics

BOARD OF REGENTS FOR HIGHER EDUCATION

The 17 Connecticut State Colleges and Universities (ConnSCU) governed by the Board of Regents for Higher Education, offer students an affordable, accessible option to further their education or career training. With 12 community colleges, 4 state universities and an online college, no matter where you live or work, there's a ConnSCU campus close to you.

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Yvette Melendez, Vice Chair (South Glastonbury)

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William H. McGurk (Somers)

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JoAnn H. Price (West Hartford)

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* *Student Trustees*

LEADERSHIP TEAM

The Connecticut State Colleges and Universities (CSCU) leadership team works with the campus leaders, faculty, and staff to help increase the educational attainment and workforce development of Connecticut's adult population.

President, Connecticut State Colleges & Universities – **Mark E. Ojakian**

Provost & Senior VP Academic & Student Affairs – **Jane McBride Gates**

Vice President for Community Colleges – **David L. Levinson**

Vice President for State Universities – **Elsa Núñez**

Director of Government Relations – **Sean Bradbury**

Associate Director for Board Affairs – **Erin Fitzgerald**

Director of Research & System Effectiveness – **William J. Gammell, Ph.D.**

Director of Strategic Initiatives – **Michael Kozlowski**

Director of Communications – **Maribel La Luz**

Chief of Staff – **Alice Pritchard**

Chief Financial Officer – **Erika H. Steiner**

Chief Information Officer – **Joe Tolisano**

Counsel – **Ernestine Y. Weaver**

Vice President for Human Resources – **Steven Weinberger**

PRESIDENT'S EXECUTIVE COUNCIL (Formerly REGIONAL ADVISORY COUNCIL)

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Kevin Burke (Hartford)

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Andrea Jackson-Brooks (New Haven)

Jeff Klaus (New Haven)

Lenell Kittlitz (Newington)

The Honorable Martin Looney (New Haven)

Althea Marshall Brooks (New Haven)

Paul Patton (New Haven)

Tony Rescigno (New Haven)

Robert Santy (Rocky Hill)

Carlos Torre (New Haven)

William Villano (New Haven)

GATEWAY COMMUNITY COLLEGE FOUNDATION, INC.

The Gateway Community College Foundation assists the College in expanding its services to students, enhancing academic instruction, and helping the College to invest in Connecticut's future.

Mimi Lines, Chair, Robinson & Cole, LLP

Paul McCraven, Vice Chair

Helene Augustine, Treasurer, Wells Fargo Private Bank

Thomas Beirne, Secretary, Halsey Associates

Richard Borer, Easter Seals Goodwill Industries

Hiram Brett, Brett Associates

Althea Marshall Brooks

Dan Caron

John Emra, AT&T

Stephanie Fagan, Alexion Pharmaceuticals, Inc.

Martha J. Fernald

Charles Frey, Nonprofit Consultant

Sally Glick, Chamber Insurance Trust

Lindy Gold, CT State Dept of Economic & Com Dev.

Thomas Griggs Jr., International Festival of Arts & Ideas

Allen Hadelman, Hadley, Inc.

Robert C. Hinton, Pullman & Comley, LLC.

Roberta Hoskie, Outreach Realty, Outreach School of Real Estate

Pedro Soto, Space-Craft Manufacturing

Susan Stone

Ex-Officio Directors

Paul Broadie II, Ph.D., President, Gateway Community College; Interim

Mark Lynch, Ph.D., Faculty Representative

Abdur Wali, Student Representative

ADVISORY COMMITTEES

These committees assist the program faculty in maintaining quality programs, relevant courses, and appropriate experiences that reflect the needs of area businesses and service industries, as well as local, state, and federal agencies.

