



COLLEGE CATALOG

2024 | 2025

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ACADEMIC CALENDAR

Fall 2024

Faculty Semester Begins	August 26, 2024
Classes Begin - Full-Term (1) and First 7-week Session (7B)	August 28, 2024
Labor Day, NO CLASSES	September 2, 2024
Late Start (LS) Classes Begin	September 11, 2024
First 7-week Session (7A) Ends	October 15, 2024
Second 7-week Session (7B) Begins	October 23, 2024
Thanksgiving Recess, NO CLASSES	November 27- December 1, 2024
Finals Week - Full-Term (1) and Late Start (LS) Classes	December 10-16, 2024
Second 7-week Session (7B) Ends	December 16, 2024
Faculty Semester Ends	December 23, 2024

Winter 2024-2025

Classes Begin	December 27, 2024
Classes End	January 19, 2025

Spring 2025

Martin Luther King Day, COLLEGE CLOSED	January 20, 2025
Faculty Semester Begins	January 21, 2025
Classes Begin - Full-Term (1) and First 7-week Session (7A)	January 24, 2025
Late Start Classes Begin	February 7, 2025
Presidents' Day, NO CLASSES	February 17, 2025
First 7-week Session (7A) Ends	March 13, 2025
Spring Break Recess, NO CLASSES	March 17-23, 2025
Second 7-week Session (7B) Begins	March 28, 2024
Day of Reflection Recess, NO CLASSES	April 18-20, 2025
Finals Week - Full-Term (1) and Late Start (LS) Classes	May 13-19, 2025
Second 7-week Session (7B) Ends	May 18, 2025
Memorial Day, COLLEGE CLOSED	May 26, 2025
Faculty Semester Ends	June 1, 2025

Additional important dates are included in the calendar maintained on the CT State website.

PRESIDENT'S WELCOME

Welcome to Connecticut State Community College!

Your educational journey is among the most significant endeavors you will undertake, and we are dedicated to being your steadfast partner in achieving success.

The CT State 2024-2025 College Catalog encompasses an extensive array of courses, programs, support services, degree offerings, and transfer information designed to guide you towards academic excellence. Our commitment to providing you with superior education and support is reflected in every page.

Within this catalog, you will discover over 300 degree and certificate programs. I encourage you to utilize this resource as a comprehensive planning guide to explore the diverse opportunities, services, and programs that CT State offers.

Our catalog features a broad spectrum of university transfer options, career pathways, and degree programs that equip you with the essential knowledge and skills to thrive in a multifaceted and interconnected world. Rest assured, our curriculum is aligned with the evolving demands of today's dynamic job markets.

To the new students joining CT State this fall, and to all returning students, we extend a warm welcome. We wish you great success as you embark on your educational journey and contribute to our tradition of excellence.

In Partnership,

Dr. John Maduko, M.D.

President

Connecticut State Community College

ABOUT THE COLLEGE

MISSION

The Connecticut State Community College provides access to academically rigorous and innovative education and training focused on student success. The College supports excellence in teaching and learning, makes data-informed decisions, promotes equity, and advances positive change for the students, communities, and industries it serves.

VISION

CT State will be recognized for exceptional student success, educational leadership, and transformative collaboration with business and industry, government, educational, and key stakeholders while advancing diverse opportunities for Connecticut's citizens and communities.

EQUITY STATEMENT

Equity is the removal and reduction of barriers that negatively impact student success within structures, policies and practices and ensuring that students receive targeted resources and supports to achieve their academic, professional, and personal goals. Equity is achieved by identifying and intentionally addressing structural racism, systemic poverty, and other forms of marginalization, upholding the expectation that administrators, faculty, and staff act as anti-racist institutional change agents. CT State Community College commits to bold and disruptive change by actively identifying, naming, and dismantling structural racism, systemic poverty, and other barriers, establishing equitable and anti-racist policies and practices, and empowering students, faculty, staff, and administrators to advance racial, social, and economic justice. Our core collective responsibility is to continuously assess practices and policies and transform the world we live in by eliminating inequities.

ACCREDITATION & EXTERNAL AGENCY RECOGNITION

Institutional Accreditation

Connecticut State Community College is accredited by the **New England Commission of Higher Education (NECHE)**. Initial accreditation was granted effective July 1, 2023.

Specialized Accreditation, Certification, and Recognition Agencies

Connecticut State Community College is proud to be working with the following organizations to ensure that our programs meet the highest standards in their respective areas of specialization.

- Accreditation Board for Engineering and Technology
- Accreditation Commission for Education in Nursing
- Accreditation Counsel for Education in Nutrition and Dietetics
- Accreditation Counsel for Occupational Therapy Education
- Accrediting Bureau of Health Education Schools
- American Bar Association
- American Culinary Federation Education Foundation Accrediting Commission
- American Health Information Management Association Professional Certificate Approval Program
- American Library Association Allied Professional Association
- American Veterinary Medical Association Committee on Veterinary Technician Education and Activities

- American Welding Association
- Association of Collegiate Business Schools and Programs
- Commission on Accreditation in Physical Therapy Education
- Commission on Accreditation of Allied Health Education Programs
- Accreditation Review Council on Education in Surgical Technology and Surgical Assisting
- Commission on Accreditation of Allied Health Education Programs
- Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions
- Commission on Accreditation of Allied Health Education Programs Joint Review Committee on Diagnostic Medical Sonography
- Commission on Accreditation of Allied Health Education Programs Medical Assisting Education Review Board
- Commission on Dental Accreditation/American Dental Association
- Commission on Opticianry Accreditation
- Committee on Accreditation for Respiratory Care
- ISO 9001-2015 Manufacturing Certification
- Joint Review Committee on Education in Radiologic Technology
- Joint Review Committee on Nuclear Medicine Technology
- National Association for the Education of Young Children
- National Association of Schools of Music
- National Automotive Technician Education Foundation, Automotive Service Excellence Education Foundation
- National Fire Academy Fire and Emergency Services Higher Education
- The National Institute for Metalworking Skills

CT STATE FACTS

Academic year 2024-25 is the second in CT State's history. In our first year with a community that included approximately 64,000 students, we reached the following milestones.

Approximately 50,000 students enrolled in credit-bearing courses. Of these:

- 70% attended part-time
- 25% attended all classes remotely; an additional 40% enrolled in at least one online class
- 6% were English language learners
- 60% identified as women
- 57% were students of color
- 30% were age 25 or older (median age was 21)
- 8% were enrolled in dual enrollment programs

Our first commencement ceremonies awarded:

- 5,844 degrees or credit certificates to 5,269 graduates
- 2,516 non-credit workforce credentials to 2,334 graduates

CONNECTICUT STATE COLLEGES AND UNIVERSITIES SYSTEM

Connecticut State Community College is one of six public colleges and universities with the Connecticut State Colleges and Universities (CSCU) system. The system includes the four state universities: Central, Eastern, Southern and Western Connecticut State Universities, Charter Oak State College, and CT State. The CSCU system operates under the oversight of the Connecticut Board of Regents for Higher Education.

CONTINUING NOTICE OF NONDISCRIMINATION

CT State Community College does not discriminate on the basis of race, color, religious creed, age, sex, national origin, marital status, ancestry, present or past history of mental disorder, learning disability or physical disability, sexual orientation, gender identity or expression, veteran status, criminal record, genetic information or any other federal or state protected class in its employment, programs, and activities. For information regarding the nondiscrimination, disability, and Title IX policies/procedures, contact: John-Paul Chaisson-Cardenas, Vice President for Diversity, Equity and Inclusion, CT State Community College, 860-612-7056, jchaisson-cardenas@commnet.edu.

CAMPUSES OF CT STATE COMMUNITY COLLEGE

Asnuntuck Campus

170 Elm Street, Enfield, CT

Capital Campus

950 Main Street, Hartford CT

Gateway Campus

20 Church Street, New Haven, CT

Housatonic Campus

900 Lafayette Blvd., Bridgeport, CT

Manchester Campus

Great Path, Manchester CT

Middlesex Campus

100 Training Hill Road, Middletown CT

Naugatuck Valley Campus

750 Chase Parkway, Waterbury, CT

Northwestern CT Campus

Park Place East, Winsted, CT

Norwalk Campus

188 Richards Ave, Norwalk, CT

Quinebaug Valley Campus

742 Upper Maple Street, Danielson, CT

Three Rivers Campus

574 New London Turnpike, Norwich, CT

Tunxis Campus

271 Scott Swamp Road, Farmington, CT

GETTING STARTED AT CT STATE

OVERVIEW

Apply for admission by creating an account and completing the [online application](#). Be advised that applicants must provide:

- proof of high school or college graduation or GED and
- proof of immunity to measles, mumps, rubella and varicella (MMRV) to be accepted into a degree program, to be eligible for financial aid, and/or to graduate from CT State Community College.
- other supplemental items are required if you are an international student, a veteran, or are seeking admission to a selective admission program in the School of Nursing and Health Careers.

CT State is an open admission institution, but some programs within the School of Nursing and Health Careers have limited enrollment and **selective admission** processes. Applicants to selective programs should familiarize themselves with the additional requirements detailed on specific program pages. Consult the [Selective Admission](#) programs page for a complete list of these programs and their requirements.

Graduating high school seniors: apply and begin the enrollment process as early as possible, which includes course placement (in progress transcripts are accepted), completion of the financial aid (FAFSA) process, advising, registration, and payment of tuition and fees. Upon graduation, please ask your high school to send a final transcript to the Admissions Office.

Apply for Financial Aid

Students must be enrolled in a degree program to receive eligible financial aid, including federal grants, loans or PACT funds. The FAFSA opens October 1 of each year, and students are encouraged to apply as soon as possible. Priority deadlines for financial aid are May 15 for the fall semester and October 1 for the spring semester. Students applying for financial aid after August 1 for the fall and January 1 for the spring should be prepared to pay tuition and fees at the time of registration. If eligible and approved for financial aid, the payment may be reimbursed. Payment plans are available through the campus Bursar's or Cashier's Office to those registered for at least six credit hours.

CT State's FAFSA Code: 007635*

During the transition to a single statewide college, this code will identify Capital Community College on the FAFSA. The Department of Education will update the college name on the FAFSA in the summer of 2023.

Determine Course Placement

Course placement is currently determined by final high school GPA and/or SAT/ACT scores. In some cases, students are asked to complete assessment testing. Students that have completed college-level English and/or math must send an official transcript to the Admissions office at your preferred campus for evaluation. AP Score Reports are required to transfer AP courses. Additional information is available on the [Course Placement Page of the CT State website](#).

Former Students Seeking Readmission

Students who have previously enrolled in a degree or certificate program of study at CT State Community College, but have not attended the College for two or more years, must submit an application to the college as a readmitted student. This includes students of any of the Connecticut Community Colleges prior to the merger of Fall 2023. Depending upon how long a student has been separated from the College, resubmission of matriculation items may also be required to complete the admission application. Matriculation items can include proof of high school completion and immunizations.

RESIDENCY IN CONNECTICUT

Applicants are asked to provide documentation which verifies their residency. Residents of Connecticut are eligible for a reduced tuition rate per this statute:

Per general statutes of CT Sec. 10a-29. (Formerly Sec. 10-329e). Determination of student status.

Per general statutes of CT Sec. 10a-30, it shall be presumed that the establishment of a new domicile in the state of Connecticut by an emancipated person has not occurred until they have resided in this state for a period of not less than one year. See general statutes 10a-27, 10a-28, 10a-29, 10a-30 for full text and related statutes.

Per Public Act 11-43, undocumented students shall be entitled to classification as an in-state student for tuition purposes, (A) if such person (i) resides in this state; (ii) attended any educational institution in this state and completed at least four years of high school level education in this state; (iii) graduated from a high school in this state, or the equivalent thereof, and is registered as an entering student, or is enrolled at a public institution of higher education in this state, and (B) if such person is without legal immigration status, such person files an affidavit with such institution of higher education stating that they have filed an application to legalize their immigration status, or will file such an application as soon as they are eligible to do so.

NEBHE

The Board of Trustees (now Regents) 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: 1. Nonresident students whose traveling time would be less if attending a CT State 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. 2. Nonresident students who wish to enroll in a CT State degree program which does not exist in their home states are permitted to enroll in such program at the NEBHE tuition rate.

Military Status and Establishing Residency

In order to qualify for in-state tuition, students with military status must establish residency by uploading the following documentation during the Admissions Process:

- **Active Duty Military and National Guard Members:** Military Training Orders
- **Veterans:** DD214
- **Dependents of Active Duty members, National Guard members, or Veterans:** Military Eligibility Certificate

TRANSFER ADMISSIONS

Students may transfer to CT State from other colleges for any semester. In addition to following the procedures for admission into a program, transfer students should submit an official transcript from any other college(s) and universities attended and must be an accepted or enrolled student with CT State for the completion of a transcript evaluation. Official transcript(s) must be sent by mail or sent electronically directly from your previous college(s) to the CT State Admissions Office. Student copies of transcripts/unofficial transcripts will not be accepted for transfer evaluation. Official transcripts are accepted through e-transcript services such as Parchment, College Board, and the National Student Clearinghouse and by postal mail. Transfer grades are not included in CT State's calculation of grade point average (GPA).

Acceptance of Transfer Credit Policy at Connecticut State Colleges and Universities

Board of Trustees Policy 3.17.1 (Approved 1973; amended 1979, 2005 and 2007.)

At CT State, 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:

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 Regents.

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.

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.

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-specialty accredited program, the College shall provide appropriate means for the validation of the student's competency in the technical specialty course areas.

This policy shall appear in all college catalogs.

PRIOR LEARNING ASSESSMENT

CT State recognizes many ways that students arrive with experiences that merit academic credit.

Advanced Placement: Degree credit will be granted on the basis of scores on the Advanced Placement Examinations (AP Exams) administered by the College Entrance Examination Board. Students who earn a 3 or higher receive credit for the courses for which the examinations are stipulated as measures. Students must request official AP exam results from College Board to be sent to CT State Community College electronically CTState-TranscriptEval@ct.edu or mailed directly to: CT State Community College, Attn: Admissions, Transcript Evaluation, 185 Main Street, New Britain, CT. 06051.

Academic Credit for Military Experience: Veterans may obtain transfer credit for courses successfully completed in schools of the United States Armed Forces provided such courses are deemed to be equivalent and applicable to CT State degree requirements.

Students may apply for evaluation of prior learning by utilizing one of these examination options:

- [The College Level Examination Program \(CLEP\)](#), administered by the Educational Testing Service in Princeton, NJ.
- [Advanced Placement \(AP\) Exams](#), administered by The College Board.
- College-developed examinations produced by some programs and departments at CT State. For further information on this option, please contact the appropriate program coordinator or department chairperson.
- Credit through portfolio assessment. Prior learning is assessed by Charter Oak State College. Once credit is established, CT State will use the credit as part of the transfer evaluation process, transferring in credit appropriate to the student's program of study.

COLLEGE FOR CURRENT HIGH SCHOOL STUDENTS

CT State offers a range of opportunities for high school students to simultaneously enroll in our college courses. These courses are transcribed on a student's CT State transcript and may count for both high school graduation requirements as well as towards a college certificate or degree. All students who take dual or concurrent enrollment must first apply to the College through the dual and concurrent enrollment application.

Dual and Concurrent Enrollment Programs

High School Partnership

Students who meet admissions criteria can take courses on our campus or online taught by CT State faculty, known as dual enrollment. High school juniors and seniors who are eligible for High School Partnership (HSP) can enroll in up to two courses in the fall and spring semesters of their junior and senior year tuition and fee-free.

Concurrent Enrollment

CT State also has a number of high school locations that offer our courses taught by high school credentialed teachers, known as concurrent enrollment. Students must be in their junior or senior year also meet any remaining other admissions criteria required for the course(s).

CT State also offers the following campus-specific dual/concurrent enrollment options:

Gateway to College is a national model, where students complete their high school diploma on the CT State Gateway campus through a partnership between the local school district and the campus, and is tuition and fee-free to participating students. Through this program, you will take college courses mapped to complete your high school graduation requirements while earning college credit toward an associate degree. You must meet the same eligibility requirements as any other college student taking the same courses.

Middle College high schools are a national model, which co-locates a high school on a college campus and leverages a combination of high school partnership courses and concurrent enrollment courses to customize pathways for you to earn college credit while completing your high school diploma. Courses are offered at no cost to you or your family. You will benefit from physically being on the college campus with access to all of the college amenities and services, once dual-enrolled. These partnerships are currently offered at [Manchester \(Great Path Academy\)](#), [Three Rivers \(Three Rivers Middle College Magnet High School\)](#), and [Quinebaug Valley \(Quinebaug Middle College High School\)](#).

P-TECH is a national model where you may take a combination of high school partnership courses and concurrent enrollment courses, mapped to earning up to an industry-recognized associate degree in information technology. You may take college-credit-bearing classes starting in the 9th grade. This option currently exists through a partnership between Norwalk Public School and the [Norwalk](#) campus.

Self-Paying Dual Enrollment CT State also offers the high school student the opportunity to enroll in our courses beyond those available in the programs listed above. In this case, students must pay for all tuition, fees and other costs and meet the enrollment criteria for the course. Students taking this route are typically non-degree seeking.

For more information, please contact our recruitment staff at CTState-AdmissionsRecruitment@ct.edu

Applicants with Specific Considerations

HOME SCHOOLED STUDENTS

1. A home-schooled student is defined, for the purposes of this policy, as someone who has completed a secondary school education in a home school setting that is treated as a home school or private school under state law, or who is in the process of doing so.
2. Home schooled students who wish to attend Connecticut State Community College (CT State) to pursue a degree or certificate must meet the same admission requirements as any other applicant, except for providing evidence of graduation from a secondary school or obtaining a state equivalency diploma. This includes, but not necessarily limited to, completing an application, paying admissions fees, submitting evidence of inoculation against measles, mumps and rubella, taking placement tests, etc.
3. Home schooled applicants may also submit a copy of a transcript from any secondary school attended, whether or not they may have graduated therefrom, or a copy of a federal or state equivalency diploma, or a summary of the secondary program of study they pursued, and a certificate of successful completion thereof, signed by the parent or other provider of the home schooling.
4. Home schooled applicants may be required to submit transcripts, or records of study, if such are required for other applicants.
5. Home schooled applicants who wish to enroll at a CT State campus, but not pursue a degree or certificate, shall be treated as any other non-matriculated student at the college.
6. Home schooled applicants may, at the discretion of the college to which they are applying, be required to have an in-person interview with a college designee to assess the applicant's ability to benefit from the program of study.
7. The college shall develop such procedures, forms, and other materials as may be necessary to manage this policy.
8. The college shall also establish an appeals process, with appeals going to the Associate Vice President of Recruitment, Admissions and Community Outreach or designee who may, in special circumstances, waive the requirements of the policy.
9. If and when the State of Connecticut enacts laws or issues policies regarding home schooled students or their admissions to public colleges, this policy will be revised and reissued, as may be necessary, to ensure compliance therewith.

- Board Policy 5.1.5

VETERANS

The federal government offers a wide variety of services to veterans through the U.S. Department of Veterans Affairs ([VA Educational Benefits](#)). CT State is committed to improving the resources available for student veterans on our campuses by fostering an encouraging environment to strengthen institutional and individual goals.

You are advised to apply for veterans benefits as soon as you apply for admission to the College using the information found at <https://www.va.gov/education/how-to-apply>. To be eligible for VA benefits, you must be enrolled in a degree or eligible certificate program. Most credit programs and some non-credit programs offered by the College are eligible for VA benefits. Approved programs can be found at the CT Office of Higher Education <https://www.ohe.ct.gov/vet/default.shtml>. Once you have registered for classes and submitted your request for certification, the College will certify your enrollment to the VA. Your continued certification by the College is contingent upon meeting satisfactory academic progress guidelines (please see section below). A student whose Combined Academic Standing indicates suspension is academically ineligible to receive VA educational benefits.

Students receiving VA benefits must submit a Certification Request each semester and notify the VA Certification Team of any changes in their course load and/or program of study. Changes in course load may result in VA overpayment. Courses must meet requirements of the degree or certificate in which the veteran or dependent is enrolled.

"GI Bill®" is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at <https://www.benefits.va.gov/gibill>."

Policy Protecting Students from Fees and Penalties Due to VA Payment Delay

In accordance with Title 38 US Code 3679 subsection (e), this school adopts the following additional provisions for any students using U.S. Department of Veterans Affairs (VA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation and Employment (Ch. 31) benefits, while payment to the institution is pending from the VA. This school will not:

- Prevent the student's enrollment; Assess a late penalty fee to;
- Require student secure alternative or additional funding;
- Deny their access to any resources (access to classes, libraries, or other institutional facilities) available to other students who have satisfied their tuition and fee bills to the institution.

However, to qualify for this provision, such students may be required to:

- Provide Chapter 33 Certificate of Eligibility (or its equivalent) or for Chapter 31, VA VR&E's contract with the school on VA Form 28-1905 (or its equivalent) by the first day of class.

Note: Chapter 33 students can register at the VA Regional Office to use E-Benefits to get the equivalent of a Chapter 33 Certificate of Eligibility. Chapter 31 student cannot get a completed VA Form 28-1905 (or its equivalent) before the VA VR&E case-manager issues it to the school.

- Provide written request to be certified;
- Provide additional information needed to properly certify the enrollment as described in other institutional policies
- In addition, the [VA GI Bill Comparison Tool](#) will identify schools that have additional requirements.

Academic Standing

U.S. Department of Veterans Affairs (VA) regulations require that all students receiving VA educational benefits meet the College's academic standing policy as stated in the CT State college catalog. Students failing to meet the academic standards will have their VA educational benefits discontinued in accordance with the institution policy. Students who are suspended for failing to meet the College's academic standing policy will be reported to the VA. Students may appeal their academic suspension in accordance with CT State policy. (Please see "Academic Suspension" section of this Handbook.) Should the appeal be successful, the student's enrollment will be reported retroactively to VA for the enrollment period to which the appeal applies.

Veterans Tuition Waiver

A waiver of general fund tuition is extended to all eligible Connecticut Veterans with service during certain wartime periods. Members of the Connecticut National Guard may also be eligible for waivers of tuition.

To be eligible for a tuition waiver, veterans must:

- be honorably discharged or released under honorable conditions for active service in the U.S. Armed Forces (U.S. Army, Navy, Marine Corps, Air Force, and Coast Guard). National Guard members, activated under Title 10 of the United States Code, also are included.
- have served at least 90 or more cumulative days active duty in time of war (please see Periods of Service below), except if separated from service earlier because of a federal Department of Veterans Affairs (VA) rated service-connected disability; or the war, campaign, or operation lasted less than 90 days and service was for the duration.
- be accepted for admission at CT State.
- be domiciled in Connecticut at the time of acceptance, which includes domicile for less than one year.
- Veterans must submit their DD-214 (Discharge Papers) to the Certification Team. **Tuition waivers are not provided for Summer Session, Winter Intersession, or Credit-Free Courses.**

Periods of Service

Only those who served in the following manner may qualify:

Active duty for at least 90 days during:

- World War II..... December 7, 1941 - December 31, 1946
- Korean Conflict..... June 27, 1950 - January 31, 1955
- Vietnam Era..... February 28, 1961 - July 1, 1975
- Persian Gulf War..... August 2, 1990 - Until an ending date prescribed by Presidential proclamation or by law (no end date at this time). All military war service subsequent to August 2, 1990, is covered, including but not limited to, Enduring Freedom, Noble Eagle, Iraqi Freedom, Somalia, and Bosnia.

Engaged in combat or in a combat support role in:

- Lebanon..... July 1, 1958 - November 1, 1958, or September 29, 1982-March 30, 1984
- Grenada..... October 25, 1983 - December 15, 1983
- Operation Earnest Will..... July 24, 1987 - August 1, 1990 (escort of Kuwaiti oil tankers flying the U.S. flag in the Persian Gulf)
- Panama..... December 20, 1989 - January 31, 1990

Reservists must be mobilized in time of war for other than training purposes.

Connecticut National Guard Tuition Assistance

CT National Guard members will need to file an application with their unit before the beginning of each semester. The Certificate of Eligibility that is issued from the CT National Guard must be on file with your campus Certifying Official before the registration process can be completed.

Tuition waivers are not provided for Summer Session, Winter Intersession, or Credit-Free Courses.

Dependent Children/Surviving Spouse Waivers

State statutes also provide that tuition at Connecticut public colleges and universities may be waived for:

any Connecticut resident who is a dependent child or a surviving spouse of a member of the Armed Forces killed in action on or after September 11, 2001, who was a Connecticut resident; and

state residents who are dependent children of a person whom the Armed Forces has declared to be either missing in action or a prisoner of war while serving in the Armed Forces after January 1, 1960.

Courses Subject to Waiver

Tuition Waivers are for credit courses during the spring and fall semesters ONLY and are not provided for summer session, winter intersession, or Continuing Education/credit-free courses.

Expenses Not Covered

College costs other than tuition - such as for books, student activity and course fees, parking - are not waived. Waivers may also be reduced by the amount of education reimbursement you may receive from your employer.

For further information on Veterans Services, please click on your designated campus here: <https://ctstate.edu/veterans>

Principles of Excellence

CT State adheres to the principles outlined in the Principles of Excellence executive order.

- Provide students with a personalized form covering the total cost of an education program.
- Provide educational plans for all Military and Veteran education beneficiaries.
- End fraudulent and aggressive recruiting techniques and misrepresentation.
- Provide accommodations for Service Members and Reservists absent due to service requirements.
- Designate a Point of Contact for academic and financial advising.
- Ensure accreditation of all new programs prior to enrolling students.
- Align institutional refund policies with those under Title IV.