- **AUTOMOTIVE TECHNOLOGY**

James B. Aiken, Sr., General Motors (Retired)

Nate Bettancourt, Former Student

Jay Bradley, Karl Chevrolet

John DeMartin, Parsons Buick

Ron DePoto, Parent of Student

Tim Feegel, Jackson Chevrolet

Vern Fortin, Middletown Toyota

Mark A. Lentine, Snap-On Tools

William O'Bier, Lee Partyka Chevrolet

Ken Pfeiffer, Valenti Chevrolet

Justin Rafone, Colonial Toyota

Rob Richnavsky, West Chevrolet

Dan Schnauffer, D'Addario Buick-GMC-Cadillac

Doug Summerton, Middletown Toyota

- **BIOMEDICAL ENGINEERING TECHNOLOGY**

Raymond Acosta, Chief Biomedical Engineering Technician, Yale-New Haven Hospital

Athan Chekas, Director, Clinical Engineering / Communications, New Britain General Hospital

John Chiarella, Colonel, U.S. Army (Ret.)

Vincent Cianci, Biomedical Engineering Technician, Hospital of Saint Raphael (GNHSTC 1984)

Michael Clemons, Chief Biomedical Engineer, The Westerly Hospital

Tony D'Adamo, Manager, Clinical Engineering Department, St. Vincent's Medical Center (GNHSTC 1986)

Thomas Koshis, X-Ray Engineer, GE Healthcare
Robert Meneguzzo, Manager, Field Service, Philips Medical Systems
Patrick Nelligan, CBET, CRES, Director, Biomedical Engineering, Bristol Hospital
Nicholas Noyes, CCE, Director, Clinical Engineering, University of Connecticut Health Center
David Roden, Installation Team Leader, Philips Medical Systems (GNHSTC 1985)

- **BUSINESS/BUSINESS OFFICE TECHNOLOGY/RETAIL/ENTREPRENEURSHIP/HOSPITALITY**

Margaret Antonelli, A.S., South Central Community College, Veterans Affairs Medical Center
Chris Bartlett, Skater's Landing and Global Entertainment Media
Marlon Bennett, The Lighting Quotient
Dennis Brown, Business Consultant
Sharon Burns, Wal-Mart
Diane Calello, Yale-New Haven Health System
Pat Daniel, New Haven Chamber of Commerce
Beth DuPont, Director of Human Resources, CT Hospital Association
C.E. Vlisedes Ph.D., University of New Haven
Corinne Fisher, Yale University School of Medicine
Michelle Fraser, Associate Director Admissions, Gateway Community College
Susan Gendreau, Qualidigm
Jane Griffith, Esquire
Drew Harris, Professor, Central Connecticut State University
Scott Healy, Town Green Special Services District,
Scott Hibson, Director of Sales, New Haven Hotel
Carlton Highsmith, President and CEO, Specialized Packaging Group, Inc.
Letamarie Highsmith, Vice President, Specialized Packaging Group, Inc.
Ed Hill, U.S. Navy Office of the Supervisor of Shipbuilding Small Business Liaison
Stan Kapinos, Innotech
Julie Brander-Klein, SCORE
Ann McDonnell, EcoGenics
Susan McLean, A.S., South Central Community College, United Illuminating
Debbie Mele, Sales Manager, Omni New Haven Hotel at Yale
Mary Ann O'Brien, New Haven Public Schools
Chris Ortwein, Town Green District Economic Prosperity Initiative
Joe Pasquantino, U.S. Navy Office of the Supervisor of Shipbuilding Small Business Liaison
Lynn Peterson, Marketing Director, Westfield Connecticut Post
Tim Phalen, Connecticut Retail Merchants Association
Matthew Potochney, The Lighting Quotient
Michael Roer, Entrepreneurship Foundation
Patricia Sanders, Post College President Emeritus, Chairman, New Haven SCORE
Jose Santiago, Walgreens
Wesley Thorpe, Executive Director, Emergency Shelter Management Service
Linda Trudeau, Board of Education, Guilford, CT
Robin Vuillermet, Co-owner, Union League Cafe
Clay Williams, City of New Haven Small Business Development
Lisa Woods, Connecticut Procurement Technical Assistance Program
Michael Zacchea, Lt. Col. USMC (ret.) UCONN Entrepreneurship Bootcamp for Veterans with Disabilities
Berdest Wisbon, A.S. Gateway Community College, ACES, Program Development

- **COLLEGE OF TECHNOLOGY SITE COORDINATORS AND ADVISORY COMMITTEE**

Peter Angelastro, Naugatuck Valley Community College
Daniel Burkey, Associate Dean, University of Connecticut, School of Engineering
Karen Wosczyzna-Birch, COT System Director
Mehrdad Faezi, Manchester Community College
Ann Marie Gagnon, Charter Oak State College
Hubert Godin, Middlesex Community College
Bill Griffin, Housatonic Community College
Frank Gulluni, Asnuntuck Community College

Sharon Gusky, Northwestern Community College
Tara Jo Holmberg, Northwestern Community College
Joseph Karnowski, Norwalk Community College
Patrick Knowles, Three Rivers Community College
Michael Ligon, Capital Community College
Lin Lin, Middlesex Community College
Steven Moore, Manchester Community College
James Mulrooney, Assistant Dean, Central Connecticut State University, School of Engineering
Robert Ryder, Housatonic Community College
Catherine Seaver, Manchester Community College
Susan Spencer, Professor, Gateway Community College
Greg Szepanski, Tunxis Community College
Mark Vesligaj, Quinebaug Valley Community College

- **COMPUTER ENGINEERING TECHNOLOGY**

Dr. Hisham Alnajjar, Associate Dean, Electrical & Computer Engineering, University of Hartford
Dr. Atluru, Chief Executive Officer, Diversified Technology Consultants
Chris Bassett, Director of Information Technology, Town of North Haven
Michael Buccilli, Director of Career Service, Gateway Community College
Michael Doering, Director of Quality - Fire Systems, Honeywell Fire Systems
Steven Dufour, Software Design Assurance Manager, Honeywell Fire Systems
Richard Halkyard, Professor, Gateway Community College
Dr. Scott Hamilton, Professor and Chairman of Engineering, Quinnipiac University
Dr. Ronald Harichandran, Dean of Tagliatela College of Engineering, University of New Haven
Alex Linos, Franchise Owner, Nerds to Go
Lee Panagoulas, Professor, Gateway Community College
Larry Salay, Director of Information Technology, Gateway Community College
Poulomi Sanyal
Dr. Karen Tracey, Department Chair, Computer Electronics & Graphics Technology, CCSU
David Yaccarino, State Representative, R-87

- **COMPUTER SCIENCE TECHNOLOGY**

Robert Jasek, Information Security Officer, Yale University
Mohammed Hanif, Senior Engineer, Northeast Utilities
Carrie M. Horvath, Ph.D., Portal Support Specialist, Connecticut Community Colleges
Robert Hubbard, Business Admin. & Management Department Chair, Albertus Magnus College
David Pfrommer, Senior Software Engineer, CD Solutions, Inc.
Stacy W. Walker, IT Coordinator, Yale Cancer Center

- **DRUG AND ALCOHOL RECOVERY COUNSELOR PROGRAM**

Stuart Baker, APT Foundation
Rodney Denson, MSW, LADC Greater Bridgeport Mental Health, DARC Alumnus, Adjunct Faculty
Karl Garrett, Regional Network of Programs
Martin Jackson, Director, Hamden Children's Center
Charles MacDonald, Director, Alternatives in the Community, DARC Alumnus
Alexandra Molina, Director, Greater Bridgeport Mental Health
Jeff Quamme, Vice President, Connecticut Certification Board
Teresa Roehrich, MS, LADC, CCS, Apt Foundation, DARC Alumnus, Adjunct Faculty
Eileen Russo, MA, LADC, DARC Associate Professor
Robin Woodward, CAC, HELP, Inc., DARC Alumnus, DARC EA