Foreign Schools, High Schools, On-the-Job Training and Apprenticeship programs, Residency and Internship programs, and those who do not charge tuition and fees were not asked to comply with the Principles of Excellence.

The VA's Comparison tool will let you see if the school you are interested in attending participates in the Principles of Excellence program.

Veterans Oasis

CT State is dedicated to supporting our military community with their transition from service members to students. Each CT state campus provides a safe space specifically for veterans to study, relax and build comradery with other student veterans. Campuses also offer information on how to access Veteran Administration benefits for all who are eligible. For further information on Veterans Services, please click on your designated campus here: <https://ctstate.edu/veterans>

INTERNATIONAL STUDENTS

CT State Community College (CT State) is authorized by the United States Government under the Department of Homeland Security and United States Citizenship and Immigration Services (USCIS), to enroll academically qualified international students into all Associate Degree Programs.

F-1 international students entering the United States will be admitted to CT State Community College for the Fall and Spring semesters of each academic year, must attend full time (12 or more credit/semester hours), and must maintain their full-time status to remain eligible for the duration of their F-1 Visa Status.

Application Deadlines

New Students:

- Fall Semester - June 15th
- Spring Semester - November 1st

Transfer Students (with an active I-20 from another US college/university):

- Fall Semester - July 20th
- Spring Semester - December 20th

All relevant information requested to complete the Application Process for a SEVIS I-20 must be provided by the due dates. Applicants unable to submit the required documentation by the due dates will be considered for the following semester and will have to submit updated financial documentation.

Admissions & SEVIS I-20 Documentation

CT State is an open enrollment institution and students are admitted into their Degree Programs upon completing the CT STATE Application process. CT State is not a Language Institute and does not issue SEVIS I-20's for Intensive English Language Studies across all campuses.

**Note: CT State Community College is not a Language Institute and does not issue SEVIS I-20s for Intensive English Language Studies across all campuses.*

The Admissions Application and all relevant documentation for requesting a SEVIS I-20 must be submitted to the Principal Designated School Official (PDSO) or Designated School Official (DSO) at CT State Community College. The following documentation must be provided by the prospective student before a SEVIS I-20 can be issued by CT State Community College (CT STATE). All documents must be translated into English, validated, and notarized as being an official, accurate translation.

New Students:

1. A completed [CT State Community College Application](#)
2. Proof of high school graduation or its equivalent
3. Proof of immunization against measles, mumps, rubella and varicella (chicken pox); a record of two doses of each required immunization must be on file with CT State prior to acceptance.
4. Copy of the student's passport (biographical page only)
5. English Proficiency:
 1. TOEFL (Test of English as a Foreign Language), IELTS (International English Language Testing System), or Duolingo official scores. The minimum TOEFL score for admission is 61 on the internet-based version. The minimum IELTS score for admission is 5.5. The minimum Duolingo score for admission is 85.
 2. a.*Note: If your home campus is Norwalk, in Norwalk, CT, English placement can be provided upon arrival.
6. Financial Sponsor & Affidavit of Support:

Affidavit of Support and supporting financial documents noting the student's intended source of financing available to cover their educational and living expenses while in the United States. All financial documents, including bank statements, must be in English and note currency values in US dollar equivalencies. (Please note that all funds must be liquid assets. Stock/Mutual/Retirement accounts/properties are not considered liquid assets.)
7. Housing Plan Letter showing student's intended US address, as well as permanent homeland address.

Transfer Students:

Transfer students in F-1 status transferring from a college/university in the US must provide

1. A completed [CT State Community College Application](#)
2. Proof of high school graduation or its equivalent
3. Proof of immunization against measles, mumps, rubella and varicella (chicken pox); a record of two doses of each required immunization must be on file with CT State prior to acceptance.
4. Proof that they are currently in status and eligible for transfer
5. A copy of F-1 Visa passport page
6. A copy of their current I-20, current college transcript
7. An International Student Transfer Form. This is provided by CT State Community College
8. English Proficiency:
 1. While it is expected that an international applicant will have some level of English proficiency, the student's actual level of English proficiency will be determined upon their arrival on campus. All students must complete English and Math Placement Assessment prior to course registration or provide an official college transcript from the previous college/university showing completion of the of required college-level math and English courses.
 2. Transfer students may also submit TOEFL (Test of English as a Foreign Language), IELTS (International English Language Testing System), or Duolingo official scores. The minimum TOEFL score for admission is 61 on the internet-based version. The minimum IELTS score for admission is 5.5. The minimum Duolingo score for admission is 85.

9. Financial Sponsor & Affidavit of Support:

Affidavit of Support and supporting financial documents noting the student's intended source of financing available to cover their educational and living expenses while in the United States. All financial documents, including bank statements, must be in English and note currency values in US dollar equivalencies. (Please note that all funds must be liquid assets. Stock/Mutual/Retirement accounts/properties are not considered liquid assets.)

10. Housing Plan Letter showing student's intended US address, as well as permanent homeland address.

For the complete list of international students' admission requirements, please visit www.ct.edu/international .

SENIOR CITIZENS - TUITION WAIVER

Connecticut residents aged 62 or older who have been accepted for admission to Connecticut State Community College shall be exempt from payment of tuition, general fees, and the application fee provided if, at the end of the regular registration period, there is space available in the course(s) in which the person intends to enroll. Proof of age must be submitted to the Business Office to complete the eligibility requirements for this waiver.

CLEP EXAM EQUIVALENTS

CLEP Exam	Exam Score	Passing Score	Course(s)	CT State*	Credits
Business					
Financial Accounting	50	50	ACC* 113	ACCT 1130 - Principles of Financial Accounting	3
Information Systems	50	50	CSA* 105	CIS 1141 - Introduction to Management Information Systems	3
Introductory Business Law	50	50	BBG* 231	BUSN 2310 - Business Law I	3
Principles of Management	50	50	BMG* 202	BMGT 2020 - Principles of Management	3
Principles of Marketing	50	50	BMK* 201	BMKT 2010 - Principles of Marketing	3
Composition & Literature					
American Literature	50	50	ENG* 221	ENG 2620 - American Literature to 1865	3
Analyzing and Interpreting Literature	50	50	ENG* 102	ENG 1020 - Composition II and Literature	3
College Composition	50	50	ENG* 101, ENG* ELE	ENG 0910 - Composition Workshop	6
College Composition Modular	50	50	ENG* 101	ENG 1010 - Composition	3
English Literature	50	50	ENG* 231	ENG 2520 - British Literature to 1798	3
Humanities	50	50	HUM* ELE	HUM 1001 - Introduction to Humanities	3
Foreign Languages					
French Language: Levels 1 and 2	50 OR 63+	Level 1: 50 Level 1 and 2: 59+	FRE* 101, FRE* 102 FRE* 101, FRE* 102, HUM 297	<i>Level 1:</i> FREN 1011 - Elementary French I and FREN 1012 - Elementary French II <i>Level 1 and 2:</i> FREN 2011 - Intermediate French I and FREN 2012 - Intermediate French II	8
German Language: Levels 1 and 2	50 OR 63+	Level 1: 50 Level 1 and 2: 60+	GER* 101, GER* 102 GER* 101, GER* 102, HUM 297	<i>Level 1 and Level 1 and 2:</i> GERM 1011 - Elementary German I and GERM 1012 - Elementary German II	8
Spanish Language: Levels 1 and 2	50 OR 63+	Level 1: 50 Level 1 and 2: 63+	SPA* 101, SPA* 102 SPA* 101, SPA* 102, SPA* 201/HUM 297	<i>Level 1:</i> SPAN 1011 - Elementary Spanish I and SPAN 1012 - Elementary Spanish II <i>Level I and 2:</i> SPAN 2011 - Intermediate Spanish I and SPAN 2012 - Intermediate Spanish II	8
Spanish with Writing: Levels 1 and 2	50 or 65	Level 1: 50 Level 1 and 2: 65+	SPA* 101, SPA* 102 Level 1: SPA* 101, SPA* 102 Level 2: SPA* 101, 102, 201, 202	<i>Level 1 and Level 1 and 2:</i> SPAN 1030 - Elementary Spanish Composition I and SPAN 2030 - Intermediate Spanish Composition I	8

History & Social Sciences					
American Government	50	50	POL* 111	POLS 1002 - American Government	3
History of the United States I: Early Colonization to 1877	50	50	HIS* 201	HIST 1015 - US History to 1877	3
History of the United States II: 1865 to the Present	50	50	HIS* 202	HIST 1016 - US History from Reconstruction	3
Human Growth and Development	50	50	PSY* 201	PSY 1011 - General Psychology I	3
Introduction to Educational Psychology	50	50	N/A	PSY 2020 - Educational Psychology	3
Introductory Psychology	50	50	PSY* 111	PSY 2001 - Lifespan Development	3
Introductory Sociology	50	50	SOC* 101	SOC 1001 - Principles of Sociology	3
Principles of Macroeconomics	50	50	ECN* 101	ECON 1001 - Principles of Macroeconomics	3
Principles of Microeconomics	50	50	ECN* 102	ECON 1002 - Principles of Microeconomics	3
Social Sciences and History		50	SOC*/HIS* ELE	INDS 2299 - Independent Study	6
Western Civilization I: Ancient Near East to 1648	50	50	HIS* 101	HIST 1001 - Western History to the 1500s	3
Western Civilization II: 1648 to the Present	50	50	HIS* 102	HIST 1002 - Western History from the 1500s	3
Science & Mathematics					
Biology	50	50	BIO* 121	BIO 1210 - General Biology I	4
Calculus	50	50	MAT* 254	MATH 2600 - Calculus I	4
Chemistry	50	50	CHE* 121	CHEM 1210 - General Chemistry I	4
College Algebra	50	50	MAT* 172	MATH 1600 - Pathway to Calculus: College Algebra	3
College Mathematics	50	50	MAT* 137	MATH 1010 - Intermediate Algebra	3
Natural Sciences	50	50	SCI* ELE (non-lab)	SCI 1014 - Survey of Science	4
Precalculus	50	50	MAT* 186	MATH 1610 - Precalculus	3

ADVANCED PLACEMENT EXAM EQUIVALENCIES

**Advanced Placement (AP) Exam
CT State Equivalency**

AP Exam	Exam Score	CT State Equivalent	CT State Credits
Biology	3+	BIO 1210 and 1220 incl labs	8
Calculus AB	3+	MATH 2600	4
Calculus BC	3+	MATH 2600 & MATH 2610	8
Chinese Language and Culture	3+	CHNS 1012	4
Comparative Government and Politics	3+	POLS 1002	3
Computer Science A	3+	CSC 1211	3
Computer Science Principles	3+	CIS 1002	3
Chemistry	3	CHEM 1210	4
	4+	CHEM 1210 & CHEM 1220	8
English Language and Composition	3+	ENG 1010	3
English Literature and Composition	3+	ENG 1020	3
Environmental Science	3+	ENV 1010	3
European History	3+	HIST 1001 & HIST 1002	6
French Language and History	3	FREN 1012	4
	4	FREN 2011	4
	5	FREN 2012	4
German Language and History	3	GERM 1012	4
	4	GERM 2011	4
	5	GERM 2012	4
Human Geography	3+	GEOG 1020	3
Italian Language and History	3	ITAL 1012	4
	4	ITAL 2011	4
	5	ITAL 2012	4
Japanese Language and Culture	3+	JAPN 1012	4
Latin	3+	LATN 1012	4
Physics I	3+	PHYS 1201	4
Physics II	3+	PHYS 1202	4
Physics C: Mechanics	3+	PHYS 2201	4
Physics C: Electricity and Magnetism	3+	PHYS 2202	4
Precalculus	3+	MATH 1610	4
Psychology	3+	PSY 1011	3

TUITION, FEES, & FINANCIAL AID

FINANCIAL AID

CT State has Financial Aid Offices on campuses across the state to assist students with all of the concerns and logistics of paying for college. Depending on a variety of factors, students may be eligible for grants, loans, campus foundation scholarships, work-study, and other sources of financial aid. Priority Application Deadlines are July 15 for fall processing and November 15th for spring processing. Students must submit a FAFSA prior to the last day of attendance for the award year in order to be eligible and apply aid to that year.

Student General Eligibility Requirements

To be eligible for federal financial assistance at CT State, a student must:

- Be a United States citizen or an eligible non-citizen
- Have financial need as assessed by an eligible need analysis system
- Be enrolled as a matriculated student at CT State Community College
- Be in an eligible degree or certificate program
- Maintain satisfactory academic progress
- Not be in default on any federal educational loan or owe a repayment on any federal grant at any institution
- Have completed high school or have earned the GED.
- Financial aid is available for [undocumented students](#). Use [these forms](#) to apply for aid.

Each year, the Financial Aid Office uses all available resources to help eligible students fund their direct costs, which include charges for tuition and fees, and an allowance for books and supplies. At CT State, more than \$100 million is awarded annually to more than 30,000 students.

Courses Eligibility ("Courses in Program")

To receive financial aid students must be enrolled in an eligible degree or certificate program. Federal regulations stipulate that a student may only receive financial aid for courses that count toward that enrolled, eligible program. CT State tracks the courses that a student is registered for that count toward their degree/certificate program. *Courses identified as not meeting program requirements will not be included in the calculation of financial aid eligibility.* Prerequisites will be covered.

Additionally, timely degree completion is critical as time limits and aggregate lifetime limits exist for all aid programs.

Term Eligibility - Full-Time and Part-Time

Students enrolled in 12 credits or more in one semester, are considered to be a full-time students. Aid eligibility is affected by enrollment levels as follows:

- 12 credits and above: full-time - receive 100% of financial aid award
- 9-11 credits: 3/4-time - receive 75% of financial aid award
- 6-8 credits: 1/2-time - receive 50% of financial aid award (Note: This is the minimum level needed to maximize your financial aid.)
- 1-5 credits: less than half time - may not be eligible for financial aid (contact Financial Aid Office to confirm)

Applying

Applying for federal, state, and institutional financial aid for any campus location at CT State is done by completing the [Free Application for Federal Student Aid \(FAFSA\)](#). All students are encouraged to complete the FAFSA, even if those who may believe that they or their families make too much money to qualify.

You must use Connecticut State Community College's federal school code **007635** on your FAFSA.

All critical information regarding Financial Aid at CT State and the benefits and obligations for recipients is maintained in detail at the [Financial Aid Website](#).

TUITION & FEES

CT State In-State Tuition Rates 2024-2025

Please note: tuition and fees are subject to change.

Credit Hours	Tuition	College Services Fee	Total
1	\$192	\$116	\$308
2	\$384	\$116	\$500
3	\$576	\$116	\$692
4	\$768	\$137	\$905
5	\$960	\$158	\$1,118
6	\$1,152	\$179	\$1,331
7	\$1,344	\$200	\$1,544
8	\$1,536	\$221	\$1,757
9	\$1,728	\$242	\$1,970
10	\$1,920	\$263	\$2,183
11	\$2,112	\$284	\$2,396
12 or more**	\$2,304	\$305	\$2,609
Annual Full-time	\$4,608	\$610	\$5,210

*In-state tuition and fees for neighboring States (Massachusetts, Rhode Island and New York) are available at the following campuses:

Asnuntuck, Housatonic, Naugatuck Valley-Danbury, Northwestern Connecticut, Norwalk, Quinebaug Valley, and Three Rivers.

**Excess Credits Tuition Charge - An additional flat tuition charge of \$100 per semester shall apply when total registered credits exceed 17 for the semester.

Out of State Tuition Rates 2024-2025*

Credit Hours	Tuition	Services Fee	Total
1	\$578	\$325	\$903
2	\$1,156	\$325	\$1,481
3	\$1,734	\$325	\$2,059
4	\$2,312	\$378	\$2,690
5	\$2,890	\$431	\$3,321
6	\$3,468	\$484	\$3,952
7	\$4,046	\$537	\$4,583
8	\$4,624	\$590	\$5,214
9	\$5,202	\$643	\$5,845
10	\$5,708	\$696	\$6,476
11	\$6,358	\$749	\$7,107
12 or more**	\$6,936	\$802	\$7,738
Annual Full-time	\$13,872	\$1,604	\$15,476

* In-state tuition and fees for neighboring States (Massachusetts, Rhode Island and New York) are available at the following campuses:

Asnuntuck, Housatonic, Naugatuck Valley-Danbury, Northwestern Connecticut, Norwalk, Quinebaug Valley, and Three Rivers.

****Excess Credits Tuition Charge** - An additional flat tuition charge of \$100 per semester shall apply when total registered credits exceed 17 for the semester.

NEBHE Tuition Rates 2024-2025*

The [New England Board of Higher Education Tuition Break](#) program offers students from other New England states a discounted tuition rate.

Credit Hours	Tuition	Services Fee	Total
1	\$289	\$147	\$436
2	\$578	\$147	\$725
3	\$867	\$147	\$1,014
4	\$1,156	\$179	\$1,335
5	\$1,445	\$211	\$1,656
6	\$1,734	\$243	\$1,977
7	\$2,023	\$275	\$2,298
8	\$2,312	\$307	\$2,619
9	\$2,601	\$339	\$2,940
10	\$2,890	\$371	\$3,261
11	\$3,179	\$403	\$3,582
12 or more**	\$3,468	\$435	\$3,903
Annual Full-time	\$6,936	\$870	\$7,806

*In-state tuition and fees for neighboring States (Massachusetts, Rhode Island and New York) are available at the following campuses:

Asnuntuck, Housatonic, Naugatuck Valley-Danbury, Northwestern Connecticut, Norwalk, Quinebaug Valley, and Three Rivers.

****Excess Credits Tuition Charge** - An additional flat tuition charge of \$100 per semester shall apply when total registered credits exceed 17 for the semester.

Mandatory Usage Fees

Fee Description	Total
Clinical Program Fee-Level 1*	\$511
Clinical Program Fee-Level 2*	\$377
Advanced Manufacturing Lab Fee (per course)	\$200
*** (3)	
	\$108
Supplemental Course Fee Level 1 **	(Supplemental Course Fee Level 1 + Supplemental Course Fee Level 2) - Max per Term - \$430
	\$215
Supplemental Course Fee Level 2 ** (2)	(Supplemental Course Fee Level 1 + Supplemental Course Fee Level 2) - Max per Term - \$430
	\$54
Material Fee *** (1)	Max per Term - \$108

* Per semester; not assess Material or Supplemental Course Fee

** Per course; level determined by additional contact hours

Level 1 = 1 to 1.5 contact hours greater than credit hours

Level 2 = 2 or more contact hours greater than credit hours

*** Per course, where applicable

- (1) Material Fee excludes Advanced Manufacturing and Nursing courses which have different material assessments.
- (2) Supplemental Course Fee Level 2 is maximum per course and maximum per Semester to \$430.
- (3) Advanced Manufacturing Program Fee with a per lab class fee of \$200. No maximum - number of labs per semester can vary widely.

Student Activity Fees & Transportation Fees (per semester)

Fee	Full-Time	Part-Time
Student Activities	\$20	\$10
Transportation Fee (U_PASS Per Semester) (1-2)	\$40	\$40
NV-Rides (For students identifying Naugatuck Valley as the home campus)	\$10	\$10

(1) Transportation Fee applies to student at all home campuses, with the exception of the Naugatuck Valley and Quinebaug Valley campuses.

- (2) Some exclusions apply

Late Drop Fees/Refunds

Late drop fee for full-term course

90% of tuition and 100% of fees associated with the dropped course(s) is refunded when the course(s) are dropped between calendar day eight and census (20% of the term).

Late drop fee for abbreviated terms (Summer, Winter, Late Start or Other Variable Terms)

90% of tuition and 100% of fees associated with the dropped course(s) is refunded when the course(s) is dropped between 10% of the term length and 20% of the term length.

Courses dropped later than these periods in the semester are considered withdrawals. A "W" grade is assigned and no refund is issued.

All fees and extension fees are enumerated in this [Fee Chart](#).

Free Tuition for Connecticut Residents

The [Mary Ann Handley Award](#) is available to Connecticut residents who have graduated from high school (including home school and GED students). This award is designed to cover the gap between federal and state grants and community college tuition. To qualify, students must complete the FAFSA and meet all additional requirements.

ACADEMICS AT CT STATE

SCHOOLS OF STUDY

CT State's curriculum offers more than 300 degrees and credit certificates within six schools of study. Our interdisciplinary approach will give you the knowledge and tools to pursue your life and career goals. Each of our six academic schools blends classical disciplines with career-ready, cutting edge-programs. Learn more about each school below.

School of Arts and Humanities

Academic Dean: B.L. Baker, bl.baker@ctstate.edu, (860) 612-7055

Creative arts and humanities programs combine curiosity, expression, and passion together in growing career fields with many opportunities for the future. A degree from the School of Arts and Humanities at CT State builds crucial skills such as critical thinking, creativity, communication, and cross-cultural understanding.

Our students gain the tools to cultivate a deep understanding of different cultures and cultural differences - historically, geographically, and artistically. Arts and humanities students are distinct in their ability to bring innovative solutions to novel challenges.

The School of Arts and Humanities offers a rich array of courses in Art and Design, Communication, Digital and Media Production, English, Languages and Culture, and Performing Arts, which serves to guide and educate students to reflect critically on the role of the humanities in their personal and professional growth; to connect students to the rich cultural mosaic of Connecticut, the region, and the world; and to foster a vibrant environment of artistic and scholarly activities for the college and surrounding communities. Students will study both the impact of change on our culture, and the timeless perspectives that have shaped our lives and thought.

For individuals with many strengths and interests, CT State Community College offers focused associate degree or certificate programs leading to creative and productive careers, and provides opportunities for hands-on, real-world engagement. Pathway programs are available in several majors, allowing students to gain course credits that directly transfer to a bachelor's degree program at Connecticut colleges and universities.

School of Business and Hospitality

Academic Dean: Jimmy Adams, jimmy.adams@ctstate.edu, (860) 612-7047

There is a growing need for trained employees in commerce, health care, hospitality, government, international business, nonprofit organizations, paralegal, and more. Businesses rely on these employees' knowledge of critical business elements and principles to be successful.

At CT State Community College, students learn with real-world application and experience in current business practices. Our programs equip students with the skills they need to learn the value of information and technology in a variety of business environments. From information management to electronic health records, our programs cover a variety of environments where students can apply highly portable tools and approaches to solving complex problems.

For those interested in hospitality, our graduates have gone on to own bakeries; serve as chefs and managers in both formal and informal restaurants; work in foodservice settings in health care, business, and industry; work in hotels of all sizes; and hold management positions in many areas of the hospitality field.

By earning an associate degree or certificate in a business-related program, students can apply skills to a variety of industries after graduation or transition a path to transfer to a four-year college or university for those wishing to continue their studies.

School of Engineering and Technology

Academic Dean: David DiMattio, david.dimattio@ctstate.edu, (860) 612-7066

Welcome to the Connecticut State Community College School of Engineering & Technology, where innovation meets education. CT State's School of Engineering & Technology is committed to providing cutting-edge programs designed to prepare students for successful careers in a variety of high wage, high demand fields. With a diverse range of offerings spanning advanced manufacturing, architecture, automotive technology, construction, computer science, networking, cybersecurity, computer information systems, engineering science, engineering technology, welding, robotics, mechatronics, environmental engineering, and water management, we strive to meet the evolving needs of today's industries and pave academic pathways for transfer to 4-year institutions.

Within the School of Engineering & Technology, students have the opportunity to explore their passions, develop practical skills, and engage with industry professionals. Whether you are interested in designing sustainable structures, mastering the latest software technologies, or delving into the intricacies of environmental engineering, our programs provide a solid foundation for success in the workforce or for transfer.

Led by experienced faculty members who are experts in their respective fields, our curriculum emphasizes hands-on learning, real-world applications, and collaboration. Through well-equipped facilities, industry partnerships, and experiential learning opportunities, we empower our students to excel in their chosen paths and make meaningful contributions to the ever-changing landscape of engineering and technology.

Join us at the Connecticut State Community College School of Engineering & Technology and embark on a journey of discovery, innovation, and limitless possibilities. Whether you are beginning your educational journey or seeking to enhance your skills, we are committed to helping you achieve your goals and reach new heights in your career.

School of Nursing and Health Careers

Academic Dean: Paula Dowd, paula.dowd@ctstate.edu, (860) 612-7054

To support an increasing number of health-related careers, CT State Community College offers many academic options for prospective students. Health career professionals help evaluate, treat, and prevent illnesses by collaborating in a variety of health fields, and individuals with many different skill levels can be successful in these areas. While some professions involve working directly with patients, others work behind the scenes, playing important roles in the health care field.

Students who enjoy helping others, hands-on or detailed work, problem solving, or have an interest in a medical-related field, can find an affordable and flexible career solution by earning an associate degree or certificate in one of many allied health fields. Allied health consists of a group of health professionals who work towards the diagnosis and treatment of diseases. These professionals also promote disease prevention and wellness, and work to support various health care systems.

For those students interested in a career in nursing, the Connecticut Community College Nursing Program (CT-CCNP) is an innovative associate degree program of study offered at six CT State campuses. The program serves a diverse population of students, offers excellent clinical sites, and has a thirty plus year record of proven success.

For those students who are interested in other health careers such as laboratory medicine, occupational and physical therapy, respiratory care and more, the CT State Community College offers degrees as certificates, and Associate degree programs which, in many cases, can be built upon and lead to a higher degree at our other four-year institutions.

School of Science and Mathematics

Academic Dean: David DiMattio, david.dimattio@ctstate.edu, (860) 612-7066

The School of Science and Mathematics at CT State Community College offer engaging learning opportunities in science and mathematics for students with a diverse range of academic and career interests. These learning opportunities emphasize the acquisition of mathematical and scientific knowledge as well as the development of quantitative and scientific reasoning skills.