- **ELECTRICAL ENGINEERING TECHNOLOGY**

William Bacon, Vice President, Metrology Operations, Zygo Corporation
Harold Hansen, Senior Engineer, Hamilton Sundstrand Space Systems International (UTC)
Robert O'Connor, Technical Consultant
Ron Robert, Staffing Manager, United Illuminating Co.
Charles E. Ruotolo, Electrical Engineering Consultant, Ruotolo Electric
Lisa Sampietro, Assistant Branch Manager, Randstad US
Edmond Vinarub, Electronic/Electro-Optics Consultant

- **ENVIRONMENTAL SCIENCE AND TOXICOLOGY**

R. Scott Allen, Enforcement Officer, Inland Wetland and Water Courses Commission
Dr. Murali Atluru, Diversified Technology Consultants
Patrick Bowe, Air Management Bureau, CT Department of Environmental Protection
Charlie Cappannari, Cytotec Industries, Inc.
Mary Chesley, Environmental Monitoring Laboratory, Inc.
David Ditta, Complete Environmental Testing
Jim Dziuba, Marin Environmental
Thomas Morrisey, Director of Planning, Water Management Bureau, CT Dept. of Environmental Protection
William Williams, Vice President, Consulting Environmental Engineers
Ken Zercie, Assistant Director, State Police Forensic Laboratory

- **HUMANITIES**

Dino Ciaburri, Adjunct Faculty, Gateway Community College, Headmaster, Milford Academy (Ret.)
George Charlesworth, Attorney
Donald Dimenstein, Director of Elderly Services (Ret.)
Sandy Kooregian, Executive Director, Domestic Violence Services of Greater New Haven
Paul Musco, Shoreline Chiropractic Services
Howard Reitman, Director, Reitman Personnel Agencies
Vivian Shipley, Professor of English, Southern CT State University
John Artis Yopp, Director, Department of Children and Families

- **HUMAN SERVICES**

Tracy Blanford, Professor, Gateway Community College
Kellie Byrd Danso, Director Student Engagement & Career Development, Gateway Community College
Chantal Gray, Boys and Girls Club of New Haven
Jim Horan, CT Association of Human Services
Arnold Johnson, Emergency Shelter Management Services
Eric Murrell, GCC Human Service Alumni, Columbus House, Inc.
Teresa Russo, Professor, Gateway Community College

- **MANUFACTURING ENGINEERING TECHNOLOGY**

Dr. Eben C. Cobb, Professor, Worcester Polytechnic Institute
Russell J. Corriveau, Senior Manufacturing Engineer, Sargent Manufacturing Company
Vincent Dinicola, Jr., Senior Manufacturing Engineer, U.S. Surgical
Geraldo C. Reyes, Jr., General Manager, Sargent Manufacturing Company
Robert Paternoster, Adjunct Faculty, Gateway Community College.

- **MECHANICAL ENGINEERING TECHNOLOGY**

John Bokowski, Operation Consultant, United Illuminating
William Celotto PE Retired, Mechanical Engineering Technology, Gateway Community College
Ilias Diamantis, Project Engineer, Parker Hannifin Corporation
John Sarris, Ph.D, Chair, Mechanical Engineering Department, University of New Haven
Protais Tala, Validation Engineer, CAS Medical System, Inc.

- **NURSING**

Susan Diehl, Professor & Chair, Nursing Division, University of Hartford
Lindsay Donnelly, Nursing Education Coordinator, Gaylord Hospital
Mary Ann Glendon, RN to BSN Coordinator, Southern CT State University
Peggy Joyce, Administrator, Whitney Center
Judy Hahn, Director of Education & Professional Development, Yale New Haven Hospital
Carol Martineau, Supervisor, Elim Park Health Care & Rehab
April McGrath, Graduate, Gateway Community College
Lisa O'Connor, Director of Undergraduate Nursing Program, Quinnipiac University
Linda Pellico, PhD, APRN, Yale University School of Nursing
Lisa Rebesch, Chairperson & Associate Professor, Dept. of Nursing, Eli Whitney Technical H.S.
Melinda Schoen, VP for Nursing, Masonicare
Ginnine Tanoia, Montowese
Beverly Tontini, HR Recruiter, VNA

- **NUTRITION AND DIETETICS**

Donna Caseria, RD, Clinical Nutrition Research Coordinator, Yale-New Haven Hospital
Anne Davis, Ph.D., RDN, FAND, Director of Dietetics, University of New Haven
Marcia Doran, RDN, Professor, Gateway Community College
Nicholas Ferrigno, Nutrition and Dietetic student, Gateway Community College
Pam Galasso, RD, Nutrition Consultant
Elaine Lickteig, RDN, Associate Professor and Clinical Coordinator, Gateway Community College
Nina Ruckes, RD, Nutrition Consultant

- **RADIOLOGY**

Jon Alderman, Research Associate, Yale School of Medicine
Denise Allen, Regional Chief Therapist, Yale New Haven Hospital
Amy Barocsi, Chief Technologist, Nuclear Medicine, Milford Hospital
Kathleen Bell, Regional Manager, Yale-New Haven Shoreline Medical Center
Karen Blackburn, Assistant Administrator of Radiology, William W. Backus Hospital
Reg Body, Clinical Instructor, GCC
Michael Bohan, Radiation Safety Officer, Yale-New Haven Hospital
Virginia Bowolick, Chief Radiation Therapist, Bridgeport Hospital
Vicki Bozzuto, Dean of Continuing Education and Workforce Development, Gateway Community College
Angela Burnham, Lead Sonographer, St. Francis Hospital
Gloria-Mary Calhoun, Radiation Therapist, Yale New Haven Hospital, St. Raphael Campus
Carissa Carta, Senior Technologist Nuclear Medicine, Middlesex Hospital
Melanie Caruso, Clinical Instructor, Department of Ultrasound, Middlesex Hospital
Christy Casella, Clinical Instructor, Temple Radiology
Christine Cooper, Director of Radiology & Cardiology, Griffin Hospital
Anne Curtis, M.D., Clinical Professor, Department of Diagnostic Imaging, Yale-New Haven Hospital
Lori Daley, Chief Technologist, Nuclear Medicine Department, VA Connecticut Healthcare System, West Haven Campus
David Daniele, Staff Technologist Nuclear Medicine, UCONN Health Center
Floyd Davis, Clinical Instructor, GCC
Sandra Dean, Radiology Interim Director, Middlesex Hospital
Elizabeth DeRosa-Linsley, Imaging Director, Temple Radiology
Nancy DeStefano, Lead Sonographer, Department of Ultrasound, Middlesex Hospital
Robert DeVito, Manager, Department of Diagnostic Imagine, Yale-New Haven Hospital
Gina Giaquinto, Clinical Instructor, GCC
Gregory Getman, Clinical Instructor, GCC
Joyce Giannelli, Clinical Instructor, GCC
Cheryl Granucci, Director, Diagnostic Radiology, Yale-New Haven Hospital
Matthew Gregory, Chief Technologist, Nuclear Medicine, Yale-New Haven Hospital
Lorna Grohns, Yale-New Haven Hospital, St. Raphael's campus
Kathy Hale, Radiation Therapy Instructor
Kathy Halligan, Diagnostic Radiology, Yale-New Haven Hospital
Kathleen Hansen, Chief Technologist, Nuclear Medicine, MidState Medical Center
Bonnie Hensen, Lead Sonographer, VA Connecticut Healthcare System, West Haven Campus
Susan Higgins, Radiation Therapy Department, Yale-New Haven Hospital
Karen Hoang, Clinical Supervisor, Cardinal Health Nuclear Pharmacy Services (East Hartford)
Tony Hrenyo, Lead Sonographer, Milford Hospital
Alan Iovino, Chief Sonographer, Ultrasound, Norwalk Hospital
JoAnne Jones, Chief Technologist, Bridgeport Hospital Radiology
John Kim, Chief Dosimetrist, Yale-New Haven Hospital
Christine Kopp, Lead Sonographer, St. Francis Hospital
Mark Lewis, Chief Technologist, Radiology Department, VA Connecticut Healthcare System, West Haven Campus
Carol Mason
John Magee, Sonographer Supervisor Ultrasound, Bridgeport Hospital
Anna McKinzie, Smilow Cancer Hospital at Yale-New Haven Hospital
Sue McLean, Supervisor, Radiation Oncology, Danbury Hospital
Claudine Murphy, Radiation Therapy, Bridgeport Hospital
Shalene Neeman, Chief Radiation Therapist, Yale New Haven Hospital St. Raphael's Campus New Haven