By engaging in the study of science and mathematics, students experience how these academic areas are integral and applicable to their lives. Students learn how to apply science to solve problems through lab experiences, research, and course work and to think collaboratively and critically. Faculty in both science and mathematics prepare students for future success in technical and non-technical career pathways, developing written, oral, and graphical communication skills. They learn new concepts and techniques as required for continuing professional development and prepare to take industry-based certification exams.

Whether you are looking for more immediate employment or plan on transferring to a four-year college or university, we have the programs and courses to match your interests and schedule.

School of Social and Behavioral Sciences

Academic Dean: Joshua Searcy, joshua.searcy@ctstate.edu, (860) 612-7074

The Social and Behavioral Sciences represent areas of learning that help us to understand more deeply the cultural, historical, social, political, and psychological forces that shape our lives. Courses include introductory and secondary-level offerings in anthropology, communications, history, humanities, languages, political science, psychology, sociology, and more.

CT State Community College's Social and Behavioral Science programs combine skills and passion toward a career that's exciting and fulfilling and helps make a real difference in people's lives. Programs allow students to build skills and qualifications for existing careers, to seek a new and exciting career, or to aspire to be a leader in criminal justice, early childhood education, human services, political science, psychology, social work, and more.

Curriculums are designed for those seeking continuing education or to further enhance skills and credentials, as well as for those who are planning to transfer to a bachelor's degree program. Students learn about the challenges and the rewards of working in the field while gaining practical hands-on experience through class experiences and diverse internships.

GENERAL EDUCATION CORE

Overview

Students earning an Associates degree are required to take courses to fulfill the college-wide requirements of the General Education Core Curriculum.

A common general education curriculum contributes to the development of an educated person by exposing students to multiple disciplines and multiple methods of inquiry in broad foundational courses in the arts and humanities, social and behavioral sciences, physical and natural sciences, and mathematics; cultivates student success by helping students acquire skills and knowledge - such as oral/written communication, information literacy, and critical thinking skills - to further their education and thrive in a complex, diverse, and changing world. A common general education curriculum also permits students to change majors with minimal loss of credit and minimal disruption in progress to degree completion. It also aids in seamless transfer and is aligned with the general education component of all CT State Transfer Ticket degrees.

Each General Education course will:

1. Ask students to demonstrate knowledge of the fundamental concepts, theories, primary works, skills, or ideas within the specific category discipline area.
2. Ask students to interpret and apply introductory methods of inquiry and analysis in the discipline category.
3. Have as its main objective, and 2/3 of its focus, the category content and/or skills.
4. Apply in only one General Education category.
5. Be vetted and approved by an appropriate academic discipline group.

Upon completion of the General Education Core Curriculum, students will be able to demonstrate beginning competency in communication, critical thinking, and the foundational knowledge and methods of inquiry in multiple disciplines.

Core Competencies

Course/Category	Credits
ENG 1010 - Composition	3
MATH 1000 or higher - <i>Required course varies by program</i> or Quantitative Reasoning course (QUAX) for CSCU Transfer Pathway Programs	3-4
Arts & Humanities Gen Ed Courses ARHX <i>Recommend course varies by program</i>	3
Choose one from: Scientific Reasoning Gen Ed Courses SCRX Scientific Knowledge Gen Ed Courses SCKX <i>Recommended course varies by program</i>	3-4 <i>lab optional in some programs</i>
Choose one from: Social/Behavioral Science Gen Ed Courses SBSX Historical Knowledge Gen Ed Courses HISX <i>Recommended course varies by program</i>	3
Choose one from: Oral Communication Gen Ed Courses ORAX Written Communication II Gen Ed Courses WRIX <i>Recommended course varies by program</i>	3
Choose one from: Continued Learning/Information Literacy Gen Ed Courses CLIX Scientific Knowledge Gen Ed Courses SCKX Scientific Reasoning Gen Ed Courses SCRX Social/Behavioral Science Gen Ed Courses SBSX Historical Knowledge Gen Ed Courses HISX Written Communication II Gen Ed Courses WRIX Oral Communication Gen Ed Courses ORAX	3-4
<i>Students must take at least one course in the Gen Ed core which meets a diversity requirement. This is a program-designated course fulfilled in most cases by CCS 1001 - College & Career Success</i>	Total: 21-25

To view a list of General Education Courses by Category see the [Catalog Website](#)

ACADEMIC POLICIES & PROCEDURES

DEFINITIONS

Academic Credit Hour

As adopted by our accreditor, NECHE, Connecticut State Community College defines a credit hour in compliance with the U.S. Department of Education.

A credit hour represents academic work requiring the equivalent of:

1. One hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or
2. At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

Matriculated Student

A matriculated student is one who has been admitted to the College and is enrolled in a credit certificate or degree program. A non-matriculated (or non-degree) student is one who is taking classes at the College but has not enrolled in a credit certificate or degree program. Non-matriculated students are not eligible for Financial Aid.

Associate of Arts (AA)

A degree designed to build a foundational education in a particular subject, typically focused on the liberal arts. Some emphasize general education credits for transfer to a bachelor's degree.

Associate of Science (AS)

A degree designed to build a foundational education, typically in the sciences, mathematics, or technology. Some emphasize general education credits for transfer to a bachelor's degree.

Associate of Applied Science (AAS)

A degree that provides skills and knowledge, often in the form of a credential or qualification, that allow for direct entry into the work force; these degrees may serve as transfer degrees with or without a guarantee that additional credits will not be needed at the baccalaureate level within the CSCU system.

Credit Certificate

Credit certificate programs may be comprised of a single course or small groups of courses generally intended for occupational training, upgrading, or retraining. Regardless of their duration or composition, certificate programs:

- require fewer than 60 credits.
- are comprised of courses for skills development required for employment or for career advancement and do not contain broad General Education requirements.

GRADES AND GRADE POINTS

Letter grades are given at the end of each semester to indicate how well a student has met the goals established for each course. For each letter grade, there is a corresponding number called a grade point. These are used to calculate a student's grade point average, or GPA.

Grade Point Average (GPA)

Grade	Range	Grade Points per Credit Hour
A	93-100%	4.0
A-	90 - 92.99%	3.7
B+	87 - 89.99%	3.3
B	83 - 86.99%	3.0
B-	80 - 82.99%	2.7
C+	77 - 79.99%	2.3
C	73 - 76.99%	2.0
C-	70 - 72.99%	1.7
D+	67 - 69.99%	1.3
D	63 - 66.99%	1.0
D-	60 - 62.99%	0.7
F	< 60%	0
P	-	0
W (withdrawal)	-	0

Temporary Grades

Grade	Range	Grade Points per Credit Hour
I (Incomplete)	-	0
M	-	0

Administrative Marks

Grade	Range	Grade Points per Credit Hour
AU	-	0

Developmental grades

Grades earned in courses numbered below 1000 will appear with the "#" sign after the letter grade to designate their status.

NOTE: These grades are not included in College GPA calculation, but are included in the calculations that determine eligibility for Financial Aid.

Incomplete Grades

I - Incomplete

Used as a temporary grade assigned by a faculty member when coursework is missing and the student agrees to complete the requirements.

A student may request an Incomplete from the faculty member; that faculty member is not required to agree to the request. Faculty members should assign an Incomplete when there are extenuating circumstances, such as illness, that prevent a student from completing the assigned work on time. Further consideration should be given to determine if the student has participated in and completed at least 61% of the course, and, in the judgment of the faculty member, the student can complete the remaining work no later than the tenth week of the next standard semester.

Any faculty member that assigns an Incomplete shall document such an activity, and inform the student, the campus Dean of Faculty or campus dean responsible for faculty affairs, the campus supervisor of enrollment services, and other appropriate parties, as needed, using a common form. Supporting documentation, agreed upon by both the faculty and student, must include:

- A brief description of the requirements to be completed;
- The date by which the coursework must be submitted to the faculty member;
- A statement that the Incomplete will change to a specific letter grade if the work is not completed by the tenth week of the next standard 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 Campus Supervisor of Enrollment Supervisor or their designee shall convert the Incomplete on the student's transcript to the letter grade specified on the original paperwork. Specially accredited programs may have specific progression criteria where a student cannot progress in their program with an incomplete on their transcript.

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 the student has earned the required GPA.

REPEATING A COURSE

No course may be repeated for credit more than twice without approval. The highest grade received will be used in calculating the student's cumulative grade point average. This does not apply to those courses that are designed to be repeated for additional credit. Programs with professional and regulatory standards may have different requirements for repeating courses in which case, those standards shall be applied.

AUDITING A COURSE

Used for students not wishing to be awarded college credit for a course taken. This status allows students to participate in class activities without being required to meet the examination or assessment requirements of the course. Students may ask to have coursework critiqued, but audited courses do not earn a grade and faculty members are not required to grade an auditor's coursework. Full tuition and fees are charged for courses audited. Students must be informed that State and Federal regulations prohibit the College from awarding aid for audited courses. A student who wishes to change from credit to audit status must request this within the first 20% of a term in which the course is offered, using such forms and procedures as the college may prescribe. Audit deadlines for terms will be published in term calendars. Students auditing a course may not change to credit status. Students may only audit the same course two times, and any additional requests to audit must be approved by the campus Dean of Faculty or campus dean responsible for faculty affairs. Certain degrees or certificates, such as selective admissions programs, may not allow for courses to be converted to audit.

CALCULATION OF GPA

The grade point average (GPA) is a composite score used to determine the relative standing of a student, either for a single semester or for the total number of semesters at the college. Grade points are calculated by multiplying the numerical weight allocated to each grade by the semester hours of credit assigned to each course. The GPA is determined by dividing the total number of grade points by the total number of semester hours attempted by the student.

GRADE APPEALS

Policy

An academic appeal is an allegation by a student that an employee of the college has violated federal or state laws and regulations, college or department policies, accreditation standards, or the policies stated in the course syllabus related to an assigned grade, notation, or other academic decision. A student may seek campus-level review of the assignment of a grade, notation, or other decision affecting academic status in accordance with the procedure outlined in the college catalog.

The campus-level appeal will take place at the campus where the grade, notation, or course being appealed took place. The student shall be afforded the right to present a statement of appeal and relevant information in support of it. The faculty member shall also be afforded the right to present a statement of relevant information regarding the appeal. It is the student's responsibility to show that the decision in question is arbitrary, i.e., without a reasonable basis, or was made for improper reasons in violation of this policy. The student is entitled to a written response upon completion of the appeal procedure outlined in the college catalog.

The procedural time frames provided may be modified by the Campus CEO for good cause shown.

The decision of the Campus CEO, or designee shall be final.

Procedure

There are three procedural options for responding to a student's campus-level review of the assignment of a grade or other decision affecting academic status: Regular Appeal, Expedited Non-Clinical Appeal, and Expedited Clinical Appeal. For all three options, Step 1 of the campus-level appeal process will not take place prior to the Registrar's posting of final grades.

The [Regular Grade Appeal Procedure](#) should be followed if the grade being appealed would not prevent a student from graduating, transferring, or progressing in their designated program the following semester or term. The regular appeal procedure would likely be completed within 40 business days of the start of the next full academic semester.

The [Expedited Non-Clinical Grade Appeal Procedure](#) should be followed if the grade being appealed is from a non-clinical program and would prevent a student from graduating, transferring, or progressing in their designated program the following semester or term. The expedited (non-clinical) appeal procedure would likely be completed within 15 business days from the Registrar's Office posting of the official final grade.

The [Expedited Clinical Grade Appeal Procedure](#) should be followed if the grade being appealed is for a specialized course in a clinical program and would prevent a student from graduating, transferring, or progressing in their designated program the following semester or term. The expedited clinical appeal procedure would likely be completed within 10 business days from the Registrar's Office posting of the official final grade plus, if applicable, any additional days required for the completion of program-level appeal procedures stipulated by specialized accredited clinical programs. Some clinical programs may permit program-level appeal procedures to be completed prior to the Registrar's Office posting of the official final grade; however, Step 1 of the campus-level appeal process will not take place prior to the Registrar's posting of final grades.

Each Students may reach out to their Guided Pathways Advisor and/or program advisor for assistance in navigating the appeals process. Every type of appeal is initiated by a student with the [CT State Academic Appeal Form](#).

ACADEMIC ENGAGEMENT

Academic Engagement

While CT State is not considered an attendance-taking institution, they are required to verify the academic engagement of each student in each registered course by demonstrating "academic attendance" or an "academically-related activity" for Title IV purposes. This must be completed prior to the predetermined census date of each traditional semester, as well as during periods of enrollment shorter than the traditional 15-week semester (i.e. summer terms). The purpose of this practice is to identify students who have enrolled in coursework, but have not demonstrated an academically-related activity as a means to accurately report official college enrollment and meet the regulatory standard of compliance.

Required Activity Prior to Census

All students are required to demonstrate academic engagement (defined below) in each of their registered courses no later than the predetermined census date of each period of enrollment. Students who make this demonstration in at least one of their registered courses shall be considered to have begun the period of enrollment. Students who do not make this demonstration in any registered courses shall be considered to have not begun the period of enrollment.

Students Who Begin a Period of Enrollment

Students who begin a period of enrollment shall be counted in official census data, reflective of their actual enrollment status. Students who then cease engagement in their coursework, without officially withdrawing from the college prior to the end of the withdrawal period, shall be assigned a letter grade of "F" with a corresponding last date of academic engagement for each affected course. These students shall be considered an unofficial withdrawal from the college, and be subject to Return of Title IV regulations, if applicable. The latest date reported by faculty shall be the date of determination for unofficial withdrawal from the college.

Students Who Do Not Begin a Period of Enrollment

Students who are determined to have not academically engaged in a period of enrollment leading up to census shall be assigned a registration status of "Never Participated (NP)" for each affected course. Students assigned an NP for all courses shall be removed from the period of enrollment, and shall be counted as "never attended" for enrollment reporting purposes. Courses with an NP designation are not counted toward a college's official census, and affected students are not eligible to receive financial aid for courses assigned this status.

NP - Never Participated

A registration status used for students who have enrolled in coursework, but have failed to engage in an academically related activity by the predetermined census date. Students who receive an NP designation are no longer permitted to attend a course section after an NP has been reported. Additionally, they are not eligible to receive a final grade, and not eligible to access the learning management system for the affected course section.

Academic Engagement

In accordance with federal regulatory definition, academic engagement (otherwise known as "academic attendance" and "attendance at an academically-related activity") includes, but is not limited to:

- Physically attending a class where there is an opportunity for direct interaction between the instructor and students;
- Submitting an academic assignment;
- Taking an exam, an interactive tutorial, or computer-assisted instruction;
- Attending a study group that is assigned by the institution;
- Participating in an online discussion about academic matters; and
- Initiating contact with a faculty member to ask a question about the academic subject studied in the course.

This does not include activities where a student may be present, but not academically engaged, such as:

- Logging into an online class without active participation; or
- Participating in academic counseling or advising.

The institution must make a determination of "academic attendance" or an "academically related activity;" a student's certification of attendance that is not supported by institutional documentation is not acceptable.

DEAN'S LIST

Each semester, the College recognizes students for superior academic performance based on the following criteria.

- 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 Incomplete shall make the student ineligible for Dean's List recognition that semester. Upon completion of the coursework for which the Incomplete was granted, the student may petition the Dean of Faculty and Students within 30 days of the posting of the final grade, to have the Dean's List retroactively recognized on the student's official transcript.
- Students who withdraw from courses may be eligible for the Dean's List, however, if the withdrawal causes them to fall below 12 credits for that term, they will not be eligible for full-time Dean's List for that term.
- Students who are in academic probationary status or have a Dean's hold due to academic integrity issues are not eligible for Dean's List recognition, even if their semester grade point average might otherwise make them eligible.

ACADEMIC STANDING

The Connecticut State Community College Academic Standing Policy is explicit to a student's academic performance and does not address Financial Aid standing. Financial aid students must meet the standards provided under the Satisfactory Academic Progress (SAP) policy, which is separate from this Academic Standing Policy. Academic Standing is designed to help ensure students who fall below a 2.0 cumulative grade point average (GPA) are provided with structured levels of support and advising to guide students towards academic success.

Determination of Good Standing:

Any student whose cumulative grade point average GPA is 2.0 or higher is considered in good academic standing. Students in good academic standing may register for up to 19 credits in a regular (fall or spring) term.

Academic Warning

Students whose cumulative (GPA) falls below a 2.0 at the conclusion of the semester, including winter and summer intercessions, will be placed on First Level Academic Warning. Students shall return to good standing when their cumulative GPA reaches 2.0 or higher. Academic Standing includes three progressive levels of warning and suspension, each with varying credit caps. Students whose cumulative GPA falls below a 2.0 cumulative GPA are notified in writing of their academic standing. Students are required to work with their Guided Pathway advisor and in collaboration with their faculty advisor as needed to create an individualized plan to increase their cumulative GPAs.

Students who have attempted more than 31 credits toward an associate degree or 13 or more credits toward a certificate program and have been on the first three levels of Academic Warning shall be placed on Academic Suspension and will not be permitted to enroll in the subsequent fall or spring semester.

The grid outlines each level of Academic Standing and the maximum number of credits permissible.

Academic Standing Levels	Attempted Credits	Semester Credit Cap	Summer Credit Cap	Winter Credit Cap
Good Academic Standing	Any	19	12	6
First Level Academic Warning	Any	13	9	3
Second Level Academic Warning	Any	10	7	0
Third Level Academic Warning	Any	7	6	0
Academic Suspension	31 or more AS 13 or more Certificate	0	0	0

Credit Cap Appeals

Credit Cap is the maximum number of credits a student may register for in a semester. Students with extenuating circumstances may request Credit Caps be increased. Students seeking a credit increase may submit a Credit Cap Appeal to the Dean of Students and Faculty, the Dean of Academic Affairs, or their respective designee at any level of Academic Warning.

Re-Enrollment Following Academic Suspension

In the first semester following Academic Suspension, students may enroll in up to 7 credits. Credit Caps shall automatically continue each semester until a 2.0 cumulative GPA is achieved.

Academic Suspension Appeals

Students placed on Academic Suspension may appeal the requirement to take a one semester leave of absence through the Dean of Students and Faculty or the Dean of Academic Affairs, or their respective designee. Decisions will be issued in writing within 10 business days of receipt. If an initial appeal is denied, the student may request a second appeal in writing requesting a hearing with the Campus Academic Standing Appeals Committee. The committee's decision will be communicated in writing, and their decision will be final. Students on Academic Suspension may not appeal summer or winter intercession credit caps.

Students on Academic Suspension who are granted an appeal are placed upon Third Level Academic Warning for their appeal semester. If students fail to earn a 2.0 semester GPA during their appeal semester, they will be returned to Academic Suspension and will be required to take a one semester leave from the college. If the student's semester GPA after their return semester is above 2.0, but the student's cumulative GPA after their return semester is still below 2.0, the appeal will be continued, and the student will remain on Third Academic Warning.

READMISSION

Students who wish to return after an academic suspension should schedule an appointment with their Guided Pathways Advisor begin that process.

ACADEMIC FRESH START

The Academic Fresh Start Program is a one-time opportunity for eligible students, returning to college after an absence of one or more years (two standard semesters), to refresh their grade point average (GPA). A student must be re-enrolling with a cumulative GPA below 2.00 to qualify for this program.

All grades previously earned remain on the student's transcript and the student retains credit for courses with a grade of "C-minus" or above, including "P" (Pass), "CR" (Credit), and "CRT" (Credit Transfer). The courses for which Academic Fresh Start is invoked include a transcript symbol (^) indicating that the policy has been applied to the student's academic history.

The Academic Fresh Start Program can only be used once, including at previous Connecticut Community College campuses, and does not apply to any completed degree or certificate. Fresh Start is exclusively for academic purposes and is not related to any/all Financial Aid guidelines regarding previous credits enrolled. Students should consult with the Financial Aid Office for such details.

Once approved as a candidate for the Fresh Start, a student must complete a minimum of 9 credits with grades of "C" or better for the Fresh Start to be applied to the entire academic history prior to the application term.

The Enrollment Services Office will document the semester of implementation and notify the student. The student is responsible for notifying the Enrollment Services Office once they have completed the required 9 credits so that the pending Fresh Start can be applied to the student's academic record.

CHANGE OF MAJOR

Students will find the "Change of Major" form through [myCTState](#), the information portal for CT State students, faculty, and staff. Students can access a variety of enrollment forms, as well as the status of financial aid, search for courses, register for classes, access student orientation, access college email, complete coursework in Blackboard, manage college finances, with one single sign-on.

GRADUATION CREDIT VARIANCE PROCEDURE FOR LEGACY STUDENTS

Purpose:

To hold harmless all students who complete legacy Connecticut community college degree or certificate requirements but, due to credit discrepancies solely created through the curriculum alignment process, are missing one or more credits to graduate from an equivalent CT State Community College ("CT State") degree or certificate program.

Conditions:

For any student who CT State has determined meets all requirements of a legacy Connecticut community college degree or certificate program, but does not meet the minimum CT State credit threshold required for the equivalent aligned degree or certificate, the following criteria must be met prior to the awarding of the credential:

- The student was previously enrolled in an equivalent degree or certificate program at a legacy Connecticut community college
- The student meets the minimum number of credits required for graduation from the legacy degree or certificate program
- The student has met the required outcomes of the legacy degree or certificate program
- The minimum number of credits completed for a degree equals 60 credits or more
- The student has met all other CT State Community College requirements for graduation

Selective admissions or specialized accreditation programs will be required to follow accrediting agency standards regarding credit variances.

GRADUATION HONORS

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

Summa Cum Laude for students with a 3.9 - 4.0 grade point average

Magna Cum Laude for students with a 3.7 - 3.89 grade point average

Cum Laude with a 3.4 - 3.69 grade point average

All graduation honors are recorded on the student's academic transcript. Students with an Incomplete grade on their transcript at the time of graduation may become eligible retroactively for graduation honors upon completion of the course requirements. Such recognition shall appear on the transcript, provided that the student has earned the required grade point average.

EARNING MULTIPLE ASSOCIATE DEGREES

Earning a Second Associate Degree

A student may earn a **second** Associate degree under the following circumstances:

- All program requirements are met for both degrees.
- The residency requirement of one-quarter (25%) of the complete degree is met for any degree earned at Connecticut State Community College
- The second degree includes a minimum of 15 credits which are different from the first degree
- If both degrees are to be earned at Connecticut State Community College, the student has earned a minimum of 75 credits and has met the residency requirement within each degree.

Earning More Than Two Associate Degrees

Any request to earn more than two Associate Degrees requires approval of the Campus Dean prior to the program being added to the student's record. Additional degrees must meet the following criteria:

- All program requirements must be met for each degree earned.
- The additional degree must be 15 credits different from any other degree earned (three Associates degrees are a minimum of 90 total credits, etc).
- The residency requirement of one-quarter (25%) of any complete degree is met for any degree earned at Connecticut State Community College.
- No two degrees can be a part of the same group of options under a parent degree.

Discipline Groups Limited to One Associate-level Credential

Per Board of Regents Policy: *completion of the requirements of an additional program option under the same parent degree does not constitute a different degree.*

This policy applies in these disciplines:

Automotive Technology	Early Childhood Education	Computer Information Systems	New Media Production
Business Administration	Environmental Science	Computer Science	Technology Studies
Business Office Technology	Graphic Design	Criminal Justice	Theater
Communication	Human Services	Cybersecurity	Visual Arts

A detailed list of affected programs is available on the [Academic P&P: Parent Degrees and Their Options](#) page of this catalog. While multiple associate degrees may not be earned in these areas, many offer credit certificates that can be earned alongside the chosen Associate degree.

GRADUATION

Requirements

Candidates for an Associate Degree at CT State Community College shall have successfully completed the following requirements*:

- Minimum of 60 credits
- Min of 25% of credits completed at CT State
- Overall GPA 2.0
- Completion of 21-credit General Education Core
- Completion of program requirements as proscribed by the department

Candidates for a Credit Certificate at CT State shall have successfully completed the following requirements*:

- Min of 25% of credits completed at CT State
- Overall GPA 2.0
- Completion of program requirements as proscribed by the department

These requirements are college-wide minimums. Programs with specialized accreditations, endorsements or other standards may have additional graduation requirements which are described in the College Catalog or Program Handbook.

Graduation Application

Students will find the "Graduation Application" form through myCTState, the information portal for CT State students, faculty, and staff. The application should be submitted in the term when a student is registered for their final requirements for the relevant certificate or degree program. This form can also be obtained through any campus-based enrollment offices or through the Guided Pathways advisors.

EXPECTATION OF ACADEMIC INTEGRITY

All colleges and universities have an expectation that the work done by students and faculty will be conducted honestly and fairly. Maintaining this academic integrity is central to a successful learning environment. It is important for members of the community to understand and avoid actions that are considered academic misconduct.

Academic misconduct includes, but is not limited to, plagiarism and all forms of cheating. Students are expected to do their own work on assignments, laboratory exercises, quizzes, examinations, and any other academic work.

Plagiarism is defined as the submission of work by a student for academic credit as one's own work of authorship which contains work of another author (whether purchased, borrowed, or otherwise obtained, from any source, including the Internet) without appropriate attribution, either intentionally or unintentionally.

Cheating includes, but is not limited to: (i) use of any unauthorized assistance in taking quizzes, tests or examinations; (ii) use of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems or carrying out other assignments; (iii) the acquisition, without permission, of tests or other academic material belonging to a member of the College faculty or staff or any other individual or entity; (iv) falsifying laboratory results or other data; (v) submitting, if contrary to the rules of a course, work previously presented in another course; (vi) knowingly and intentionally assisting another student in any of the above, including assistance in an arrangement whereby any work, classroom performance, examination, or other activity is submitted or performed by a person other than the student under whose name the work is submitted or performed; and (vii) engaging in any other behavior specifically prohibited by a faculty member in the course syllabus.