Dan Oliver, Clinical Instructor, GCC

Marion Owen, Sonographer, Supervisor of Ultrasound, William W. Backus Hospital

Susan Palumbo, Lead Sonographer, Ultrasound, Connecticut Children's Medical Center

Diana Pasqua Kardamis, Chief Technologist, Nuclear Medicine, Griffin Hospital

Michele Pepe, Manager, Nuclear Medicine, Yale-New Haven Hospital

Maureen Perachio, Manager, MR, Yale New Haven Hospital

Darcy Phillips, Manager, Nuclear Medicine, Lawrence & Memorial Hospital

Joseph Phillips, Director of Diagnostic Imaging/Therapeutics, UCONN Health Ctr.

Lauren Pierce, Supervisor/Lead Ultrasound Technologist, Bristol Hospital

Laura Quillia, Clinical Instructor, Lawrence & Memorial Hospital

James Ricci, Chief Technologist, Nuclear Medicine, William W. Backus Hospital

Staci Riley, Imaging Director, Lawrence & Memorial Hospital

Pauline Rocha, Manager, Breast Imaging and Film Library, Lawrence & Memorial

Linda Rossetti, Clinical Instructor, Radiology Department, Bridgeport Hospital

Tracy Ruzmos, Clinical Instructor, Radiology, VA Connecticut Healthcare System, West Haven Campus

Kyle Salerno, Sonographer, Supervisor of Ultrasound, Hospital of Saint Raphael

Rachel Sanderson, Radiation Therapist, Gateway Community College

Lawrence Saperstein, MD, Nuclear Medicine, Yale-New Haven Hospital

Christina Sartori, Radiation Therapist, Yale New Haven Hospital St. Raphael Hamden Campus

Marcie Scalia, Manager, Cardiac Imaging, Yale-New Haven Hospital

Nancy Schebell, Radiologic Technologist, Griffin Hospital

Dana Schwartz, Advanced Radiology Consultants

Karen Shannon

Jamie Sheehan, Chief Technologist, Nuclear Medicine, Yale New Haven Hospital St. Raphael Campus

Roseann Shore, Clinical Instructor, Gateway Community College

Anthony Sicignano, Senior Staff Technologist, Nuclear Medicine, Yale New Haven Hospital St. Raphael Campus

Irene Smith, Sonographer, Supervisor Ultrasound, Griffin Hospital

Keri Smolinsky, Clinical Instructor, GCC

Linda Tamplini, Supervisor, Bridgeport Hospital-Antenatal Unit

Michael Tatta, Administrator, Department of Radiology, Bridgeport Hospital

Richard Thayer, Assistant Professor, Gateway Community College

Dawn Tomaszewski, Manager, Interventional Radiology, Yale-New Haven Hospital

Porfidio Torres, Jr., Clinical Instructor, GCC

Donna Travali, Clinical Instructor, Radiology Department, Bridgeport Hospital

Vera Tsatkin, Chief Technologist, Nuclear Cardiology, Yale-New Haven Hospital

Patsy Twohill, Emergency Department, Yale-New Haven Hospital

Robert Varsanik, Chief Technologist, Nuclear Medicine, Saint Francis Hospital and Medical Center

Bozena Zieba, Clinical Instructor, Radiology, VA New England Healthcare System, West Haven Campus

- **RAILROAD ENGINEERING TECHNOLOGY**

Brian Clark, CTC&S

Paul Constantinople, Retired, Metro North Railroad

Jose Correia, Foreman, MTA Metro-North Railroad

Marcellus Edwards, Conductor, MTA Metro-North Railroad

Garrick Fearson, Sr. Productivity Planner, MTA Metro-North Railroad

Fred Gill, Talent Acquisition Specialist, MTA Metro-North Railroad

Lawrence Ivy, Foreman, Mechanical, MTA Metro-North Railroad

Keith Kalish, Radio Maintainer, MTA Metro-North Railroad

Wayne Sanford, President, Shoreline Trolley Museum

Frank Vega, Foreman General I - MTA Metro-North Railroad

DIRECTIONS

New Haven Campus 20 Church Street, New Haven, CT 06510

From Hartford

I-91 South to I-95 South (New York). Take Exit 46, Long Wharf (first exit on the right). At the bottom of the exit ramp, turn right onto Sargent Drive. Go straight. Turn left at the traffic light on Church Street and go over the bridge toward downtown New Haven. The college is on the left.

From New London

I-95 South (New York). Take Exit 46, Long Wharf (first exit on the right). At the bottom of the exit ramp, turn right onto Sargent Drive. Go straight. Turn left at the traffic light on Church Street and go over the bridge toward downtown New Haven. The college is on the left.

From New York

I-95 North to exit 47 toward Downtown New Haven. Make a slight right onto N Frontage Road. Turn Right onto Church Street. The college will be on your left.

North Haven Campus 88 Bassett Road, North Haven, CT

From New Haven and Points South

I-95 North and I-91 North to Exit 11. At the end of the exit ramp, turn right onto Route 22. Proceed to third traffic light and turn left onto Bassett Road. The college is on the right, approximately 1/4 mile.

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Route 15 (Wilbur Cross/Merritt Parkway) to Exit 63. At the end of the exit ramp, turn right onto Route 22. Proceed to the fourth traffic light and turn left onto Bassett Road. The college is on the right, approximately 1/4 mile.

From New London and Points East of New Haven

I-95 South to I-91 North to Exit 11. At the end of the exit ramp, turn right onto Route 22. Proceed to the third traffic light and turn left onto Bassett Road. The college is on the right, approximately 1/4 mile.

From Hartford and Points North

I-91 South to Exit 12 (Washington Avenue). At the end of the exit ramp, turn left. Proceed to the second traffic light and turn left onto Blakeslee Avenue. At the end of the road, turn left onto Bassett Road. The college is on the right, approximately 1/4 mile.

Downtown New Haven Attractions



★ GCC

- 1 Yale Physicians Building
 - 2 Dana Building
 - 3 Yale-N H Hospital
 - 4 Yale-N H Children's Hospital
 - 5 Temple Medical Building
 - 6 New Haven Hotel
 - 7 Chapel Square Mall
 - 8 Omni Hotel at Yale
 - 9 Shubert Theater
 - 10 Yale Center for British Art
 - 11 Yale Repertory Theater
 - 12 Yale Art Gallery
 - 13 The Study Hotel
 - 14 Ronald McDonald House
 - 15 City Hall
 - 16 Yale Information Center
 - 17 Peabody Museum
 - 18 Beinecke Library
 - 19 Sprague Hall
 - 20 Woolsey Hall
 - 21 Battell Chapel
 - 22 Yale Bookstore
 - 23 New Haven Public Library
 - 24 360 State Street/Elm City Market
- P Parking
 \$ ATM
 i INFO New Haven

GatewayCT.edu

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 20 Church Street
 New Haven, CT 06510