Unauthorized recording or transmissions includes, but is not limited to, the use of any electronic media or device for the transmission and/or recording of class material, unless authorized by the instructor.

Faculty can assign a grade of "F" to any student found guilty of academic misconduct. Such an "F" cannot be overridden by a student-initiated "W" (withdrawal from the specific class or withdrawal from all classes). If a student is found to have multiple infractions, a stronger penalty may be observed. Academic dishonesty can also result in other disciplinary sanctions as defined in the CSCU Student Code of Conduct.

Academic dishonesty also includes the unauthorized, undisclosed use of generative artificial intelligence (AI) to complete classwork.

ACADEMIC RESOURCES

COLLEGE & CAREER SUCCESS

Please consult the complete [College & Career Success Policy](#) for additional detail. See below for detailed information on the course CCS 1001 referenced in the policy.

The Board of Regents for Higher Education directed the Connecticut State Community College, in conjunction with the CSCU System Office through the leadership of the CSCU Provost and Senior Vice President for Academic and Student Affairs, to:

- Require all Connecticut State Community College programs of study to include the three (3) credit CCS 1001 which is focused on college success and career exploration.
- Require all degree-seeking students to enroll in CCS 1001 within their first nine (9) credits.
- Ensure that CCS 1001 includes a component that meets the general education core diversity requirement, with the acknowledgement that diversity topics should ideally be embedded throughout the General Education core and across the curriculum.
- Ensure that CCS 1001 fulfills one of the general education core competencies.
- Make recommendations regarding which programs of study might add CCS 1001 as an exception to normalization, in accordance with BOR policy.
- Provide guidance regarding which circumstances allow a student to request exemption from taking CCS 1001 with final decisions on exemptions made by campus academic leadership.
- Ensure that CCS 1001 is regularly updated to align with the latest research and evidence from the field regarding successful first year experience courses, noting that current research demonstrates that the most successful first year experience courses use pedagogies that promote learning-for-application, use equity-minded pedagogies and inclusive formats, give instructors the tools and structural supports to teach effectively, and substantively link the course to other academic courses to improve transfer of learning.
- Provide administrative oversight of CCS 1001 to ensure consistency of delivery and outcomes.

CCS 1001 - College & Career Success

Credits: 3

This course prepares students for success in college and beyond. Students will develop self-awareness and an understanding of how to navigate college, value diversity, develop skills and strategies for success, and explore career options. Essential academic skills including information literacy, critical thinking, and effective communication will be addressed. By the end of this course, students will create a personalized academic and career success plan.

Prerequisite: Must be eligible to take intensive/developmental-level English class ([ENG 0960](#), or [ENG 0930](#)) or higher. [ESOL 1302](#) or higher or recommendation of ESOL coordinator.

General Education Code: Continued Learning/Information Literacy (CLIX)

Previous CCS* 101, IDS* 105, IS 103, CSS* 101

Student Exemption for CCS 1001 effective Fall 2023

The exemption only applies to two student populations: **LEGACY** and **TRANSFER-IN** students. If a student is eligible for an exemption, the student can meet with their advisor and/or Program Coordinator for substitution guidance. Aside from these two student populations, all students will be required to take CCS 1001 starting in Fall 2023. Please see the [Student Exemption Procedure](#) for full details.

Legacy Students:

A "legacy student" is a student who was enrolled in a Connecticut community college prior to Fall 2023 but did not complete a degree program, and is now enrolling in a CT State Community College degree program.

If a student has completed 24 or more college-level credits and has not taken an equivalent course (outlined in the exemption), a student will be eligible* for a course substitution.

If a student has completed any of the outlined 1 or 1.5 credit courses (as listed in the exemption) at the CT Community Colleges, the CCS 1001 requirement may be waived, and the student will be eligible* for a course substitution.

If a student has completed *CCS 101 College & Career Success* at any of the colleges prior to Fall 2023, that course will fulfill the CCS 1001 requirement in CT State programs.

Transfer-In Students:

If a student has completed an equivalent 3 credit course at an accredited college or university with a C- or higher, that course will be transferred in and will fulfill the CCS 1001 requirement.

If a student has NOT completed an equivalent 3 credit course at an accredited college or university but has 24 or more transferable credits with a C- or higher, the student will be eligible* for a course substitution of CCS 1001.

**Please note that eligibility does not mean that a student is required to seek a substitution for CCS 1001. In many cases, a student will benefit from taking CCS 1001 and this option needs to be discussed through the advising process.*

HONORS PROGRAMMING

CT State Honors Program

The **Honors Program** at CT State provides students with academic enrichment to supplement their associate degree program. Throughout the cohort-based program, Honors students hone the academic, professional and interpersonal skills necessary for transfer and future academic and career success. Honors students benefit from a better teacher-to-student ratio, close faculty mentoring, special programming, independent study opportunities, and access to scholarships and unique opportunities (e.g., Honors Program students can take courses at four-year institutions in CT at no cost). As a result, most Honors Program students transfer to competitive four-year institutions (e.g., Wesleyan, Yale, Vanderbilt, NYU, Amherst College, UConn, etc) with significant scholarships.

The Honors Program is flexible enough to fit with most degree programs and students can use Honors Program courses to fulfill general education requirements. An Honors Program is offered on several CT State campuses. Students can apply for acceptance into the Honors Program on any campus that has one even if it is not their home campus and students do not have to switch their home campus if accepted into an honors program on a different campus. More information as well as the application can be found at www.ctstate.edu/honors

Additionally, the Business Administration program offers an honors degree. This program focuses on the business core as well as an emphasis on critical Math curricula. A minimum GPA of 3.4 is required for this option.

Honors Courses

CT State offers students the opportunity to apply to take an honors course (e.g., Composition Honors, General Psychology Honors, U.S. History Honors) without being a member of the Honors Program. Honors courses can be found in the course catalog with the designation "H" after the course code (e.g. ENG 1010H - Composition Honors). Students must have a minimum 3.25 CT State GPA to be accepted into an honors course. Interested students can email the Honors Program coordinator on the campus at which the course of interest is being offered. More information can be found at www.ctstate.edu/honors

ACADEMIC ADVISING

Academic advising assists students in establishing and achieving their academic, career, and transfer goals. CT State students have access to both trained professional advisors (Guided Pathways Advisors) as well as faculty content experts (Faculty Advisors). Students should meet with their advisor(s) at least once per semester and more often as needed. General information about advising and campus contacts are available on the [CT State Advising](#) webpage. Students are assigned specific advisors during their first semester; these are noted on their degree audits in the [myCTState portal](#).

Faculty Advising

All full-time faculty engage in academic advising and provide advising to students within their specific program(s) or discipline. Faculty are the foremost experts on their specific discipline or program and play an integral role in supporting the student's academic, career, and transfer planning. Students should connect with their assigned faculty advisor to discuss program options and details about the curriculum, student learning outcomes, and specifics of the degree or certificate program.

Guided Pathways Advising

Mission Statement

All community college students, from initial registration to completion, are supported by Guided Pathways Advisors to establish academic and career goals, receive proactive and individualized academic and holistic supports that result in the timely and equitable completion of credentials that lead to employment, transfer, and family sustainable wages.

Vision

Guided Pathways Advising is a dynamic, student-centered, holistic approach grounded in student development and learning. Guided Pathways Advisors align advising practices with the diverse and unique needs of each individual student in their caseload. GPAs advise, advocate, mentor, support, and coach their caseload to reach their individual goals.

Guiding Principles

- Students receive deliberate and personalized supports necessary to contribute to their success inside and outside the classroom.
- Guided Pathways Advisors pledge to empower students and staff to advance racial, social, and economic justice while identifying and responding to student barriers.
- Student voices are amplified by honoring lived experiences and by highlighting their unique assets to develop meaningful advising relationships.

INSTRUCTIONAL METHODS

Connecticut State Community College offers the following course types to address learning, scheduling, and safety considerations for all in our educational community.

Hyflex (FLEX)

This course delivery method provides students with the most flexibility. In the Hyflex course design, students can:

- Choose to attend face-to-face, classroom- based synchronous class sessions (TRAD), or
- Choose to participate in synchronous live remote online sessions presented via WebEx, Teams, or Collaborate, without physically attending class (LRON), or

Complete part, or all, of the course instruction asynchronously, without attending scheduled live sessions (either on-ground or remotely) (ONLN).

Hybrid (HYBR)

Combines synchronous on-ground or remote instruction and asynchronous online instruction. *This course method is for courses that have required hands-on components that cannot be accomplished online or asynchronously, for example: labs,*

manufacturing, clinical, technology, or digital arts courses. Students will be required to attend scheduled class sessions on-ground or remotely as noted in the schedule.

Live Remote On-Ground (LRCR)

This course delivery method *requires students to attend a synchronous class at a specified time and day as noted in the schedule but allows students to take a course partially onsite and partially live remote online* (via video conference). Students will have the option of attending class on-ground or continuing to participate via live online remote. Classes may make use of Blackboard, but instruction is delivered in real-time.

Live Remote Online (LRON)

Live synchronous online sessions are held at specified times using Teams/WebEx/Collaborate. Classes may make use of Blackboard, but instruction is delivered in real-time as noted in the schedule.

Online with Campus Requirements (OLCR)

All instruction is asynchronous like ONLN but requires a synchronous, on-ground orientation and/or real-time proctored assessments.

Online (ONLN)

Courses in which *all instruction and assessment is delivered asynchronously through Blackboard*-often in conjunction with publisher-based content. These courses include discussion boards, assignments, projects, assessments, etc. Courses designated as ONLN have completely asynchronous instruction, as well as asynchronous assessment.

Traditional (TRAD)

Includes *synchronous on-ground classroom-based* instruction, as well as sections coded with other instructional codes for classroom-based instruction like Lab, Clinical, Co-op. Classes may make use of Blackboard, but instruction is delivered in real-time as noted in the schedule.

Additional details about these instructional methods and the technology that students need to have for each are available in this [specification document](#).

TUTORING SERVICES

Tutoring is available to CT State students at their home campus or any campus where they are enrolled in classes. The [Tutoring and Academic Support](#) webpage can connect students to all campuses and their appointment scheduling tools. Additionally, there are more than 30 online student success webinars available at any time.

DEGREE AUDITS

Inside the [myCTState](#) portal, students have access to an audit which tracks their progress toward degree completion. The audit tracks degree requirements, including general education and program courses fulfilled and GPA. Students' assigned advisors and other information about their account status are also list on the audit.

POLICY RESOURCES FOR STUDENTS

Student Code of Conduct

Academic institutions exist for the transmission of knowledge, the pursuit of truth, the development of students, and the general well-being of society. In line with this purpose, the Board of Regents for Higher Education ("BOR") in conjunction with the Connecticut State Colleges and Universities ("CSCU") has the duty to protect the freedoms of inquiry and expression, and furthermore, has the responsibility to encourage all of its members to develop the capacity for critical judgment in their sustained and independent search for truth. CSCU has certain self-defined institutional values. Principal among these values is respect for the safety, dignity, rights, and individuality of each member of the CSCU Community. The opportunity to live, study, and work in an institution which values diverse intellectual and cultural perspectives and encourages discussion and debate about competing ideas in an atmosphere of civility is a basic component of quality higher education.

All members of CSCU must at all times govern their social and academic interactions with tolerance and mutual respect so that the students who pass through a CSCU door are enriched by these experiences and are prepared for full and enlightened participation in a multi-cultural society. Because of the BOR's and CSCU's commitment to principles of pluralism, mutual respect, and civility, certain activities are not acceptable on CSCU campuses. Acts of intolerance, of hatred or violence based on race, religion, sexual orientation or expression, disability, gender, age, or ethnic background are antithetical to the BOR's and CSCU's fundamental principles and values. It is the BOR's and CSCU's responsibility to protect our students' right to learn by establishing an environment of civility. The disciplinary process is intended to be part of the educational mission of CSCU. Student disciplinary proceedings are not criminal proceedings and are not subject to court rules of procedure and evidence.

The Board of Regents has a detailed [Student Code of Conduct](#) which provides further detail and applies systemwide. Procedures for community college students differ from those procedures applicable to either the universities or Charter Oak State College. This is due to the environmental, cultural and administrative differences within the types of the institutions comprising CSCU. Procedures for addressing allegations and sanctions regarding academic misconduct (as defined in Section I.D.1) for Community College Students as set for in this Section III of the Code.

Title IX

Title IX (Title Nine) of the Education Amendments of 1972 is a federal law that protects all students attending or accessing services at an educational institution that receives federal funding. It allows all students to attend school in an environment free of harassment, gender-based violence and discrimination. Violations of your rights under Title IX would be sexual assault, sexual harassment, sex discrimination or gender discrimination. At CT State Community College we take our responsibility to address and protect these rights very seriously. For information regarding the nondiscrimination, disability, and Title IX policies/procedures, contact: John-Paul Chaisson-Cardenas, Vice President for Diversity, Equity and Inclusion, CT State Community College, 860-612-7056, jchaisson-cardenas@commnet.edu.

In addition to Dr. Chaisson-Cardenas, resources are available at each campus location to support students, receive complaints, help students navigate processes and answer questions.

- [Understanding Title IX at CT State](#)
- [Community and Campus-Based Resources](#)
- [CSCU System-wide Resources](#)

Confidentiality of Student Education Records (FERPA)

The federal Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. Broadly, these are:

- The right to inspect and review the student's education records within 45 days of the day the College or University receives a request for access.
- The right to request amendment of an education record that the student believes is inaccurate.

- The right to provide written consent before the College or University discloses personally identifiable information (PII) from the student's education records, except to the extent that FERPA authorizes disclosure without consent.
- The right to refuse to permit the College or University to release Directory Information except in certain circumstances.
- 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.

A subset of student information, called "Directory Information," is designated by the Board of Regents as permissible to release under specific circumstances as described in full text of the policy.

Designated Directory Information, procedural details (including how to file a complaint), and exceptions to the above can be found in the full [CSCU Board of Regents Policy 2.2](#).

Online Students' Rights

If you are enrolled in distance education at a participating State Authorization Reciprocity Agreement (SARA) institution you are afforded certain rights under this agreement including the right to file complaints after exhausting the institution's internal grievance procedures. Complaints that will be considered under this agreement can include discrimination, financial issues, program design and academic support structures. Issues regarding student life, such as discipline, grading, etc., fall solely within the purview of the institution and are not generally investigated. Full details of this scope of this agreement and related processes are available at the [CSCU System website](#).

Photo and Video Policy

CT State's Strategic Marketing and Communications department, as well as other areas of the college, often takes or commissions photos and videos of students, faculty and staff, visitors and event attendees. These images are taken in public spaces on a campus, as well as in classrooms and labs. CT State reserves the right to use these photographs/videos as part of its publicity and marketing efforts. Students who enroll in CT State courses and community members attending CT state events at any of its locations do so with the understanding that these images might include them and might be used in college publications, both printed and electronic; social media; print and digital advertising; direct mail; electronic media and other forms of promotion.

Responsible Use of Information Technology

CT State and the CSCU System build and maintain an Information Technology infrastructure which is essential to the robust educational and professional environment of the institution. Members of the college community share in the benefits and responsibilities which accompany this technology. These responsibilities are enumerated in [the CSCU Acceptable Use Policy - IT](#)

Board of Regents Policy Repository

The Board of Regents for Higher Education bears responsibility for approving the broad policies which shape our educational communities and ensure compliance with federal and state regulations They maintain a [full repository of these policies](#).

Policy Topics Include:

- Academic Affairs
- Student Affairs
- Finance, Facilities and Administration
- Human Resources
- General Board Policy
- System Organization and Governance
- Title IX

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Arts & Humanities

Art Studies - CSCU Transfer Degree, AA (ARTT-AA-TAP)

This program is a CSCU Pathway Transfer Degree in Visual Art, A.A. that is intended for Connecticut Community College students to transfer to Connecticut State Universities (Southern CT State University, Central CT State University, Eastern State University, Western State University) and Charter Oak State College without either losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline.

Learning Outcomes:

- **Technical Competency**
Introduce students to traditional and contemporary visual art media, methods, materials, and processes
- **Communication Competency**
Students begin to learn to communicate ideas about the visual arts through oral, visual and written expression, using appropriate terminology.
- **Contextual Analysis**
Students will come to understand, discuss and critique diverse contemporary and historical perspectives in visual art
- **Conceptual Analysis**
Students are introduced to how the elements and principles of art and design transform ideas into visual expression
- **Professional Practice**
Students are introduced to professional, ethical, and collaborative behaviors as they relate to a variety of career and studio environments

Framework Courses (30-33 credits)

- ENG 1010 - Composition *Credits: 3*
- Elective QUAX - Quantitative Reasoning Course *Credits: 3-4*
- ARTH 1001 - Global Art History Prehistory to 1500 CE *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30-34 credits)

- ART 1110 - Drawing I *Credits: 3*
- ARTH 1002 - Global Art History 1500 CE to present *Credits: 3*
- ART 1210 - Two-Dimensional Design *Credits: 3*
- **OR** ART 1220 - Three-Dimensional Design *Credits: 3*
- **OR** ART 1310 - Sculpture I *Credits: 3*

Restricted Electives

Select 2- 3 courses from the list below with no more than one course from a single group. *Credits- 6-9*

- ART 1120 - Drawing II *Credits: 3*
- ART 1770 - Printmaking I *Credits: 3*
- ART 1250 - Color Theory *Credits: 3*
- **OR** ART 1510 - Painting I *Credits: 3*
- GRA 1501 - Graphic Design I *Credits: 3*
- **OR** GRA 2300 - Digital Imaging I *Credits: 3*

- **OR** GRA 1101 - Introduction to Computer Graphics *Credits: 3*
- **OR** ART 2810 - Digital Painting & Drawing *Credits: 3*
- ART 1310 - Sculpture I *Credits: 3*
- **OR** ART 1610 - Ceramics I *Credits: 3*
- **OR** ART 1630 - Ceramic Handbuilding *Credits: 3*
- ART 1410 - Darkroom Photography I *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*

Open Electives

This will be 3 or 4 courses depending on the choices made for the Restricted Electives above. *Credits: 9-12*

You are free to choose any courses at or above 1000-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 for your program. You can also complete other General Education requirements for CCSU, SCSU, WCSU and COSC- but not more than two requirements for ECSU. You are encouraged to meet with your advisor to determine which courses to select.

Total Credits 60-63

Communication Studies - CSCU Transfer Degree, AA (COMM-AA-TAP)

Community College students can complete associate degree programs that transfer without hassle to all Connecticut State Universities and Charter Oak State College offering their major. Upon transfer, students are guaranteed full junior status and can complete a bachelor's degree in their major without losing any credits or be required to take any extra credits.
(<https://www.ct.edu/transfer/tickets>)

Program Objectives:

- Complete an Associate of Arts degree in Communication Studies.
- Transfer seamlessly into a Bachelor of Arts/Science degree program in Communication/ Strategic Communication/ Media Studies/ Media Arts with junior-level status in the receiving CSCU institution as part of the CSCU Transfer Tickets program.

Program Outcomes

- Describe the Communication discipline and its central questions
- Employ Communication theories, perspectives, principles, and concepts
- Create messages appropriate to the audience, purpose, and context
- Critically analyze messages
- Apply ethical communication principles and practices
- Influence public discourse

Framework Courses (30-34 credits)

- ENG 1010 - Composition *Credits: 3*
- Elective QUAX - Quantitative Reasoning Course *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4* (COMM Course Recommended)
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** COMM 1302 - Interpersonal Communication *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30 credits)

- Elective CRTY - Creativity Course *Credits: 3*
- Elective GLKY - Global Knowledge Course *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- COMM 1000 - Introduction to Communication *Credits: 3*
- COMM 1302 - Interpersonal Communication *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- Elective COMM - Directed COMM Elective *Credits: 3*
- COMM Elective *Credits: 3*
- Unrestricted Electives *Credits: 9*

Total Credits: 60-64

Communication: Digital Media Production Certificate (COMM-CC-DIG)

The Digital Media Production Certificate program provides exposure to up-to-date hardware, equipment and digital software to learn and practice basic video production, TV production, audio recording/podcasting and editing skills. It is intended for individuals with no or partial media experience who wish to experience hands-on work in the applicable fields of radio/podcasting, television or video production. Students can practice necessary skills for potential employment in various digital media agencies, stations, and social media platforms - especially those that require work in either on-camera/on-mic and/or off-camera/behind-the-scenes. Classes are highly practical and provide significant hands-on opportunities, creative real-world projects, and building a professional media portfolio.

Learning Outcomes:

- Implement creative and interpretive skills through project-based work while scripting, producing, and editing original material for radio, television, video, and social media.
- Identify and distinguish specific mass media industries, media job roles, and required media skills.
- Plan, generate, and edit written and oral materials for professional media projects.

Required Courses

- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- COMM 1612 - Audio Production *Credits: 3*
- COMM 1603 - Television Production *Credits: 3*
- COMM 1604 - Video Filmmaking *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- COMM 2512 - Screenwriting *Credits: 3*

Total Credits: 18

Communication: Human Communication, AS (COMM-AS-HUM)

Communication studies prepare students to participate in the professional, social, and civic life in an ethical, intellectually curious, and engaged manner. The discipline of communication focuses on how people use messages to generate meanings within and across various contexts, cultures, channels, and media.

Students who complete the major will have knowledge of foundational theories of communication; prevailing communication research paradigms; media industry structure and practices; prevailing criticism of media practice and performance; media influence on individuals and groups; the interplay of media systems in a global context; roles and functions of communication in interpersonal, group, organizational, and public contexts; conventions of public address and advocacy; and the impact and ethics of persuasion.

Students will be able to think critically; develop and present arguments; communicate effectively in interpersonal, group, organizational, and public contexts; and invent, arrange, and deliver effective and ethical messages via oral, print, and electronic modes.

Human Communication Option:

The Human Communication concentration prepares students to effectively collaborate in teams, clearly express ideas, as well as analyze and respond to challenging issues that arise in interpersonal, intercultural, small-group, and organizational contexts. Human Communication majors will develop strategies for communicating effectively and ethically through mediated channels. The degree provides open electives allowing students to pursue areas of interest in a range of career fields such as public relations, social media brand strategy, project management, human resources, mediation, counseling, customer service, negotiation, recruitment, administration, and freelance entrepreneurial pursuits.

Learning Outcomes:

- Describe the Communication discipline and its central questions
- Employ Communication theories, perspectives, principles, and concepts
- Create messages appropriate to the audience, purpose, and context
- Critically analyze messages
- Apply ethical communication principles and practices
- Influence public discourse

Communication General Education Core (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- COMM 1201 - Film Study and Appreciation *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Social and Behavioral Science Elective: PSY 1011, SOC 1001, HIST 1001, ANTH 1001, or ANTH 1005 *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** COMM 1302 - Interpersonal Communication *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Communication Program Core (24 Credits)

- COMM 1000 - Introduction to Communication *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** COMM 1302 - Interpersonal Communication *Credits: 3*
- COMM 1306 - Social Media in Contemporary Society *Credits: 3*
- **OR** COMM 2502 - Social Media Strategy *Credits: 3*

- COMM 1401 - Journalism I *Credits: 3*
- **OR** COMM 1601 - Digital Video Production *Credits: 3*
- **OR** COMM 1604 - Video Filmmaking *Credits: 3*
- **OR** COMM 1612 - Audio Production *Credits: 3*
- **OR** COMM 2512 - Screenwriting *Credits: 3*
- Communication Elective (any COMM) *Credits: 3*
- Open Electives *Credits: 6*

Human Communication Courses (15 credits)

- COMM 1303 - Group Communication *Credits: 3*
- COMM 1305 - Intercultural Communication *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*
- **OR** PSY 1011 - General Psychology I *Credits: 3*
- **OR** ANTH 1005 - Introduction to Cultural Anthropology *Credits: 3*
- Communication Elective (any COMM) *Credits: 3*
- Open Elective *Credits: 3*

Total Credits: 60-61

Communication: Journalism, AS (COMM-AS-JRN)

Communication studies prepare students to participate in the professional, social, and civic life in an ethical, intellectually curious, and engaged manner. The discipline of communication focuses on how people use messages to generate meanings within and across various contexts, cultures, channels, and media.

Students who complete the major will have knowledge of foundational theories of communication; prevailing communication research paradigms; media industry structure and practices; prevailing criticism of media practice and performance; media influence on individuals and groups; the interplay of media systems in a global context; roles and functions of communication in interpersonal, group, organizational, and public contexts; conventions of public address and advocacy; and the impact and ethics of persuasion.

Students will be able to think critically; develop and present arguments; communicate effectively in interpersonal, group, organizational, and public contexts; and invent, arrange, and deliver effective and ethical messages via oral, print, and electronic modes.

Journalism Option:

The Journalism AS option offers practical experience and coursework to develop students' writing and reporting skills for broadcast, print, online, and emerging media. Students will create original content for publication as well as analyze and critique mass media. Students will gain additional experience through placement in internship programs. This option prepares students for employment or transfer to a bachelor's degree program.

Program Learning Outcomes:

- Describe the Communication discipline and its central questions
- Employ Communication theories, perspectives, principles, and concepts
- Create messages appropriate to the audience, purpose, and context
- Critically analyze messages
- Apply ethical communication principles and practices
- Influence public discourse

Communication General Education Core (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- COMM 1201 - Film Study and Appreciation *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Social and Behavioral Science Elective: PSY 1011, SOC 1001, HIST 1001, ANTH 1001, or ANTH 1005 *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** COMM 1302 - Interpersonal Communication *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Communication Program Core (24 Credits)

- COMM 1000 - Introduction to Communication *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** COMM 1302 - Interpersonal Communication *Credits: 3*
- COMM 1306 - Social Media in Contemporary Society *Credits: 3*
- **OR** COMM 2502 - Social Media Strategy *Credits: 3*
- COMM 1401 - Journalism I *Credits: 3*
- **OR** COMM 1601 - Digital Video Production *Credits: 3*

- **OR** COMM 1604 - Video Filmmaking *Credits: 3*
- **OR** COMM 1612 - Audio Production *Credits: 3*
- **OR** COMM 2512 - Screenwriting *Credits: 3*
- Communication Elective (any COMM) *Credits: 3*
- Open Electives *Credits: 6*

Journalism Courses (15 credits)

- COMM 1401 - Journalism I *Credits: 3*
- COMM 2401 - Publications Workshop *Credits: 3*
- COMM 2995 - Internship *Credits: 3*

Media Production Elective - choose one

- COMM 1603 - Television Production *Credits: 3*
- COMM 1612 - Audio Production *Credits: 3*
- COMM 1604 - Video Filmmaking *Credits: 3*
- COMM 2512 - Screenwriting *Credits: 3*
- COMM 1402 - Photojournalism *Credits: 3*
- COMM 1601 - Digital Video Production *Credits: 3*

Advanced Writing Elective - choose one

- ENG 2101 - Creative Writing: Nonfiction *Credits: 3*
- COMM 1304 - Introduction to Public Relations *Credits: 3*
- COMM 1502 - Sports Reporting *Credits: 3*
- COMM 1511 - Media Writing *Credits: 3*
- COMM 2402 - Advanced Publications Workshop *Credits: 3*

Total Credits: 60-61

Communication: Media Production, AS (COMM-AS-MDP)

Communication studies prepare students to participate in the professional, social, and civic life in an ethical, intellectually curious, and engaged manner. The discipline of communication focuses on how people use messages to generate meanings within and across various contexts, cultures, channels, and media.

Students who complete the major will have knowledge of foundational theories of communication; prevailing communication research paradigms; media industry structure and practices; prevailing criticism of media practice and performance; media influence on individuals and groups; the interplay of media systems in a global context; roles and functions of communication in interpersonal, group, organizational, and public contexts; conventions of public address and advocacy; and the impact and ethics of persuasion.

Students will be able to think critically; develop and present arguments; communicate effectively in interpersonal, group, organizational, and public contexts; and invent, arrange, and deliver effective and ethical messages via oral, print, and electronic modes.

Media Production Option:

The Media Production concentration develops students' practical skills in a variety of digital media production areas such as audio, video, filmmaking, television production, journalism, and emerging media. Students will also explore and analyze media history, scriptwriting, and multimedia creation to create original content for a variety of audiences. Students will gain additional experience through placement in internship programs. This option prepares students for employment or transfer to a bachelor's degree program.

Learning Outcomes:

- Describe the Communication discipline and its central questions
- Employ Communication theories, perspectives, principles, and concepts
- Create messages appropriate to the audience, purpose, and context
- Critically analyze messages
- Apply ethical communication principles and practices
- Influence public discourse

Communication General Education Core (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- COMM 1201 - Film Study and Appreciation *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Social and Behavioral Science Elective: PSY 1011, SOC 1001, HIST 1001, ANTH 1001, or ANTH 1005 *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** COMM 1302 - Interpersonal Communication *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Communication Program Core (24 Credits)

- COMM 1000 - Introduction to Communication *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** COMM 1302 - Interpersonal Communication *Credits: 3*
- COMM 1306 - Social Media in Contemporary Society *Credits: 3*
- **OR** COMM 2502 - Social Media Strategy *Credits: 3*
- COMM 1401 - Journalism I *Credits: 3*

- **OR** COMM 1601 - Digital Video Production *Credits: 3*
- **OR** COMM 1604 - Video Filmmaking *Credits: 3*
- **OR** COMM 1612 - Audio Production *Credits: 3*
- **OR** COMM 2512 - Screenwriting *Credits: 3*
- Communication Elective (any COMM) *Credits: 3*
- Open Electives *Credits: 6*

Media Production Courses (15 Credits)

- COMM 1612 - Audio Production *Credits: 3*
- COMM 1601 - Digital Video Production *Credits: 3*
- **OR** COMM 1603 - Television Production *Credits: 3*
- **OR** COMM 1604 - Video Filmmaking *Credits: 3*
- COMM 2995 - Internship *Credits: 3*
- Digital Arts Design Elective: COMM 1501 - Visual Communication or any course from DAT, DGA, or GRA *Credits: 3*

Media Production Elective - choose one

- COMM 2401 - Publications Workshop *Credits: 3*
- COMM 1401 - Journalism I *Credits: 3*
- COMM 2512 - Screenwriting *Credits: 3*
- COMM 2513 - Scriptwriting for Media *Credits: 3*
- COMM 1601 - Digital Video Production *Credits: 3*
- COMM 1603 - Television Production *Credits: 3*
- COMM 1604 - Video Filmmaking *Credits: 3*
- COMM 1613 - Radio Production *Credits: 3*
- COMM 2601 - Advanced Digital Video Production *Credits: 3*
- COMM 2611 - Advanced Audio Production *Credits: 3*

Total Credits: 60-61

Communication: Public Relations Certificate (COMM-CC-PR)

The certificate program in Public Relations, bridging the disciplines of communication and business, is designed to appeal to several populations: new students considering a degree program in communication, employees in other areas of communication seeking retraining, and students with associate or bachelor's degrees seeking rapid certification in the skills necessary for entry-level positions in public relations. The program is designed for maximum flexibility. Students who are already proficient in specific areas of communication or technology will be able to fill in the voids in their training by customizing their courses to their individual needs. Similarly, students seeking a broad range of training in all areas relevant to public relations-including marketing, written and oral communications and effective use of social media-will achieve a generalist's knowledge.

Learning Outcomes:

- Design, implement and evaluate a marketing/PR campaign.
- Write for internal and external publications with an understanding of the needs of the target audiences.
- Establish media contacts.
- Serve as an effective spokesperson for an organization or business.
- Apply ethical principles to decision making and crisis management.
- Understand the role of the public relations practitioner within the context of mass communication.
- Understand the impact of print and broadcast media on the practice of public relations

Required Courses

- ENG 1010 - Composition *Credits: 3*
- COMM 1306 - Social Media in Contemporary Society *Credits: 3*
- COMM 1401 - Journalism I *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- COMM 1304 - Introduction to Public Relations *Credits: 3*

Total Credits: 18

Communication: Visual Communication Certificate (COMM-CC-VIS)

The Visual Communication Certificate program provides a foundation in the technical and aesthetic aspects of visual media and communication technology. The program prepares students for employment in areas of graphic design, social media, and various new media. The program also serves as skill expansion credential for professionals working in public relations, journalism, library, development, or other related specialties that interface with various target audiences.

Learning Outcomes:

- Design, implement and evaluate visual messages for a variety of target audiences.
- Apply inclusion practices in the design and dissemination of word-based and visual information.
- Understand principles of communication effectiveness.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- Fine Arts Elective (photography recommended) *Credits: 3*
- COMM 1501 - Visual Communication *Credits: 3*
- COMM 1306 - Social Media in Contemporary Society *Credits: 3*
- **OR** COMM 2502 - Social Media Strategy *Credits: 3*
- COMM 1603 - Television Production *Credits: 3*
- COMM OR DGA Elective *Credits: 3*

Total Credits: 18

Dance Certificate (DANC-CC)

The field of dance education is taking an exciting step forward in Connecticut's public schools. An increasing number of school systems have been including dance and movement education in their grades K - 12 arts curriculum. To support this activity, and to comply with the requirements of federal education legislation known as "No Child Left Behind" (NCLB), the Connecticut State Department of Education worked for several years with educators and the dance community to develop guidelines for teacher certification in dance, thereby ensuring that well-prepared educators deliver in-school dance programs.

Per federal law, all public-school teachers in core subjects are required to be "Highly Qualified," i.e., certified in the subject area they teach. Certification is literally a "license" to be a public-school teacher within a state. Because the NCLB law includes the arts among the core subjects, dance teachers will be required to be certified in dance, just as math teachers must be certified in math, science teachers certified in science, and art teachers in art. By implementing dance certification, Connecticut joins the vast majority of other states that offer teacher certification in dance. In order to be qualified for public school teacher certification, an applicant must have successfully completed coursework in each of the following: Applied study in Ballet; Two applied courses in Modern Dance; applied study in a third folkloric dance form (e.g., Ballroom, Tap, Jazz, or African); choreographic principles; dance history and cultures; applied Kinesiology/Anatomy; Nutrition in a wellness or fitness context; and Dance Education methods/curriculum. Students completing this Dance Certificate will have met each of these requirements.

This certificate in Dance allows students the opportunity to explore dance through seminar, lecture, field work (attending live performances), and lab (dance exercises) participation. The Dance certificate enhances technique, broadens one's repertoire, builds choreographic options and production skills, expands artistic training, and provides a strong foundation in all aspects of dance. This program is tailored for individuals who seek employment or those presently working in studio, theatre, education, non-profit, or community service environments, students wanting to broaden their foundation of dance foundation, and for individuals working in the arts or entertainment industries. Graduates are not only well prepared for employment, but confident in his/her participation on the arts especially dance. It is recommended that students entering this program of study should have a familiarity with dance and the basic foundations of dance.

Note: To be qualified for public school teacher certification, an applicant must hold a college degree from an accredited institution. A Formal Pathways to Dance Certification K-12 has been designed for the public-school teacher wishing to obtain the State of Connecticut's certification. This Dance certificate may be used towards that K- 12 certification.

Learning Outcomes:

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

- Demonstrate mastery skills and techniques necessary for studio and/or theatre dance.
- Execute a comprehensive historical repertoire of various dance genres using appropriate movement vocabulary.
- Critically assess and demonstrate dance as a means of communication and reflection of one's society.
- Demonstrate critical thinking and reflection when assessing the movement capabilities of collaborative performers and appraise and adjust their teaching and performing techniques accordingly.
- Execute production skills from the choreographic process to the performance.
- Identify resources for the dance instructor and performer, including texts and music.
- Apply French movement terminology when discussing dance.

Required Courses

- DANC 1001 - History and Appreciation of World Dance *Credits: 3*
- DANC 1002 - Ballet: Renaissance to Romantic *Credits: 3*
- DANC 1011 - Jazz I: Afro-American/Caribbean *Credits: 3*
- **OR** DANC 1111 - Jazz II: Broadway and Film *Credits: 3*
- **OR** Complete all 1-credit classes below for a total of 3 credits:
 - DANC 1009 - Ballroom Dance
 - DANC 1010 - Tap

- DANC 1031 - Contemporary African Dance
- DANC 1013 - Modern Dance: Early 20th Cent-1940s *Credits: 3*
- DANC 2002 - Ballet II: Classical to Contemporary *Credits: 3*
- DANC 2013 - Modern Dance II: Second Generation America *Credits: 3*
- DANC 1018 - Dance Pedagogy for Young Children *Credits: 3*
- DANC 1075 - Kinesiology for Dancers *Credits: 3*
- HPE 1000 - Introduction to Wellness *Credits: 3*
- **OR** EXSC 2010 - Sports Nutrition *Credits: 3*

Total Credits: 27

Dance, AA (DANC-AA)

Students enrolled in this degree program are provided a broad base of cultural and historical knowledge about dance and dance technique, pedagogy, and repertoire in the diverse genres of dance. The creative process is fostered through inclusion and learning opportunities in production skills, the art of choreography, and performance. This foundation prepares students to further their study of, teach, choreograph, and/or perform dance. Students must be physically capable of participating in studio courses. Students explore dance through seminar, lecture, fieldwork (attending live performances), and participation in lab (dance exercises).

Learning Outcomes:

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

- Demonstrate and execute warm-up exercises specific to all dance forms (ballet, modern, ethnic, jazz).
- Execute a desirable physical activity, preparation, and training for the arts as a dancer, actor, or/and musician intellectually.
- Execute a variety of choreographic styles to enhance and broaden movement.
- Use choreographic vocabulary appropriately, utilizing time, space and energy.
- Demonstrate kinesthetic awareness, mental and physical coordination, rhythmic sensitivity, and musicality.
- Identify dancers and choreographers, describe their contributions to the field of dance, and discuss their processes in creating dance.
- Choreograph and perform movement and demonstrate performance skills of concentration, projection, characterization, expression and ensemble work.
- Demonstrate the ability to schedule and conduct rehearsals, and produce a performance that includes staging, lighting, costuming, decor, and publicity.

General Education Courses (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- **OR** THR 1101 - Introduction to Theater *Credits: 3*
- **OR** THR 1110 - Acting I *Credits: 3*
- **OR** MUS 1004 - World Music *Credits: 3*
- **OR** DANC 1115 - Dance as Cultural Expression *Credits: 3*
- BIO 1011 - Introduction to Nutrition *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- **OR** ANTH 1001 - Introduction to Anthropology *Credits: 3*
- **OR** SOC 1001 - Principles of Sociology *Credits: 3*
- COMM 1000 - Introduction to Communication *Credits: 3*
- **OR** ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- THR 1102 - Theater History *Credits: 3*
- **OR** ANTH 1005 - Introduction to Cultural Anthropology *Credits: 3*
- **OR** HLTH 1051 - Health and Wellness Promotion *Credits: 3*
- DANC 1001 - History and Appreciation of World Dance *Credits: 3*
- DANC 1002 - Ballet: Renaissance to Romantic *Credits: 3*
- DANC 1013 - Modern Dance: Early 20th Cent-1940s *Credits: 3*
- DANC 1011 - Jazz I: Afro-American/Caribbean *Credits: 3*

- DANC 2002 - Ballet II: Classical to Contemporary *Credits: 3*
- DANC 2013 - Modern Dance II: Second Generation America *Credits: 3*
- DANC 2021 - Dance Repertory/Ensemble I *Credits: 3*
- DANC 1111 - Jazz II: Broadway and Film *Credits: 3*
- DANC 2022 - Choreographic Principles/Ensemble I *Credits: 3*
- DANC 1018 - Dance Pedagogy for Young Children *Credits: 3*
- DANC 1075 - Kinesiology for Dancers *Credits: 3*
- DANC 2121 - Dance Repertory/Ensemble II *Credits: 3*
- **OR** DANC 2122 - Choreographic Principles/Ensemble II *Credits: 3*
- **OR** 3 total credits from among the 1-credit course options *Credits: 3*
 - DANC 1009 - Ballroom Dance
 - DANC 1010 - Tap
 - DANC 1014 - Hip Hop and Dance
 - DANC 1031 - Contemporary African Dance
 - HPE 1026A Pilates
 - DANC 2009 - Ballroom Dance II
 - DANC 1061 - Yoga I

Total Credits: 60-61

Deaf Studies Certificate (DFSD-CC)

The Deaf Studies Certificate is designed for those students whose goal is to work with Deaf people in various entry level jobs. This one-year program provides students with advanced American Sign Language (ASL) skills and an in-depth understanding of the Deaf Community focusing on a bilingual-bicultural approach. Students will learn the foundations of ASL in the classroom. However, a key component of developing proficiency in ASL is frequent interaction with Deaf ASL signers. Therefore, as part of their course requirements, students are required to interact with signing Deaf people at various events both virtual and in person.

Learning Outcomes:

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

- Communicate at an advanced level using American Sign Language.
- Demonstrate an in-depth understanding of and sensitivity to American Deaf culture.
- Describe the major characteristics of ASL literature.
- Understand the linguistical aspects of American Sign Language.
- Educate others with information and available resources for people who are Deaf and/or Hard of Hearing.

Career Opportunities:

- Teacher's aide
- Residential program counselor
- Job coach
- Communication specialist
- Deaf community advocate
- Paraprofessional with faculty who are Deaf

Required Courses

- ASL 1001 - American Sign Language I *Credits: 3*
- ASL 1002 - American Sign Language II *Credits: 3*
- ASL 2001 - American Sign Language III *Credits: 3*
- ASL 2002 - American Sign Language IV *Credits: 3*
- ASL 2005 - Linguistics of American Sign Language *Credits: 3*
- DSC 1001 - Visual Gestural Communication *Credits: 3*
- DSC 1012 - Deaf Communities: Facts and Perspectives *Credits: 3*
- DSC 2095 - Field Experience in Deaf Studies *Credits: 3*

Total Credits: 24

Digital Arts Technology, AS (DATX-AS)

The Digital Arts Technology (DAT) program provides students with an in-depth understanding of digital media creation and production. The aim of the program is to produce digital media designers for jobs in training, marketing, advertising, web development, broadcasting, audio production, graphic art, production and electronic publishing. Digital artists have become an integral part of the mainstream communications medium; positions in digital media design and development exist in business, industry, government, education, and entertainment.

NOTE: Can be a stand-alone degree or the directed electives allow for completion of one of six certificates embedded into the degree.

- Animation and Motion Graphics
- Audio Production
- Trending Technology in Digital Media
- Digital Graphics for Print and Screen
- Video Production
- Technical Communication

Learning Outcomes:

- Implement efficient time management and organizational practices.
- Effectively communicate and function both independently and as part of a team.
- Develop the ability to adapt and learn quickly.
- Utilize the phases of the project development life cycle to assist in the design, production, editing, and completion of original projects.
- Synthesize and apply the processes involved in transforming a concept to a final product.
- Complete significant projects terminating in deliverable software/media products.

The Digital Arts Technology A.S. degree provides technical experience to students seeking enhanced skills for employment in related areas. Students may enroll full or part-time; and may specialize in one of six areas of concentration earning a certificate and the AS degree. Students transfer to CT State Universities and private 4-year schools in-state, and many out of state universities. Courses in this program require access to a computer studio lab or a student must have a computer with specialized software (including Adobe Creative Cloud, Autodesk's Maya, Pro-Tools, and others as industry dictates) to take the courses remotely.

DAT program courses are offered in the traditional classroom setting; via live broadcast, allowing students to take the courses remotely.

General Education Courses (30-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100
OR MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective ORAX - Oral Communication Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (30 credits)

- DAT 1001 - Introduction to Digital Arts *Credits: 3*
- DAT 1111 - Foundations of Web Development *Credits: 3*
- DAT 1211 - Digital Graphics *Credits: 3*
- DAT 1411 - Video Foundations *Credits: 3*
- DAT 2990 - Digital Arts Project *Credits: 3*
- ART 1210 - Two-Dimensional Design *Credits: 3*
- **OR** DAT 1002 - Introduction to Photography *Credits: 3*
- **OR** DAT 1000 - Graphic Design for DAT *Credits: 3 (Or Equivalent Course)*
- Designated Electives - 3 Courses (see advisor) *Credits: 9*

Choose One 2000-level DAT Elective:

- DAT 2131 - Multi-platform Web Development *Credits: 3*
- **OR** DAT 2411 - Video Editing and Enhancements *Credits: 3*
- **OR** DAT 2421 - Motion and Special Effects *Credits: 3*
- **OR** DAT 2211 - Image Compositing *Credits: 3*
- **OR** DAT 2321 - 3D Animation *Credits: 3*
- **OR** DAT 2221 - Vector Imaging *Credits: 3*
- **OR** DAT 2535 - Studio and On-Site Recording *Credits: 3*
- **OR** DAT 2145 - Programming for the Arts *Credits: 3*

Total Credits: 60-64

Digital Arts Technology: Animation & Motion Graphics Certificate (DATX-CC-ANM)

Students who complete the Animation & Motion Graphics Certificate will be able to design two and three-dimensional digital animation sequences, special effects, and interactive media assets for use in advertising, marketing, business and media industries. Certificate credits also apply to the Digital Arts Technology degree program and for transfer to BA/ BS programs at other colleges.

Learning Outcomes:

- Demonstrate efficient time management and organizational practices.
- Practice effective communication both independently and as part of a team.
- Recognize and use standard animation production workflow to facilitate project completion.
- Apply industry-standard techniques and tools to complete professional level animation components.
- Create state-of-the-art special effect techniques used in film and video.
- Complete significant projects resulting in a robust portfolio or demo reel.

Courses in this program require access to a computer studio lab or a student must have a computer with specialized software (including Adobe Creative Cloud, Autodesk's Maya, and others as industry dictates) to take the FLEX courses, allowing for virtual attendance because the class is broadcast (and recorded).

Required Courses

- ART 1210 - Two-Dimensional Design *Credits: 3*
- **OR** ART 1110 - Drawing I *Credits: 3*
- DAT 1411 - Video Foundations *Credits: 3*
- DAT 1311 - 2D Animation for Digital Arts *Credits: 3*
- DAT 1321 - Fundamentals of 3D Graphics *Credits: 3*
- DAT 2421 - Motion and Special Effects *Credits: 3*
- DAT 2321 - 3D Animation *Credits: 3*

Total Credits: 18

Digital Arts Technology: Audio Production Certificate (DATX-CC-AUD)

Students who complete the certificate in Audio Production will be able to work in the fields of electronic music composition and audio production. Students will be exposed to important historical aspects of compositional styles, the impact of technology on music and art, and the technological tools to compose and edit audio for use in advertising, marketing, business and media industries. Certificate credits also apply to the Digital Arts Technology degree program and for transfer to BA/ BS programs at other colleges.

Learning Outcomes:

- Demonstrate efficient time management and organizational practices.
- Practice effective communication both independently and as part of a team.
- Analyze and evaluate the properties of sound, human hearing, and sound reproduction systems.
- Apply industry-standard techniques and tools to complete multi-track recording projects.
- Compose original electronic music compositions.
- Complete significant projects resulting in a robust demo reel.

Courses in this program require access to a computer studio lab or a student must have a computer with specialized software (including Adobe Creative Cloud, Avid Pro-Tools, and others as industry dictates) to take the FLEX courses.

Required Courses

- MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- THR 2295 - Theater Practicum II *Credits: 3*
- **OR** MUS 1100 - Fundamentals of Music *Credits: 3*
- **OR** THR 1122 - Sound Design and Production *Credits: 3*
- DAT 1511 - Electronic Audio Production I *Credits: 3*
- DAT 2511 - Electronic Audio Production II *Credits: 3*
- DAT 1525 - Acoustics and Sound Design *Credits: 3*
- DAT 2535 - Studio and On-Site Recording *Credits: 3*

Total Credits: 18

Digital Arts Technology: Digital Graphics for Print & Screen Certificate (DATX-CC-DGP)

Students who complete the Digital Graphics for Print & Screen Certificate will be able to design two and three-dimensional graphics for both print and digital applications for use in Graphic art production, electronic publishing, broadcast, and web design. Certificate credits also apply to the Digital Arts Technology degree program and for transfer to BA/ BS programs at other colleges.

Learning Outcomes:

- Demonstrate efficient time management and organizational practices.
- Practice effective communication both independently and as part of a team.
- Recognize and use product development workflow that will facilitate project completion.
- Apply a combination of advanced techniques and development tools to create professional level digital and print media.
- Design professional looking graphics utilizing the appropriate tools for each project.
- Complete significant projects resulting in a robust portfolio.

Courses in this program require access to a computer studio class or a student must have a computer with specialized software (including Adobe Creative Cloud and others as industry dictates) to take the FLEX courses.

Required Courses

- DAT 1111 - Foundations of Web Development *Credits: 3*
- DAT 1221 - Digital Layout *Credits: 3*
- DAT 1211 - Digital Graphics *Credits: 3*
- DAT 1000 - Graphic Design for DAT *Credits: 3* (or equivalent course)
- DAT 2131 - Multi-platform Web Development *Credits: 3*
- DAT 2211 - Image Compositing *Credits: 3*
- **OR** DAT 2221 - Vector Imaging *Credits: 3*

Total Credits: 18

Digital Arts Technology: Technical Communication Certificate (DATX-CC-TCH)

Students who complete the certificate in Technical Communication are prepared and empowered to be an effective communicator with the ability to write, illustrate, and speak about technical subjects in media, advertising, and business industries. This certificate can be completed in one semester, or applied to the TAP Communication or the Digital Arts Technology degree program and for transfer to BA/ BS programs at other colleges.

Learning Outcomes:

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

- Demonstrate increased competencies in writing and speaking skills.
- Effectively articulate technical procedures to co-workers, management, and customers.
- Utilize current computer software, audio, and video tools in preparing technical presentations.
- Critically analyze diverse uses of technical communication, including current trends and effects of mass media, and the social impact of mass media on individuals and our American culture.
- Assess and articulate how various channels of mass media communication influence message content.

This certificate is focused on retraining workers who have a desire to improve their technical communication skills. DAT courses in this program require access to a computer studio lab or a student must have a computer with specialized software (including Adobe Creative Cloud, Autodesk's Maya, and others as industry dictates) to take the FLEX courses.

Required Courses

- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- CIS 1001 - Introduction to Computers *Credits: 3*
- **OR** CSA 1110 - Introduction to Software Applications *Credits: 3*
- DAT 1001 - Introduction to Digital Arts *Credits: 3*
- DAT 1221 - Digital Layout *Credits: 3*
- DAT 1000 - Graphic Design for DAT *Credits: 3* (or equivalent course)
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*

Total Credits: 18

Digital Arts Technology: Trending Technology in Digital Media Certificate (DATX-CC-TRD)

Students who complete the certificate in Trending Technology in Digital Media will be able to design webpages and media assets for use in advertising, marketing, business and media industries. Certificate credits are designed for individuals who have already earned advanced degrees and are looking for skill-enhancement opportunities; seeking the Digital Arts Technology degree program and for transfer to BA/ BS programs at other colleges.

Learning Outcomes:

- Demonstrate efficient time management and organizational practices.
- Practice effective communication both independently and as part of a team.
- Recognize and use product development phases and timelines that will facilitate the project development cycle.
- Develop and produce accessibility-compliant user interfaces.
- Produce interactive content for multiple digital and social media platforms simultaneously.
- Complete significant projects resulting in a robust portfolio.

Courses in this program require access to a computer studio lab or a student must have a computer with specialized software (including Adobe Creative Cloud and others as industry dictates) to take the FLEX courses.

Required Courses

- BMKT 2010 - Principles of Marketing *Credits: 3*
- **OR** BMKT 2160 - Digital Marketing *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- DAT 1111 - Foundations of Web Development *Credits: 3*
- DAT 1221 - Digital Layout *Credits: 3*
- DAT 1125 - Interactive Media Design *Credits: 3*
- **OR** DAT 2145 - Programming for the Arts *Credits: 3*
- DAT 2131 - Multi-platform Web Development *Credits: 3*

Total Credits: 18

Digital Arts Technology: Video Production Certificate (DATX-CC-VID)

Students who complete the Video Production Certificate will be able to apply visual composition, lighting design, non-linear video editing, motion graphics design, audio production, and sound design for use in advertising, marketing, business and media industries. Certificate credits also apply to the Digital Arts Technology degree program and for transfer to BA/ BS programs at other colleges.

Learning Outcomes:

- Demonstrate efficient time management and organizational practices.
- Practice effective communication both independently and as part of a team.
- Recognize and use the multiple steps of the video production process to facilitate project completion.
- Apply industry-standard techniques and tools to complete professional level audio visual projects.
- Create state-of-the-art special effect techniques used in film and video.
- Complete significant projects resulting in a robust portfolio or demo reel.

Courses in this program require access to a computer studio lab or a student must have a computer with specialized software (including Adobe Creative Cloud, Avid Pro-Tools, and others as industry dictates) to take the FLEX courses.

Required Courses

- COMM 1201 - Film Study and Appreciation *Credits: 3*
- DAT 1002 - Introduction to Photography *Credits: 3* (or equivalent course)
- DAT 1411 - Video Foundations *Credits: 3*
- DAT 1525 - Acoustics and Sound Design *Credits: 3*
- **OR** DAT 2535 - Studio and On-Site Recording *Credits: 3*
- DAT 2411 - Video Editing and Enhancements *Credits: 3*
- DAT 2421 - Motion and Special Effects *Credits: 3*

Total Credits: 18

English as a Second Language: Advanced English Proficiency Certificate (ENGC-CC)

The English as a Second Language (ESL) Certificate of Advanced English Proficiency provides non-native speakers of English with personal and professional development opportunities, encourages lifelong learning, and provides employers with measurable proof of proficiency in English. Each of the courses in the program addresses English language skills and abilities necessary for success in academic studies or in careers. The curriculum includes general college courses in composition, literature, and speech, as well as ESL. Students may also use this certificate in their native countries as verification of their advanced language study and proficiency in the English Language. Both full and part-time students whose native language is not English are eligible for this program.

Learning Outcomes:

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

- Write with precision and detail in a variety of contexts.
- Comprehend diverse texts which are conceptually abstract and linguistically complex.
- Understand extended spoken discourse on contextualized and abstract topics such as in lectures, speeches, and reports.
- Express their own ideas with fluency, accuracy and comfort and participate effectively in discourse on practical, academic, social and professional topics.

Required Courses

- ESOL 1402 - Integrated Skills IV: Low Advanced *Credits: 6*
- ESOL 1502 - Integrated Skills V: High Advanced *Credits: 6*
- **OR** ESOL 1512 - Integrated Skills V: Accelerated High Advanced *Credits: 4*
- ENG 1010 - Composition *Credits: 3*

Directed Communication Electives - choose one from the list below (3 credits)

- ESOL 1407 - Communications IV: Low Advanced *Credits: 3*
- COMM 1000 - Introduction to Communication *Credits: 3*
- COMM 1302 - Interpersonal Communication *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- COMM 1305 - Intercultural Communication *Credits: 3*

Directed Writing Electives - choose one from the list below (3 credits)

- ENG 1020 - Composition II and Literature *Credits: 3*
- ENG 1030 - Composition II and Non-fiction Texts *Credits: 3*
- HIST 1002 - Western History from the 1500s *Credits: 3*
- HIST 1015 - US History to 1877 *Credits: 3*
- HIST 1016 - US History from Reconstruction *Credits: 3*
- HIST 2016 - African American History to 1877 *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*

Total Credits: 19-21

English Studies - CSCU Transfer Degree, AA (ENGL-AA-TAP)

The English Studies program provides students with a strong foundation in the liberal arts while introducing them to the study of literature and creative writing at the college level. The program is one of the Connecticut State Colleges & Universities (CSCU) Transfer Ticket programs. These programs are designed for Connecticut State Community College students who wish to transfer to one of the Connecticut State Universities (CSU) or Charter Oak State College (COSC) without either losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. CT State students can complete associate degree programs that transfer without hassle to all Connecticut State Universities and Charter Oak State College offering their major. Upon transfer, students are guaranteed full junior status and can complete a bachelor's degree in their major without losing any credits or be required to take any extra credits.

Learning Outcomes:

Program Objectives:

- Complete an Associate of Arts degree in English Studies.
- Transfer seamlessly into a Bachelor of Arts (BA) degree program in English with junior-level status in the receiving CSCU institution as part of the CSCU Transfer Ticket program.

Upon successful completion of all English Transfer Ticket degree program requirements, graduates will

- Analyze in writing literary texts using the conventions and discourse of English studies.
- Recognize at an introductory level the relationships among literature, culture, and history across multiple cultures, genres, and time periods.
- Demonstrate an understanding of the function of aesthetic elements in literature.

In addition, the graduate will complete the comprehensive learning outcomes identified within the General Education Core.

Students are free to choose any courses at or above 1000-level to complete 11- 14 credits of unrestricted electives. If Unrestricted Electives are used to take additional ENG courses, keep the CSU/COSC policies (listed below) in mind. Students should meet with their advisor before selecting any additional courses.

Central Connecticut State University (CCSU). For the English BA, Pathway students can use in the major either of the British or American surveys (221, 222, 231, 232) that they do not use to fulfill the other Pathway requirements. Creativity Course: Study Area I: Arts & Humanities Global Knowledge Course: Study Area II: Social Sciences

Eastern Connecticut State University (ECSU). For the English BA, Literary Studies, three (and sometimes four) additional 200-level ENG courses can be applied: one from ENG 210 (Fiction), ENG 213 (Poetry), & ENG 114 (Childrens Literature); one from ENG 250 (Studies in Ethnic Literature), ENG 251 (African American Literature), ENG 262 (Women in Literature), ENG 263 (Women in Poetry), & ENG 264 (Poetry and Women's Lives); one from ENG 281 (Creative Writing); and one from ENG 221 (American Literature I), ENG 222 (American Literature II), ENG 231 (British Literature I), & ENG 232 (British Literature II)

- For the English BA, Rhetoric and Composition, ENG 281 can be applied.
- For the English BA, Cultural Studies, two from ENG 114, ENG 250, ENG 251, ENG 262; and one from ENG 281 can be applied.
- For the English BA, Creative Writing one from ENG 210, ENG 213, ENG 214 (Drama), ENG 263, and ENG 264; and one from ENG 281, can be applied
- Creativity Course: Creative Expressions
- Global Knowledge Course: Individuals and Society

Southern Connecticut State University (SCSU). For the English BA, Literature OR English BA, Professional Writing, no additional 100- or 200-level courses will be applied. For the English BA, Creative Writing, ENG 282 (Creative Writing: Poetry) & ENG 283 (Creative Writing: Fiction) will be applied

- Creativity Course: Creative Drive
- Global Knowledge Course: Global Awareness

Western Connecticut State University (WCSU).

- For the English BA, 2 of the remaining courses from ENG 221, ENG 222, ENG 231, & ENG 232 will be applied
- Creativity Course: General Education Elective / Second Exposure to Creative Process and also Explorations if outside the major
- Global Knowledge Course: Intercultural Competency and also Explorations if outside the major

Charter Oak State College.

- For the English BA, 4 additional 200-level courses will be applied Creativity Course: Open Elective
- Global Knowledge Course: Global Understanding

Students may need to use the unrestricted credits to take courses that prepare them for required courses in the degree program. Students 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 students complete a minor by earning at least 18 credits in one area outside the major field; students must complete at least 9 of those minor credits at Central. Students can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC-but not ECSU. Students are encouraged to meet with their advisor to determine which courses to select.

Information on additional courses students might take if they have free elective room, including major courses as well as remaining general education courses for each CSU, with equivalency information for each CSU, can be found at <http://www.ct.edu/transfer/transferring>

Framework Courses (31-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *3-4 credits*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCR X - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- **OR** ENG 1030 - Composition II and Non-fiction Texts *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (29 credits)

- Elective CRTY - Creativity Course *Credits: 3* - a Creative Writing course is strongly encouraged
- Elective GLKY - Global Knowledge Course *Credits: 3*
- ENG 2620 - American Literature to 1865 **AND** ENG 2540 - British Literature from 1798 *Credits: 6*
- **OR** ENG 2520 - British Literature to 1798 **AND** ENG 2640 - American Literature from 1865 *Credits: 6*
- Western Literature or World Literature Course *Credits: 3* (options include: ENG 2320, ENG 2340, ENG 2420, ENG 2440)
- **OR**
 - ENG 2300 - Studies in World Literature
 - ENG 2301 - Mythology
 - ENG 2302 - Biblical and Classical Literature

- ENG 2461 - International Short Story
 - ENG 2712 - Literature of the Caribbean
 - ENG 2803 - Women Writers Across Cultures
- **OR** any other course (see italicized note below) that meets these four criteria:
 1. 75% of the authors are non-English, non-American (here we trust the judgment of faculty for, say, a foreign-born writer now writing in America in English; one clear standard might be a writer in translation)
 2. Historical breadth of the course (not a Contemporary Indian Literature course, for example)
 3. Cultural breadth (across cultures; not Western African Literature, for example, but African Literature)
 4. Not necessarily multi-genre (a world literature course in a single genre could fulfill this).

(This course must be approved by English Studies Program Coordinator)
- Open Electives - Credits: 14

Total Credits: 60-63

French Studies - CSCU Transfer Degree, AA (FREN-AA-TAP)

The CSCU Pathway Transfer Degree in French Studies, A.A. prepares students to continue their education at any Connecticut State University (CSU) leading to a baccalaureate degree in French. It is designed to strengthen and develop skills in French expression: critical reading, writing, thinking, listening, speaking, and research through the study of language, literature, culture, and related disciplines.

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

- Demonstrate listening proficiency in the target language at the Intermediate Low level as per the American Council on the Teaching of Foreign Languages (ACTFL) guidelines*.
- Demonstrate speaking proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate reading proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate writing proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate analytic, interpretative, and critical thinking skills in regard to language and the communication process.
- Recognize that understanding other cultures will enrich one's own life and result in lifelong learning.
- Apply critical thinking skills to the understanding of cultural differences and similarities.

*<https://www.actfl.org/publications/guidelines-and-manuals/actfl-proficiency-guidelines-2012>

This program is transfer focused. It is designed to prepare students with an interest in French studies to transfer to a four-year college or university at the junior level in pursuit of a bachelor's degree.

With this degree students will be able to transfer to the following majors/minors:

- At Central Connecticut State University:
 - French B.A.
 - French B.S.ED. (7-12)
 - French minor
- At Eastern Connecticut State University:
 - French minor
- At Southern Connecticut State University:
 - French B.A.
 - French 7-12, B.S.
 - French minor

Framework Courses (31-34 credits)

At least one course with a lab must be taken in either Scientific Reasoning or Scientific Knowledge and Understanding.

- ENG 1010 - Composition *Credits: 3*
- Elective QUAX - Quantitative Reasoning Course *Credits: 3-4*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30-32 credits)

- FREN 1011 - Elementary French I *Credits: 4*
- FREN 1012 - Elementary French II *Credits: 4*
- FREN 2011 - Intermediate French I *Credits: 4*
- FREN 2012 - Intermediate French II *Credits: 4*
- Elective GLKY - Global Knowledge Course *Credits: 3*
(COMM 1305, GEOG 1010, or HUM 1019 recommended)
- Elective CRTY - Creativity Course *Credits: 3*
- Unrestricted Electives - Students who begin French at a higher level than FREN 1011 will receive additional unrestricted electives. They should consider taking additional upper-level French courses. *Credits: 8-20*

Total Credits: 61-64

Game Design, AS (GMDN-AS)

The purpose of the Computer Game Design program is to provide students who are interested in a career in this industry comprehensive instruction in all aspects of computer game design and production. The specific program objectives include:

- To provide instruction in all production aspects of game design and production including animation, sound design, game level design, 3D modeling, and computer graphics.
- To connect the media creation aspects of game design with the industry standard game engine tools necessary to produce functioning gameplay.
- To integrate creative thinking and technical skills in the development of original gaming concepts.
- To offer an overview of the games industry including tracking industry trends, preparation of production proposals and budgets, and the development and responsibilities of production teams.

The program is structured to equip students with a sound foundation in technical skills, design concepts, aesthetics, terminology and vocabulary, and to provide an awareness of the application of creative and critical thinking in the use of technical knowledge. A strong emphasis has been placed on the use of the computer as a production and compositing tool.

Learning Outcomes:

Upon successful completion of all program requirements, graduates of the Computer Game Design program will:

- Meet educational standards for entry-level and intermediate level employment in the area of game design and development.
- Demonstrate an understanding of the production pipeline for game design & development (concept, storytelling, character development, level design, programming decisions, network distribution, etc.).
- Integrate creative/artistic skills (drawing, animation, storytelling, level design, etc.) with the industry standard technology and tools necessary for the development of interactive media.
- Demonstrate the software skills necessary for game development and for potential employment in the game development field.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

The Game Design A.S. degree is transferable to new programs in some of the CT State Universities, and to several colleges and Universities, both national and international. This would include Becker College, Hampshire College, Quinnipiac University, Savannah College of Art and Design (SCAD), The Academy of Art University, Fitchburg State University and others.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- GAMD 1009 - Introduction to Games *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- GAMD 1013 - Drawing for Animation and Games *Credits: 3*
- COMM 1604 - Video Filmmaking *Credits: 3*
- GAMD 2001 - World Building *Credits: 3*
- GAMD 2020 - Visual Storytelling & Sequential Art *Credits: 3*

- GAMD 2024 - Digital Painting *Credits: 3*
- GAMD 2063 - Animation Foundations *Credits: 3*
- GAMD 2075 - 2D Game Level Design *Credits: 3*
- GAMD 2071 - 3D Modeling I *Credits: 3*
- GAMD 2072 - Advanced 3D Concepts *Credits: 3*
- GAMD 2176 - 3D Animation and Rigging *Credits: 3*
- GAMD 2167 - 2D Animation *Credits: 3*
- GAMD 2177 - 3D Game Level Design *Credits: 3*
- GAMD 2090 - Game Studio Capstone *Credits: 3*

Total Credits: 60-62

German Studies - TAP/CSCU Transfer Degree, AA (GERM-AA-TAP)

The CSCU Pathway Transfer Degree in German Studies, A.A. prepares students to continue their education at any Connecticut State University (CSU) leading to a baccalaureate degree in German. It is designed to strengthen and develop skills in German expression: critical reading, writing, thinking, listening, speaking, and research through the study of language, literature, culture, and related disciplines.

Learning Outcomes:

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

- Demonstrate listening proficiency in the target language at the Intermediate Low level as per the American Council on the Teaching of Foreign Languages guidelines*.
- Demonstrate speaking proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate reading proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate writing proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate analytic, interpretative and critical thinking skills in regards to language and the communication process.
- Recognize that understanding other cultures will enrich one's own life and result in life long learning.
- Apply critical thinking skills to the understanding of cultural differences and similarities.

*<https://www.actfl.org/publications/guidelines-and-manuals/actfl-proficiency-guidelines-2012>

This program is transfer focused. It is designed to prepare students with an interest in German studies to transfer to a four year college or university at the junior-level in pursuit of a Bachelor's degree.

With this degree students will be able to transfer to the following majors/minors:

At Central Connecticut State University:

- German B.A.

At Southern Connecticut State University:

- German B.A.
- German 7-12, B.S.
- German minor

General Education Courses (30-34 credits)

At least one course with a lab must be taken in either Scientific Reasoning or Scientific Knowledge and Understanding.

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 or higher *Credits: 3-4*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (30 credits)

- GERM 1011 - Elementary German I *Credits: 4*
- GERM 1012 - Elementary German II *Credits: 4*

- GERM 2011 - Intermediate German I *Credits: 4*
- GERM 2012 - Intermediate German II *Credits: 4*
- COMM 1305 - Intercultural Communication *Credits: 3*
- **OR** GEOG 1010 - World Regional Geography *Credits: 3*
- **OR** HUM 1019 - Short-term Study Abroad *Credits: 3*
- **OR** Elective GLKY - Global Knowledge Course *Credits: 3*
- Elective CRTY - Creativity Course *Credits: 3*

Unrestricted electives Credits: 8-20

Students who begin German at a higher level than GERM 1011 will receive additional unrestricted electives.

Total Credits: 61-64

Graphic Design, AS (GRPH-AS)

The purpose of the Graphic Design Associate Degree program is:

To provide a graphic design **terminal or transfer** program in the area of graphic design, digital media, computer graphics and advertising;

- to offer a degree program for those considering an entry-level position in related graphic design fields; and
- to provide greater technical knowledge and awareness of the creative visual arts to the community. The program is structured to equip students with a sound foundation in technical skills, graphic design concepts, aesthetics, terminology and vocabulary, and to provide an awareness of the application of acquired technical knowledge. Computer use will be an integral part of the program.

This degree provides the Graphic Design student with a broad, art-based degree primarily for transfer with fundamental skills developed in 2D, 3D and time-based studios. It provides students with a Graphic Design track to 4-year university programs with a broad and foundational art and design background.

In addition to the general Graphic Design degree, students may choose Graphic Design: Design & Illustration or Graphic Design: Digital Media/Web Design.

Program Learning Outcomes:

Upon successful completion of all Graphic Design degree program requirements, graduates will:

- Demonstrate an understanding and appreciation of graphic design as a form of communication and art.
- Develop an ability to use design processes and principles to create visual products that convey a specific message to a targeted audience.
- Integrate creative thinking skills and strategies and use problem-solving techniques across a wide range of media.
- Communicate an understanding of how creative processes and skills are integrated with printing and other reproduction processes found in the graphic design field.
- Demonstrate knowledge of new technologies such as computer graphics that continue to evolve into important production tools.
- Identify the varied career paths within the graphics industry including, but not limited to, art direction, illustration, project design, production art, graphic design and media direction.
- Develop a portfolio of work reflecting knowledge, techniques, and creativity gained during the student's course of study.

In addition to the Graphic Design A.S. program learning outcomes students will:

- Demonstrate knowledge and skill in the application of the Principles of Design, Elements of Art, Visual Literacy and as an option, gain industry experience through internship.
- Integrate skills, techniques, and the safe use of materials and equipment necessary for studio art creation. Combine an understanding of art, design concepts, critical thinking, and problem solving in order to apply these skills to art processes using a variety of media.
- Communicate and critique art and concepts using specific art vocabulary.
- Apply a strong fine arts foundation and high quality, relevant coursework in preparation for career or transfer.
- Evaluate and demonstrate a historical, cross-cultural appreciation and awareness of the field of visual art. Develop an understanding of the principles and elements of two-dimensional and three-dimensional design and their applications to various studio disciplines.

The Graphic Design A.S. transfers to 4-year State Universities and private 4-year Art Schools in-state such as the Hartford Art School, and out of state, Mass College of Art, Springfield College, SCAD. Students may enroll in art and graphic design courses full- or part-time. There are no requirements or prerequisites (other than individual course prerequisites) for students wishing to take courses part-time or as electives for other programs. Graphic design/fine arts faculty members are available for consultation with students who wish to enroll in the program and, thereafter, for course selection and transfer information.

Graphic Design General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- Arts & Humanities Elective: ARTH 1012 preferred; or choose from ARTH 1001, ARTH 1002, ARTH 1003, or ART 1060 *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Graphic Design Program Core (27 credits)

- GRA 1501 - Graphic Design I *Credits: 3*
- ART 1110 - Drawing I *Credits: 3*
- GRA 1101 - Introduction to Computer Graphics *Credits: 3*
- **OR** GRA 2300 - Digital Imaging I *Credits: 3*
- ART 1250 - Color Theory *Credits: 3*
- **OR** ART 1210 - Two-Dimensional Design *Credits: 3*
- GRA 2001 - Typography *Credits: 3*
- **OR** GRA 2201 - Illustration I *Credits: 3*
- **OR** ART 1120 - Drawing II *Credits: 3*
- GRA 2401 - Digital Page Design *Credits: 3*
- **OR** GRA 2502 - Graphic Design II *Credits: 3*
- GRA 2101 - Advanced Computer Graphics *Credits: 3*
- **OR** GRA 2301 - Digital Imaging II *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- ART 1810 - Digital Video Art I *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- **OR** COMM 1604 - Video Filmmaking *Credits: 3*
- ART 2094 - Cooperative Education *Credits: 3*
- **OR** GRA 2095 - Graphic Design Internship *Credits: 3*
- **OR** GRA 2090 - Graphic Design Capstone *Credits: 3*
- **OR** 2000-level elective studio course *Credits: 3 (see list below)*
- **OR** ART 2090 - Portfolio Preparation I *Credits: 1-3*
- **OR** GRA 2098 - Special Topics: Graphic Design *Credits: 3*

Studio Electives (12 credits)

- **2D Studio Elective - Choose 2**
- ART 2090 - Portfolio Preparation I *Credits: 1-3*
- ART 1450 - Digital Photography I *Credits: 3*
- ART 1510 - Painting I *Credits: 3*
- ART 1550 - Watercolor I *Credits: 3*
- ART 1770 - Printmaking I *Credits: 3*
- ART 2810 - Digital Painting & Drawing *Credits: 3*
- ART 1250 - Color Theory *Credits: 3*

- ART 1120 - Drawing II *Credits: 3*
- ART 1130 - Figure Drawing I *Credits: 3*
- ART 1210 - Two-Dimensional Design *Credits: 3*
- GRA 2600 - Web Design *Credits: 3*
- GRA 2090 - Graphic Design Capstone *Credits: 3*
- GRA 2001 - Typography *Credits: 3*
- GRA 2201 - Illustration I *Credits: 3*
- GRA 2301 - Digital Imaging II *Credits: 3*
- OR GRA 2101 - Advanced Computer Graphics *Credits: 3*
- GRA 2306 - Digital Illustration *Credits: 3*

- **3D Studio Elective - Choose 1**
 - ART 1220 - Three-Dimensional Design *Credits: 3*
 - GRA 2705 - 3D Computer Modeling *Credits: 3*

- **Time-Based Studio Elective - Choose 1**
 - ART 1810 - Digital Video Art I *Credits: 3*
 - ART 1880 - Animation Fundamentals *Credits: 3*
 - COMM 1604 - Video Filmmaking *Credits: 3*
 - GRA 2507 - Motion Graphics and Effects *Credits: 3*

Total Credits: 60 - 63

Directed Electives are to be selected in consultation with faculty advisor and must meet stated contact hour requirement. See lists of electives offered by campus.

Graphic Design: Design & Illustration, AS (GRPH-AS-DIL)

The purpose of the Graphic Design Associate Degree program is:

To provide a graphic design **terminal or transfer** program in the area of graphic design, digital media, computer graphics and advertising;

- to offer a degree program for those considering an entry-level position in related graphic design fields; and
- to provide greater technical knowledge and awareness of the creative visual arts to the community. The program is structured to equip students with a sound foundation in technical skills, graphic design concepts, aesthetics, terminology and vocabulary, and to provide an awareness of the application of acquired technical knowledge. Computer use will be an integral part of the program.

Design & Illustration Option:

Illustration is a parallel field to Graphic Design and many designers are also illustrators. This option provides students with project-based, hands-on and digital classes in Illustration, drawing and painting to lay the foundation for transfer or career opportunities in Illustrating for design. It provides Graphic Design students an Illustration track to a 4-year transfer degree and/or career in illustration, with an emphasis on design.

Program Learning Outcomes:

Upon successful completion of all Graphic Design degree program requirements, graduates will:

- Demonstrate an understanding and appreciation of graphic design as a form of communication and art.
- Develop an ability to use design processes and principles to create visual products that convey a specific message to a targeted audience.
- Integrate creative thinking skills and strategies and use problem-solving techniques across a wide range of media.
- Communicate an understanding of how creative processes and skills are integrated with printing and other reproduction processes found in the graphic design field.
- Demonstrate knowledge of new technologies such as computer graphics that continue to evolve into important production tools.
- Identify the varied career paths within the graphics industry including, but not limited to, art direction, illustration, project design, production art, graphic design and media direction.
- Develop a portfolio of work reflecting knowledge, techniques, and creativity gained during the student's course of study.
- Demonstrate knowledge and skill in the application of the Principles of Design, Elements of Art, Visual Literacy and as an option, gain industry experience through internship.

Design & Illustration Learning Outcomes:

In addition to the Graphic Design A.S. program learning outcomes students will:

- Become competent in a variety of artistic and digital media. Develop the ability to identify, analyze, and solve design problems.
- Obtain an understanding of the aesthetics of illustration and of the history and current state of design. Become proficient in the selection and use of relevant technologies and computer software in illustration. Ability to use available software and non-digital processes to sketch, model, and produce an illustration.
- Design and develop an illustration from sketch to mockup to finished process.
- Become proficient in presenting work as well as discussing and constructively critiquing the work of others.

The Graphic Design A.S. transfers to 4-year State Universities and private 4-year Art Schools in-state such as the Hartford Art School, and out of state, Mass College of Art, Springfield College, SCAD. Students may enroll in art and graphic design courses full- or part-time. There are no requirements or prerequisites (other than individual course prerequisites) for students wishing to

take courses part-time or as electives for other programs. Graphic design/fine arts faculty members are available for consultation with students who wish to enroll in the program and, thereafter, for course selection and transfer information.

Graphic Design General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- Arts & Humanities Elective: ARTH 1012 preferred; or choose from ARTH 1001, ARTH 1002, ARTH 1003, or ART 1060 *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Graphic Design Program Core (27 credits)

- GRA 1501 - Graphic Design I *Credits: 3*
- ART 1110 - Drawing I *Credits: 3*
- GRA 1101 - Introduction to Computer Graphics *Credits: 3*
- **OR** GRA 2300 - Digital Imaging I *Credits: 3*
- ART 1250 - Color Theory *Credits: 3*
- **OR** ART 1210 - Two-Dimensional Design *Credits: 3*
- GRA 2001 - Typography *Credits: 3*
- **OR** GRA 2201 - Illustration I *Credits: 3*
- **OR** ART 1120 - Drawing II *Credits: 3*
- GRA 2401 - Digital Page Design *Credits: 3*
- **OR** GRA 2502 - Graphic Design II *Credits: 3*
- GRA 2101 - Advanced Computer Graphics *Credits: 3*
- **OR** GRA 2301 - Digital Imaging II *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- ART 1810 - Digital Video Art I *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- **OR** COMM 1604 - Video Filmmaking *Credits: 3*
- ART 2094 - Cooperative Education *Credits: 3*
- **OR** GRA 2095 - Graphic Design Internship *Credits: 3*
- **OR** GRA 2090 - Graphic Design Capstone *Credits: 3*
- **OR** 2000-level elective studio course *Credits: 3 (see list below)*
- **OR** ART 2090 - Portfolio Preparation I *Credits: 1-3*
- **OR** GRA 2098 - Special Topics: Graphic Design *Credits: 3*

Design & Illustration Electives (12 credits)

Choose 4 courses:

- ART 1120 - Drawing II *Credits: 3*
- ART 1130 - Figure Drawing I *Credits: 3*
- ART 1210 - Two-Dimensional Design *Credits: 3*
- **OR** ART 1220 - Three-Dimensional Design *Credits: 3*

- ART 1510 - Painting I *Credits: 3*
- **OR** ART 1550 - Watercolor I *Credits: 3*
- ART 1770 - Printmaking I *Credits: 3*
- ART 2810 - Digital Painting & Drawing *Credits: 3*
- ART 2090 - Portfolio Preparation I *Credits: 1-3*
- GRA 2201 - Illustration I *Credits: 3 preferred in this track*
- GRA 2202 - Illustration II *Credits: 3 preferred in this track*
- GRA 2306 - Digital Illustration *Credits: 3*
- GRA 2705 - 3D Computer Modeling *Credits: 3*
- GRA 2090 - Graphic Design Capstone *Credits: 3*

Total Credits: 60 - 63

Graphic Design: Digital Media/Web Design, AS (GRPH-AS-DMW)

The purpose of the Graphic Design Associate Degree program is:

To provide a graphic design **terminal or transfer** program in the area of graphic design, digital media, computer graphics and advertising;

1. to offer a degree program for those considering an entry-level position in related graphic design fields; and
2. to provide greater technical knowledge and awareness of the creative visual arts to the community. The program is structured to equip students with a sound foundation in technical skills, graphic design concepts, aesthetics, terminology and vocabulary, and to provide an awareness of the application of acquired technical knowledge.

Computer use will be an integral part of the program.

The Digital Media/Web Design program prepares students with a foundation of courses in art, graphic design, and digital media. This provides our students with a broad range of skills and the opportunity to explore a variety of career options. Web and Media design is in high demand as an industry and career track. This option focuses on digital media and web development to prepare students for a career in time-based media and web design.

Program Learning Outcomes:

Upon successful completion of all Graphic Design degree program requirements, graduates will:

- Demonstrate an understanding and appreciation of graphic design as a form of communication and art.
- Develop an ability to use design processes and principles to create visual products that convey a specific message to a targeted audience.
- Integrate creative thinking skills and strategies and use problem-solving techniques across a wide range of media.
- Communicate an understanding of how creative processes and skills are integrated with printing and other reproduction processes found in the graphic design field.
- Demonstrate knowledge of new technologies such as computer graphics that continue to evolve into important production tools.
- Identify the varied career paths within the graphics industry including, but not limited to, art direction, illustration, project design, production art, graphic design and media direction.
- Develop a portfolio of work reflecting knowledge, techniques, and creativity gained during the student's course of study.
- Demonstrate knowledge and skill in the application of the Principles of Design, Elements of Art, Visual Literacy and as an option, gain industry experience through internship.

Digital Media/Web Design Learning Outcomes:

In addition to the Graphic Design A.S. program learning outcomes students will:

- Demonstrate proficiency in the skills that are required in today's graphic design industry.
- Attain an expanded awareness and a critical understanding of graphic design products.
- Demonstrate proficiency with graphic design and digital media software that are industry standards. Become proficient in principles of Interaction Design and user experience processes as they relate to front- end web design and interactive graphics.

The Graphic Design A.S. transfers to 4-year State Universities and private 4-year Art Schools in-state such as the Hartford Art School, and out of state, Mass College of Art, Springfield College, SCAD. Students may enroll in art and graphic design courses full- or part-time. There are no requirements or prerequisites (other than individual course prerequisites) for students wishing to take courses part-time or as electives for other programs. Graphic design/fine arts faculty members are available for consultation with students who wish to enroll in the program and, thereafter, for course selection and transfer information.

Graphic Design General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- Arts & Humanities Elective: ARTH 1012 preferred; or choose from ARTH 1001, ARTH 1002, ARTH 1003, or ART 1060 *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Graphic Design Program Core (27 credits)

- GRA 1501 - Graphic Design I *Credits: 3*
- ART 1110 - Drawing I *Credits: 3*
- GRA 1101 - Introduction to Computer Graphics *Credits: 3*
- **OR** GRA 2300 - Digital Imaging I *Credits: 3*
- ART 1250 - Color Theory *Credits: 3*
- **OR** ART 1210 - Two-Dimensional Design *Credits: 3*
- GRA 2001 - Typography *Credits: 3*
- **OR** GRA 2201 - Illustration I *Credits: 3*
- **OR** ART 1120 - Drawing II *Credits: 3*
- GRA 2401 - Digital Page Design *Credits: 3*
- **OR** GRA 2502 - Graphic Design II *Credits: 3*
- GRA 2101 - Advanced Computer Graphics *Credits: 3*
- **OR** GRA 2301 - Digital Imaging II *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- ART 1810 - Digital Video Art I *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- **OR** COMM 1604 - Video Filmmaking *Credits: 3*
- ART 2094 - Cooperative Education *Credits: 3*
- **OR** GRA 2095 - Graphic Design Internship *Credits: 3*
- **OR** GRA 2090 - Graphic Design Capstone *Credits: 3*
- **OR** 2000-level elective studio course *Credits: 3 (see list below)*
- **OR** ART 2090 - Portfolio Preparation I *Credits: 1-3*
- **OR** GRA 2098 - Special Topics: Graphic Design *Credits: 3*

Digital Media/Web Design Electives (12 credits)

Choose courses for a minimum of 12 credits

- ART 1810 - Digital Video Art I *Credits: 3*
- ART 1880 - Animation Fundamentals *Credits: 3*
- ART 1450 - Digital Photography I *Credits: 3*
- ART 2090 - Portfolio Preparation I *Credits: 1-3*
- **OR** GRA 2098 - Special Topics: Graphic Design *Credits: 3*
- COMM 1604 - Video Filmmaking *Credits: 3*
- CSC 1271 - Web Development and Design I *Credits: 4*

- GRA 2507 - Motion Graphics and Effects *Credits: 3*
- GRA 2301 - Digital Imaging II *Credits: 3*
- **OR** GRA 2101 - Advanced Computer Graphics *Credits: 3*
- GRA 2508 - User Experience Design *Credits: 3*
- GRA 2207 - Interactive Media *Credits: 3*
- GRA 2600 - Web Design *Credits: 3* preferred on this track
- GRA 2601 - Web Design II *Credits: 3*
- GRA 2705 - 3D Computer Modeling *Credits: 3*
- GRA 2090 - Graphic Design Capstone *Credits: 3*

Total Credits: 60-63

Interior Design Career Program, AAS (IDCP-AAS)

The Interior Design program is designed to develop technical skills, creativity, and an understanding of all aspects of interior design. The graduates of the program will be qualified by education, experience, and examination to enhance the function and quality of interior spaces for the purpose of improving the quality of life, increasing productivity, and protecting the health, safety, and welfare of the public.

Learning Outcomes:

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

- Analyze client's needs, goals, and life safety requirements.
- Integrate findings with knowledge of interior design.
- Formulate preliminary design concepts that are aesthetic, appropriate, and functional, and in accordance with codes and standards.
- Develop and present final design recommendations through appropriate presentation media.
- Prepare working drawings and specifications for non-load bearing interior construction, reflected ceiling plans, lighting, interior detailing, materials, finishes, space planning, furnishings, fixtures, and equipment in compliance with universal accessibility and sustainability, guidelines and all applicable codes.
- Collaborate with professional services of other licensed practitioners in the technical areas of mechanical, electrical, and load-bearing design as required for regulatory approval.
- Prepare and administer bids and contract documents as the client's agent, and construction scheduling.
- Review and evaluate design solutions during implementation and upon completion.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ENV 1010 - Introduction to Environmental Science *Credits: 3*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40 credits)

- ARCH 1005 - Architecture Fundamentals I *Credits: 4*
- ARCH 1002 - Architecture of the World *Credits: 3*
- ARCH 1008 - Construction Materials & Methods *Credits: 3*
- ARCH 2040 - Environmental Systems *Credits: 3*
- ARCH 2030 - CAD 3D Architectural Parametric *Credits: 3*
- CAD 2204 - CAD 3D Architectural *Credits: 3*
- INTD 1001 - Interior Design Studio I *Credits: 4*
- INTD 1020 - Materials Textiles and Finishes *Credits: 3*
- INTD 2001 - Interior Design Studio II *Credits: 4*
- INTD 2002 - Interior Design Studio III *Credits: 4*
- INTD 1021 - Color and Lighting for Design *Credits: 3*
- **OR** INTD 2090 - Interior Design Internship *Credits: 3*
- CAD 1140 - Architectural CAD *Credits: 3 **

** corrected from CAD 1330 11/14/2024*

Total Credits: 61-63

Interpreter Training Program, AS (INPR-AS)

The Interpreter Training Program (ITP) (American Sign Language) ASL/English is a program of study leading to an Associate in Science degree. The purpose of the program is to provide quality interpreter education in a multidisciplinary and interdisciplinary endeavor focusing on preparing student interpreters of ASL and English. This professional career program is a comprehensive, sequenced, and integrated series of courses that is intended to provide students with the necessary techniques and skills required for professional work as interpreters at the entry level. The Registry of Interpreters for the Deaf (RID) is the organization that oversees the certification of interpreters, this includes the former National Association for the Deaf (NAD) certification. The National Interpreter Certification (NIC) process includes the knowledge exam which can be taken at anytime and the performance exam which requires a Bachelor's degree. More information and requirements can be found at www.rid.org. Graduation from the Northwestern Campus of CT State Community College ITP does not guarantee students will be granted certification.

Learning Outcomes:

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

- Effectively interpret between English and American Sign Language.
- Appropriately apply the principles of the RID/NAD Code of Professional Conduct to interpreting situations.
- Mediate cultural differences between Deaf and hearing consumers with sensitivity to and awareness of American Deaf Culture.
- Educate others with information and available resources for people who are Deaf and/or Hard of Hearing.

The Interpreter Training Program is an intensive program of study that requires commitment through the summer session as well as the fall and spring semesters. The skills required for becoming an interpreter for the Deaf rely on a secure foundation of ASL linguistics. The preparatory courses are structured so that students build a foundation of the linguistics of ASL to communicate on an advanced level with native ASL signers. This level of proficiency is essential to the subsequent courses required for the ITP. Students must possess a reliable computer and internet connection to complete the course requirements.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (49 credits)

- ASL 1001 - American Sign Language I *Credits: 3*
- ASL 1002 - American Sign Language II *Credits: 3*
- ASL 2001 - American Sign Language III *Credits: 3*
- ASL 2002 - American Sign Language IV *Credits: 3*
- ASL 2005 - Linguistics of American Sign Language *Credits: 3*
- ASL 2006 - Advanced ASL for Interpreters *Credits: 4*
- DSC 1001 - Visual Gestural Communication *Credits: 3*
- DSC 1012 - Deaf Communities: Facts and Perspectives *Credits: 3*
- INTR 1001 - Pre-Interpreting Skills *Credits: 3*
- INTR 1021 - Professional Standards in Interpreting *Credits: 3*
- INTR 2013 - Interpreting I: Consecutive *Credits: 4*

- INTR 2014 - Sign-to-Voice *Credits: 3*
- INTR 2113 - Interpreting II: Simultaneous *Credits: 4*
- INTR 2034 - Educational Interpreting with Specialized Populations *Credits: 3*
- INTR 2095 - Interpreting Practicum & Seminar *Credits: 4*

Total Credits: 70-72

Italian Studies - CSCU Transfer Degree, AA (ITAL-AA-TAP)

The CSCU Pathway Transfer Degree in Italian Studies, A.A. prepares students to continue their education at any Connecticut State University (CSU) leading to a baccalaureate degree in Italian. It is designed to strengthen and develop skills in Italian expression: critical reading, writing, thinking, listening, speaking, and research through the study of language, literature, culture, and related disciplines.

Learning Outcomes:

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

- Demonstrate listening proficiency in the target language at the Intermediate Low level as per the American Council on the Teaching of Foreign Languages guidelines*.
- Demonstrate speaking proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate reading proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate writing proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate analytic, interpretative, and critical thinking skills regarding language and the communication process.
- Recognize that understanding other cultures will enrich one's own life and result in lifelong learning.
- Apply critical thinking skills to the understanding of cultural differences and similarities.

*<https://www.actfl.org/publications/guidelines-and-manuals/actfl-proficiency-guidelines-2012>

This program is transfer focused. It is designed to prepare students with an interest in Italian studies to transfer to a four-year college or university at the junior level in pursuit of a bachelor's degree.

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

At Central Connecticut State University:

- Italian B.A.
- Italian B.S.ED. (7-12)

At Southern Connecticut State University:

- Italian B.A.
- Italian 7-12, B.S.
- Italian B.S.

Framework Courses (30-34 credits)

- ENG 1010 - Composition *Credits: 3*
- Elective QUAX - Quantitative Reasoning Course *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30 credits)

- ITAL 1011 - Elementary Italian I *Credits: 4*
- ITAL 1012 - Elementary Italian II *Credits: 4*

- ITAL 2011 - Intermediate Italian I *Credits: 4*
- ITAL 2012 - Intermediate Italian II *Credits: 4*
- Elective GLKY - Global Knowledge Course *Credits: 3*
- Recommended COMM 1305, GEOG 1010, or HUM 1019
- Elective CRTY - Creativity Course *Credits: 3*
- Unrestricted electives: Students who begin Italian at a higher level than ITAL 1011 will receive additional unrestricted electives. *Credits: 8-20*
Students should consider beginning work on minor requirements of some CSUs. They may also complete other General Education requirements (for CCSU, WCSU, SCSU, and CO-but NOT ECSU).

Total Credits: 61-64

Music (Associate of Arts in Music Studies, Manchester) (MUSC-AA)

The Associate of Arts in Music Studies degree program offers rigorous academic and performance courses comparable to the first two years of area baccalaureate music degree programs. It provides a comprehensive foundation in which students receive individual attention within their private lessons and interact with other performers in classroom and large ensemble settings. The music program emphasizes ensemble and solo performance with additional study of music theory, ear-training, keyboard skills, and music history. Musicians of all capabilities and experience can prepare for their particular musical goals including seasoned musicians as well as the talented beginner exploring music for the first time.

Music majors completing the program gain knowledge and skills required for: 1) direct employment in music-related careers (i.e. musical instrument service and sales, faith-based music worship services) or 2) for transferring to a baccalaureate music degree in performance, education, composition, audio recording, concert sound reinforcement, commercial production, church music, arts management, etc. The Associate of Arts in Music Studies also serves an ever-expanding population of diverse students seeking personal enjoyment in the study of music. Students may enroll in the program full or part time.

Students transferring from music programs including NASM accredited institutions must undergo a music audition and theory placement exam to verify the knowledge and skills obtained from music theory courses taken at the prior institution and provide proper placement within the degree.

CT State Manchester's Associate of Arts in Music is nationally accredited by the National Association of Schools of Music Studies (NASM) and in good standing.

Learning Outcomes:

Upon successful completion of the Associate of Arts in Music Studies requirements, graduates will:

- Demonstrate a historical/cross-cultural awareness and appreciation of Western European and American contemporary music.
- Demonstrate skills and techniques that reflect an understanding of the theoretical aspect of music, including: an understanding of music theory fundamentals; exploration and development of voice leading principles; formal analysis/genres; aural skills and keyboard techniques.
- Demonstrate an ability to perform solo music selections and within a music ensemble group (vocal or instrumental).
- Demonstrate technical facility and knowledge on specified instrument or voice
- Demonstrate the ability to communicate and express through the medium of music

Admission Process

Proper advisement prior to entering the music studies program is crucial to ensure students commence their studies on the right track to completing the degree successfully. **In compliance with the National Association for Schools of Music (NASM) accrediting standards, students interested in pursuing the CT State Manchester Associate of Arts in Music Studies are required to audition to determine their level of instrumental or vocal music proficiency.** Auditions must be in person and are scheduled for 30 minutes. Students are required to perform scales and two contrasting pieces.

The audition process, application and scheduled dates can be found on the Manchester campus Music Studies web page under **Audition Information**. Students who indicate prior music instruction may have the option to be tested (Credit by Examination) and receive credit for Music Theory, Ear Training, and Group Piano courses.

General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*

- PSY 1011 - General Psychology I *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** ENG 1020 - Composition II and Literature *Credits: 3*
- **OR** ENG 1030 - Composition II and Non-fiction Texts *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (44 credits)

- MUS 1405 - Applied Lessons I *Credits: 2*
- MUS 1406 - Applied Lessons II *Credits: 2*
- MUS 2405 - Applied Lessons III *Credits: 2*
- MUS 2406 - Applied Lessons IV *Credits: 2*
- MUS 1501 - Chorale Ensemble I *Credits: 1*
- **OR** MUS 1521 - Classical Chamber Ensemble I *Credits: 1*
- **OR** MUS 1522 - Jazz Combo I *Credits: 1*
- MUS 1502 - Chorale Ensemble II *Credits: 1*
- **OR** MUS 1532 - Classical Chamber Ensemble II *Credits: 1*
- **OR** MUS 1531 - Jazz Combo II *Credits: 1*
- MUS 2503 - Chorale Ensemble III *Credits: 1*
- **OR** MUS 2523 - Classical Chamber Ensemble III *Credits: 1*
- **OR** MUS 2533 - Jazz Combo III *Credits: 1*
- MUS 2504 - Chorale Ensemble IV *Credits: 1*
- **OR** MUS 2524 - Classical Chamber Ensemble IV *Credits: 1*
- **OR** MUS 2534 - Jazz Combo IV *Credits: 1*
- MUS 1201 - Music Ear-Training I *Credits: 1*
- MUS 1202 - Music Ear-Training II *Credits: 1*
- MUS 2201 - Music Ear-Training III *Credits: 1*
- MUS 2202 - Music Ear-Training IV *Credits: 1*
- MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- MUS 1002 - Music History - Classical-Contemporary *Credits: 3*
- MUS 1101 - Music Theory I *Credits: 3*
- MUS 1102 - Music Theory II *Credits: 3*
- MUS 2103 - Music Theory III *Credits: 3*
- MUS 2104 - Music Theory IV *Credits: 3*
- MUS 1301 - Group Piano I *Credits: 1*
- MUS 1302 - Group Piano II *Credits: 1*
- MUS 2303 - Group Piano III *Credits: 1*
- MUS 2304 - Group Piano IV *Credits: 1*
- MUS 1007 - Today's Music *Credits: 3*
- **Music Elective/s** to choose from the **Designated Electives List** below *Credits: 3*

Designated Electives

Some courses may only be offered at specific campus locations.

- MUS 1004 - World Music *Credits: 3*
- MUS 1008 - Today's Music: Gospel, Ragtime, Blues, Jazz *Credits: 3*
- MUS 1100 - Fundamentals of Music *Credits: 3*
- MUS 1009 - History and Appreciation of Jazz *Credits: 3*
- MUS 1811 - Guitar I *Credits: 3*

- MUS 1812 - Guitar II *Credits: 3*
- MUS 1300 - Beginning Piano *Credits: 3*
- MUS 1530 - Jazz Ensemble *Credits: 2*
- MUS 1801 - Beginning Voice *Credits: 3*
- MUS 1803 - Language for Singers *Credits: 2*
- MUS 1511 - Madrigal/Chamber Singer I *Credits: 1*
- MUS 1512 - Madrigal/Chamber Singer II *Credits: 1*
- MUS 1831 - Introduction to Conducting *Credits: 2*
- MUS 1821 - Introduction to Music Education *Credits: 2*
- MUS 1602 - Electronic Music Composition I *Credits: 3*
- MUS 2603 - Electronic Music Composition II *Credits: 3*
- MUS 2513 - Madrigal/Chamber Singer III *Credits: 1*
- MUS 2514 - Madrigal/Chamber Singer IV *Credits: 1*
- MUS 2098 - Special Topics in Music *Credits: 2*

Total Credits: 65-68

NOTES: Music major students are required to take 4 semesters of Ensembles (Vocal, or instrumental: Classical or Jazz).

Group Piano I and Applied Lessons level I courses require permission of the Music department. As in all nationally accredited music programs, students declaring Music as their major must do an interview/audition with the music faculty prior to registering for any music courses for the first time. This audition is not a pass or fail. It is simply a method of assessment, so faculty can better advise them and direct them in the right direction from the beginning of their music studies. The Piano lab has limited seat capability, thus Group Piano courses can only be open to music majors. MUS 1300 is a Beginning Piano course open to any student at the college. Occasionally, non-music majors want to continue studying the instrument. If there are seats available in the class 2-3 days before classes begin, the instructor might grant them permission to register.

Music Industry, AS (MUSI-AS)

The Music Industry Associate in Science Degree will provide students with a comprehensive experience and knowledge of the music industry for the purpose of immediate entry into the professional world and/or successful matriculation to a four-year music industry program.

Learning Outcomes:

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

- Apply a comprehensive knowledge of the principles and practices of managing musical artists and music institutions in an administrative/managerial function.
- Apply a comprehensive knowledge of the principles and practices of managing and administrating commercial music/media institutions in sales, advertising, and publicity.
- Operate and manage a complete recording studio.
- Operate and execute all functions and processes involved in a recording project, from recording the artist, mixing and editing the music, to packaging compact disks for commercial distribution.
- Produce professional quality studio music through the use of music technologies and music software.
- Demonstrate proficiency in acoustic music theory.
- Demonstrate proficiency in piano/keyboard skills.
- Demonstrate a general knowledge of Western music.
- Communicate effectively, think critically, reason scientifically and quantitatively, and employ a global perspective.

The program has an official articulation agreement with the University of Bridgeport.

Students may also transfer to other schools such as the University of New Haven, Berklee College of Music, etc. but official articulation agreements for these schools are not currently in place.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 - Mathematics of Finance *Credits: 3 or higher*
- MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- **OR** MUS 1002 - Music History - Classical-Contemporary *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (42 credits)

- MUS 1600 - Introduction to Music Production *Credits: 3*
- MUS 1004 - World Music *Credits: 3*
- **OR** MUS 1007 - Today's Music *Credits: 3*
- **OR** MUS 1008 - Today's Music: Gospel, Ragtime, Blues, Jazz *Credits: 3*
- **OR** MUS 1102 - Music Theory II *Credits: 3*
- MUS 1701 - Introduction to Music Business *Credits: 3*
- MUS 1100 - Fundamentals of Music *Credits: 3*
- **OR** MUS 1101 - Music Theory I *Credits: 3*
- MUS 1300 - Beginning Piano *Credits: 3*
- MUS 1011 - Survey of Recording Industry *Credits: 3*
- MUS 1602 - Electronic Music Composition I *Credits: 3*

- MUS 2603 - Electronic Music Composition II *Credits: 3*
- MUS 1702 - Arts and Entertainment Management *Credits: 3*
- **OR** BMGT 2020 - Principles of Management *Credits: 3*
- MUS 2606 - Music for Film, TV, and Other Media *Credits: 3*
- MUS 2605 - Principles of Sound Recording *Credits: 3*
- MUS 2604 - Advanced Music Mixing and Processing *Credits: 3*
- MUS 2095 - Music Industry Practicum Project/Internship *Credits: 3*
- Open Elective *Credits: 3*

Total Credits: 63-65

Music, AA (Gateway, Naugatuck Valley, Norwalk) (MUSX-AA)

The Music, A.A. degree is appropriate for students who wish to study music within the broader context of a liberal arts education. College-level study is an opportunity to combine art with intellect. In addition to practicing and performing, students in the Music A.A. program will learn to analyze and interpret musical compositions and performances with an awareness of craft, skill, and discipline. Classes in music theory and technique give students a foundation for pursuing a wide variety of upper-level baccalaureate degree programs in music, and a variety of specializations within those programs.

Learning Outcomes:

Upon successful completion of Music program requirements, graduates will:

- Utilize theoretical principles in the analysis and composition of music, demonstrating both an awareness of the craft, skill and discipline employed, and the intuitive values expressed.
- Demonstrate the ability to hear, internally, the melodic, harmonic, and rhythmic elements of music, and display the musicianship skills necessary to participate successfully in various musical endeavors, including performance and composition.
- Present successful solo performances using appropriate repertoire for their chosen instrument/voice with technical proficiency, musicality, and stylistic awareness. Perform musical compositions that demonstrate an intuitive awareness of the symbolic meanings inherent in that work as well as a degree of craft appropriate to the student's level of development.
- Perform and/or participate successfully in small and large ensembles, using time management and interpersonal skills to assist in the production of a collaborative musical work.
- Create original music utilizing the knowledge and skills acquired in the music courses and applied lessons taken by incipient composers, songwriters, and arrangers.
- Demonstrate intermediate keyboard competency through the performance of level-appropriate piano literature.
- Synthesize standard music references and resources (reference works, periodicals, software, etc.) while writing analytical, historical, critical, biographical, and research-oriented projects on topics in music.

Goals for the Music A.A. degree also include the following:

- To prepare students for careers in music and arts-related professions.
- To increase students' understanding and appreciation of the arts in relation to society, thus encouraging their lifelong advocacy of the arts.
- To allow students to maintain an emphasis on music while further exploring other academic interests.
- To foster intellectual curiosity.
- To encourage students to seek breadth and variety in their educational pursuits to aid them in securing employment in the ever-changing global economy.

The Music A.A. program enables students to develop musical proficiency in Music Theory, Musicianship, Keyboard, Harmony, and Performance in preparation for transfer to Bachelor of Music degree programs at the university level or for their career goals in the field of music. Courses for non-performance music majors are available for composers, arrangers, songwriters, and conductors. The program also features several music ensembles open to both non-majors and music majors. In addition to applied lessons and ensemble, the curriculum offers music theory, ear training, keyboard skills, and music literature, courses that all music majors must complete during their freshman and sophomore years.

Note: This is an open-admission program. CT State also offers an audition-based admission program, accredited by the National Association of the Schools of Music, on the Manchester campus.

General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits:3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*

- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (41 credits)

- **MUSIC THEORY & FUNDAMENTALS - Choose 4 (12 credits)**
 - MUS 1100 - Fundamentals of Music *Credits: 3*
 - MUS 1101 - Music Theory I *Credits: 3*
 - MUS 1102 - Music Theory II *Credits: 3*
 - MUS 2103 - Music Theory III *Credits: 3*
 - MUS 2104 - Music Theory IV *Credits: 3*
- **EAR TRAINING (4 credits)**
 - MUS 1201 - Music Ear-Training I *Credits: 1*
 - MUS 1202 - Music Ear-Training II *Credits: 1*
 - MUS 2201 - Music Ear-Training III *Credits: 1*
 - MUS 2202 - Music Ear-Training IV *Credits: 1*
- **PERFORMANCE ENSEMBLE (choose 4 credits)**
 - MUS 1501 - Chorale Ensemble I *Credits: 1*
 - MUS 1502 - Chorale Ensemble II *Credits: 1*
 - MUS 2503 - Chorale Ensemble III *Credits: 1*
 - MUS 2504 - Chorale Ensemble IV *Credits: 1*
 - MUS 1521 - Classical Chamber Ensemble I *Credits: 1*
 - MUS 1532 - Classical Chamber Ensemble II *Credits: 1*
 - MUS 2523 - Classical Chamber Ensemble III *Credits: 1*
 - MUS 2524 - Classical Chamber Ensemble IV *Credits: 1*
 - MUS 1540 - Drumming and Percussion Ensemble *Credits: 3*
 - MUS 1530 - Jazz Ensemble *Credits: 2*
 - MUS 1522 - Jazz Combo I *Credits: 1*
 - MUS 1531 - Jazz Combo II *Credits: 1*
 - MUS 2533 - Jazz Combo III *Credits: 1*
 - MUS 2534 - Jazz Combo IV *Credits: 1*
- **PIANO, VOICE, GUITAR - complete one group (4 credits)**
 - A.
 - MUS 1301 - Group Piano I *Credits: 1*
 - MUS 1302 - Group Piano II *Credits: 1*
 - MUS 2303 - Group Piano III *Credits: 1*
 - MUS 2304 - Group Piano IV *Credits: 1*
 - B.
 - MUS 1301 - Group Piano I *Credits 1* **AND** MUS 1801 - Beginning Voice *Credits: 3*
 - **OR** MUS 1802 - Intermediate Voice *Credits: 3*

- C.
 - MUS 1301 - Group Piano I *Credits 1 AND*
 - MUS 1300 - Beginning Piano *Credits: 3*
 - **OR** MUS 1303 - Intermediate Piano *Credits: 3*
- D.
 - MUS 1301 - Group Piano I *Credits 1 AND*
 - MUS 1811 - Guitar I *Credits: 3*
- **APPLIED LESSONS - complete 4 semesters (8 credits)**
 - MUS 1405 - Applied Lessons I *Credits: 2*
 - MUS 1406 - Applied Lessons II *Credits: 2*
 - MUS 2405 - Applied Lessons III *Credits: 2*
 - MUS 2406 - Applied Lessons IV *Credits: 2*
- **MUSIC HISTORY & APPRECIATION - choose 1 (3 credits)**
 - MUS 1000 - History and Appreciation of Western Music *Credits: 3*
 - MUS 1009 - History and Appreciation of Jazz *Credits: 3*
 - MUS 1010 - Rock and Roll History and Appreciation *Credits: 3*

Music Electives (6 credits)

Some courses may only be offered at specific campus locations.

- MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- MUS 1002 - Music History - Classical-Contemporary *Credits: 3*
- MUS 1004 - World Music *Credits: 3*
- MUS 1007 - Today's Music *Credits: 3*
- MUS 1008 - Today's Music: Gospel, Ragtime, Blues, Jazz *Credits: 3*
- MUS 1300 - Beginning Piano *Credits: 3*
- MUS 1303 - Intermediate Piano *Credits: 3*
- MUS 1601 - Electronic Music *Credits: 3*
- MUS 1602 - Electronic Music Composition I *Credits: 3*
- MUS 1701 - Introduction to Music Business *Credits: 3*
- MUS 1702 - Arts and Entertainment Management *Credits: 3*
- MUS 1801 - Beginning Voice *Credits: 3*
- MUS 1802 - Intermediate Voice *Credits: 3*
- MUS 1811 - Guitar I *Credits: 3*
- MUS 1812 - Guitar II *Credits: 3*
- MUS 1821 - Introduction to Music Education *Credits: 2*
- MUS 2604 - Advanced Music Mixing and Processing *Credits: 3*
- MUS 2605 - Principles of Sound Recording *Credits: 3*
- MUS 2606 - Music for Film, TV, and Other Media *Credits: 3*
- MUS 2098 - Special Topics in Music *Credits: 2*
- THR 1195 - Theater Practicum I *Credits: 3*
- THR 2216 - Musical Theater Training I *Credits: 3*
- THR 2217 - Musical Theater Training II *Credits: 3*
- THR 2295 - Theater Practicum II *Credits: 3*

Total Credits: 62-65

New Media Production: Audio and Music Certificate (NAMC-CC-NMP)

This program is a career-oriented certificate program designed to prepare students to work in various types of audio-related positions in music recording and media. Students can specialize in either music production or audio production for media, with some overlap between these two areas. The program emphasizes hands-on training using professional-level, state-of-the-art, digital audio technology and software with some required coursework in music. While not designed as a transfer program, the curriculum includes several courses modeled after those offered by similar bachelor's degree programs and should allow for easy transfer to these types of programs.

CT State, Middlesex campus is home to a new audio recording and post-production studios and labs are Pro Tools-based and will allow students to learn the advanced-level skills necessary to be competent professional audio technicians.

Learning Outcomes

- Effectively use a variety of industry tools and processes for producing contemporary forms of digital media across multiple delivery platforms and delivery systems.
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Workflow analysis and instructor review
 - Review of effective project delivery across platforms
- Use advanced technologies within a chosen area of specialization with the goal of successfully transitioning from school to working in the industry
Assessment:
 - Equipment and software certification tests - project and instructor portfolio review
 - Work site supervisor and evaluation
- Plan, create and maintain a professional portfolio highlighting and marketing professional skills and capabilities. Showcase this portfolio via websites, blogs, and social media to achieve employment and educational goals.
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Continuous instructor review of online portfolio and social media presence
- Demonstrate key competencies in media writing, video production, audio production, graphic design, interactive media, photography and other technologies within digital media arts.
Assessment:
 - Equipment and software certification tests
 - Grading of written materials
 - Application of aesthetic techniques to class projects - project and portfolio review
 - Thesis project instructor review and/or review by professional
- Apply critical thinking and aesthetic judgments in creating collaborative media projects.
Assessment:
 - Ability to apply aesthetics examined in media works to personal and class projects - instructor review
 - Demonstrate successful collaboration with peers and professionals as needed
- Communicate clearly, concisely, visually, verbally and in writing, using techniques appropriate for the intended audience.
Assessment:
 - Demonstrate media literacy skills through presentation of written, aural and visual media
 - Research and evaluate media through audience analysis and critiques
 - Instructor review
- Apply course knowledge and gain media production experience in a work environment through experiential learning including internships, practicums and community engaged learning.
Assessment:

- Instructor review of experiential learning blogs and logs
- On-site work supervisor evaluations of student work ethic, projects and collaboration - instructor review of student experiential learning evaluation

Required Courses

- COMM 1612 - Audio Production *Credits: 3*
- MUS 1100 - Fundamentals of Music *Credits: 3*
- **OR** MUS 1101 - Music Theory I *Credits: 3*
- MUS 1201 - Music Ear-Training I *Credits: 1*
- MUS 1602 - Electronic Music Composition I *Credits: 3*
- MUS 1301 - Group Piano I *Credits: 1*
- MUS 2603 - Electronic Music Composition II *Credits: 3*
- MUS 2605 - Principles of Sound Recording *Credits: 3*
- MUS 2604 - Advanced Music Mixing and Processing *Credits: 3*
- MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- **OR** MUS 1002 - Music History - Classical-Contemporary *Credits: 3*
- **OR** MUS 1004 - World Music *Credits: 3*
- **OR** MUS 1007 - Today's Music *Credits: 3*
- **OR** MUS 1008 - Today's Music: Gospel, Ragtime, Blues, Jazz *Credits: 3*
- **OR** MUS 1009 - History and Appreciation of Jazz *Credits: 3*
- **OR** MUS 1010 - Rock and Roll History and Appreciation *Credits: 3*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*
- Open Elective *Credits: 3*

Total Credits: 29

New Media Production: Audio and Music, AAS (NAMP-AAS-NMP)

The NMP: Audio & Music program is a career-oriented degree program that is part of a family of programs in New Media Production. The New Media Production programs are dynamic, hands-on programs designed for aspiring content creators. These programs focus on the practical aspects of new media production, design, and aesthetics; leverage a wide range of innovative technologies; utilize advanced media production facilities; and help students to work in one of several media industries. These programs are ideal for creative individuals who are enthusiastic about shaping the future of digital content and media production.

New Media Production programs provide experience with the latest software, tools, and equipment used in content creation. Emphasizing experiential learning, the programs include projects, workshops, and collaborative assignments that simulate real-world scenarios and challenges in digital media production. Students build a comprehensive portfolio of their work, displaying their skills and creativity to potential employers. Students also complete a capstone project of professional quality or at least one internship. The programs offer opportunities for networking and valuable insights into the media production industry.

Students immerse themselves in the creation of digital content, gaining expertise in various forms of media such as video, audio, animation, and interactive systems. Students have access to advanced technology and equipment, such as professional audio recording tools, graphic and animation software, and advanced video production equipment, distinctly integrated into the CT State Middlesex Center for New Media, an advanced, multi-million-dollar studio production environment.

Each of the New Media Production Associate of Applied Science degrees requires students to complete 21-22 credits of general education courses, 33 credits of directed program courses, and include 6 credits of open electives. In lieu of an associate degree, students may opt to take a certificate program that includes the same directed program courses without the general education or elective options.

The NMP: Audio and Music associate degree program is designed to prepare students to work in several types of audio-related positions in music recording and media. The primary focus of the program is music recording and production, but it also includes some coverage of audio production for media. The program emphasizes hands-on production training using professional-level, state-of-the-art, digital audio technology and software and covers all aspects of recording, mixing, and processing. It also includes some required coursework in music study and theory. While not designed as a transfer program, the curriculum includes several courses modeled after those offered by similar bachelor's degree programs and should allow for easy transfer to these types of programs.

Learning Outcomes for All New Media Production Programs:

- Create digital media content through the application of relevant principles and theories.
- Use fundamental workflows involved in digital media production processes.
- Interpret the role of digital media in contemporary communication and society.
- Competently use industry-standard media technologies.
- Apply advanced media production techniques.
- Distinguish between different styles and genres of digital media.
- Critique digital media projects based on aesthetic value, technical quality, and their impact on audience engagement.

Learning Outcomes for Audio and Music:

- Demonstrate knowledge of basic music theory and concepts.
- Create professional quality audio and music compositions.
- Setup and record a sound or music session using appropriate tools and recording techniques.
- Apply the general principles of sound design to build a mix, perform edits, and apply various signal processing effects using advanced Digital Audio Workstations.
- Distinguish between different music types and genres both historical and modern, and influential composers and musicians.

New Media Production General Education Core (21-24 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher (MATH 1100 or higher required for transfer) *Credits: 3-4*

- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40 Credits)

- NMP 1001 - Digital Media Foundations *Credits: 3*
- **OR** NMP 1025 - New Media Production *Credits: 3*
- Program Elective in Media or Music: COMM, NMP, or MUS *Credits: 3*
- COMM 1612 - Audio Production *Credits: 3*
- MUS 1602 - Electronic Music Composition I *Credits: 3*
- MUS 2603 - Electronic Music Composition II *Credits: 3*
- MUS 1100 - Fundamentals of Music *Credits: 3*
- MUS 2605 - Principles of Sound Recording *Credits: 3*
- MUS 2604 - Advanced Music Mixing and Processing *Credits: 3*
- MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- **OR** MUS 1002 - Music History - Classical-Contemporary *Credits: 3*
- **OR** MUS 1004 - World Music *Credits: 3*
- **OR** MUS 1007 - Today's Music *Credits: 3*
- **OR** MUS 1009 - History and Appreciation of Jazz *Credits: 3*
- **OR** MUS 1010 - Rock and Roll History and Appreciation *Credits: 3*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2095 - Media Production Practicum *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*
- MUS 1301 - Group Piano I *Credits: 1*
- Program Elective in Media: any COMM or NMP course *Credits: 3*
- Open Electives *Credits: 6*

Total Credits: 61-64

New Media Production: Corporate Media Certificate (NMC-CC-NMP)

The Corporate Media Production certificate program prepares students for entry-level media production positions in business, industry, and education. Emphasis is on hands-on production skills. Corporate media professionals tend to be generalists; therefore, this program provides students with a variety of production experiences including writing scripts, camera operation, video editing, web production and video streaming as they apply to business. An internal practicum in the college's nationally recognized Corporate Media Production department or an external internship at a company or non-profit organization is required.

This 30-credit certificate program is intended as a stackable credential for students looking to specialize in corporate media production. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate degree or higher or are enrolled in the Digital Media Production associate degree program to improve employability upon graduation.

Learning Outcomes

- Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and systems.
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Workflow analysis and instructor review
 - Review of effective project delivery across platforms
- Use advanced technologies within a chosen area of specialization with the goal of successfully transitioning from school to working in the industry
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Work site supervisor and evaluation
- Plan, create and maintain a professional portfolio highlighting and marketing professional skills and capabilities. Showcase this portfolio via websites, blogs, and social media to achieve employment and educational goals.
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Continuous instructor review of online portfolio and social media presence
- Demonstrate key competencies in media writing, video production, audio production, graphic design, interactive media, photography and other technologies within digital media arts.
Assessment:
 - Equipment and software certification tests
 - Grading of written materials
 - Application of aesthetic techniques to class projects - project and portfolio review
 - Thesis project instructor review and/or review by professional
- Apply critical thinking and aesthetic judgments in creating collaborative Digital Media projects.
Assessment:
 - Ability to apply aesthetics examined in media works to personal and class projects -Instructor review
 - Demonstrate successful collaboration with peers and professionals as needed
- Communicate clearly, concisely, visually, verbally and in writing, using techniques appropriate for the intended audience.
Assessment:
 - Demonstrate media literacy skills through presentation of written, aural and visual media
 - Research and evaluate media through audience analysis and critiques
 - Instructor review

- Apply course knowledge and gain media production experience in a work environment through experiential learning including internships, practicums and community engaged learning.

Assessment:

- Instructor review of experiential learning blogs and logs
- On-site work supervisor evaluations of student work ethic, projects and collaboration - instructor review of student experiential learning evaluation

Program is eligible for Workforce Innovation and Opportunity Act (WIOA)

Required Courses

- BMGT 2040 - Managerial Communications *Credits: 3*
- **OR** BENT 2170 - Small Business Management & Growth *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- *or any elective if ENG 1010 previously completed*
- COMM 2513 - Scriptwriting for Media *Credits: 3*
- COMM 1601 - Digital Video Production *Credits: 3*
- NMP 1001 - Digital Media Foundations *Credits: 3*
- **OR** NMP 1025 - New Media Production *Credits: 3*
- NMP 1047 - Digital Cinematography *Credits: 3*
- NMP 2064 - Advanced Video Editing *Credits: 3*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*
- NMP 2095 - Media Production Practicum *Credits: 3*
- Open Elective *Credits: 3*

Total Credits: 33

New Media Production: Corporate Media, AAS (NCMD-AAS-NMP)

The New Media Production Applied Associate of Science (AAS) degree qualifies students to work in the many industries that require skills in digital media production. Before the end of their first semester students are required to enroll in a certificate, specializing in one of seven areas of media production targeted to the employment needs of the state's media businesses:

- Audio and Music
- Corporate Media
- Digital Marketing
- Film and Video
- Multimedia
- News and Sports

Media is a collaborative creative business. To foster collaboration in an educational setting, the New Media Production program is designed as a cohort program. Students in their first semester are in a single cohort, taking the same courses which provide identified skills that all media production professionals should have including foundational digital media production skills, an understanding of media literacy and aesthetics, shooting and editing digital video, and knowledge about the various careers in media. At the end of that first semester, students declare their area of specialization by enrolling in one of the certificate programs. During the second and third semester, students break into smaller cohorts in their area of specialization. The larger cohort comes back together in the final semester to meet graduation requirements through the production of a capstone project of professional quality, collaborating with other members of the cohort who can bring their specialized skills to these portfolio productions. At least one internship is required to graduate from the program. Students graduate with two credentials, an AAS degree and a certificate that attest to their specialization in their selected area of production.

Students learn in a professional production environment, the \$2.5 million Center for New Media (CNM) on the Middlesex campus. CNM features advanced media production studios, labs and classrooms outfitted with the latest professional production equipment and instructional technology. A loan pool in the Center provides students with digital cinema and high-definition broadcast cameras, wireless microphones, professional light kits, audio mixers, camera dollies and other equipment needed to complete projects. There are 80 media production workstations in the Center with the latest industry-standard professional software, and a fast network infrastructure to access, manage and move large media files. CNM staff, educational assistants and student workers provide tutoring assistance, perform equipment certifications, and provide other educational support.

Students can intern with either outside businesses or the award-winning Center for New Media Productions. Center for New Media Productions' full-time media producer assigns crew positions and projects to students, something they would not normally get at an external internship.

The New Media Production Associate of Applied Science degree will provide students the opportunity to complete 21 credits of general education coursework. There are 24 credits of core program requirements divided into 12 credits of core courses that all New Media Production majors must take including 2 capstone courses and 12 credits of Program Requirements in their area of specialization. Further specialization is provided by 15 credits of Directed Electives.

NMP courses can only be taken at the CT State-Middlesex campus.

New Media Learning Outcomes

- Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and systems.
- Use advanced technologies within a chosen area of specialization with the goal of successfully transitioning from school to working in the industry
- Plan, create and maintain a professional portfolio highlighting and marketing professional skills and capabilities. Showcase this portfolio via websites, blogs, and social media to achieve employment and educational goals.
- Demonstrate key competencies in media writing, video production, audio production, graphic design, interactive media, photography and other technologies within digital media arts.
- Apply critical thinking and aesthetic judgments in creating collaborative Digital Media projects.

- Communicate clearly, concisely, visually, verbally and in writing, using techniques appropriate for the intended audience.
- Apply course knowledge and gain media production experience in a work environment through experiential learning including internships, practicums and community engaged learning.

In addition, Corporate Media student will:

- Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and delivery systems.
- Use advanced technologies within a chosen area of specialization with the goal of successfully transitioning from school to working in the industry
- Plan, create and maintain a professional portfolio highlighting and marketing professional skills and capabilities. Showcase this portfolio via websites, blogs, and social media to achieve employment and educational goals.
- Demonstrate key competencies in media writing, video production, audio production, graphic design, interactive media, photography and other technologies within digital media arts.
- Apply critical thinking and aesthetic judgments in creating collaborative Digital Media projects.
- Communicate clearly, concisely, visually, verbally and in writing, using techniques appropriate for the intended audience.
- Apply course knowledge and gain media production experience in a work environment through experiential learning including internships, practicums and community engaged learning.

New Media Production General Education Core (21-24 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher (MATH 1100 or higher required for transfer) *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- NMP 1001 - Digital Media Foundations *Credits: 3*
- **OR** NMP 1025 - New Media Production *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- GRA 1101 - Introduction to Computer Graphics *Credits: 3*
- COMM 1201 - Film Study and Appreciation *Credits: 3*
- **OR** NMP 2003 - Media Literacy *Credits: 3*
- NMP 2020 - Television Studio Production *Credits: 3*
- COMM 2502 - Social Media Strategy *Credits: 3*
- NMP 2064 - Advanced Video Editing *Credits: 3*
- NMP 1047 - Digital Cinematography *Credits: 3*
- **OR** COMM 1612 - Audio Production *Credits: 3*
- BMGT 2040 - Managerial Communications *Credits: 3*
- **OR** BENT 2170 - Small Business Management & Growth *Credits: 3*
- NMP 2090 - Media Production Capstone *Credits: 3*
- NMP 2095 - Media Production Practicum *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*

- Program Elective: COMM/DGA/GRA/NMP *Credits: 3*
- Open Elective: any course number 1000 or higher *Credits: 3*

Total Credits: 60-63

New Media Production: Digital Marketing Certificate (NDGC-CC-NMP)

The Digital Marketing certificate prepares students for entry-level digital marketing positions. It also can boost current marketable skills on a resume and help facilitate a career change. The Digital Marketing certificate is a career path that includes Business, Communications, English, and Digital Media Production courses.

A review from the American Marketing Association and the Digital Marketing Association of the top skills digital Marketers need to be successful in the workforce are embedded in the program design. In addition, the Digital Marketing certificate outcomes provide competencies in the top skills required found in digital marketing positions; Marketing Knowledge, Social Media Marketing, Marketing Strategy, Product Management, Budgeting, Marketing Communications, Content Marketing, E-commerce, User Interface & Experience, Online Advertising Email Marketing, Search Engine Optimization (SEO), Website Optimization, Display and Video Advertising and Analytics.

Learning Outcomes:

- Understand and apply segmentation, targeting, positioning, branding, and the marketing mix in pursuit of long-term marketing objectives.
- Develop and apply integrated marketing strategies for all channels.
- Analyze principles, techniques and major functions of management and business organizations.
- Create Search Engine Marketing (SEM) & Conversion Rate Optimization (CRO) techniques (campaigns), evaluate their effectiveness and recommend changes that will improve an e-commerce campaign's conversion rates.
- Understand the various methods of online display advertising and create online display ad campaigns and measure its ROAS (return on ad spend based on budgeting) for an e-commerce site.
- Understand and interpret web analytics; determine the appropriate KPIs for any type of website and make appropriate recommendations to an e-commerce website based on the conversion funnel and analytics.
- Understand and implement best practices in marketing to a database of current and potential customers via email.
- Create compelling content including titles, bylines and copy and utilize knowledge of social media tactics to design an effective social media campaigns.
- Use new media including social media, blogs, web sites and online portfolios for course presentations and job preparation.
- Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and delivery systems.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- NMP 1110 - Introduction to Digital Graphics *Credits: 3*
- NMP 2210 - Web Productions Fundamentals *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMKT 2160 - Digital Marketing *Credits: 3*
- BMKT 2080 - Social Media Marketing *Credits: 3*
- Any course in ACCT, BMGT, BENT, BMKT, BUSN, NMP, COMM, ENG, MATH, ECON *Credits: 3*
- Any course in ACCT, BMGT, BENT, BMKT, BUSN, NMP, COMM, ENG, MATH *Credits: 3*
- BUSN 2098 - Business Special Topics *Credits: 3*
- **OR** BUSN 2095 - Business Practicum *Credits: 3*

Total Credits: 30

New Media Production: Digital Marketing, AAS (NDGM-AAS-NMP)

The NMP: Digital Marketing program is a career-oriented degree program that is part of a family of programs in New Media Production. The New Media Production programs are dynamic, hands-on programs designed for aspiring content creators. These programs focus on the practical aspects of new media production, design, and aesthetics; leverage a wide range of innovative technologies; utilize advanced media production facilities; and help students to work in one of several media industries. These programs are ideal for creative individuals who are enthusiastic about shaping the future of digital content and media production.

New Media Production programs provide experience with the latest software, tools, and equipment used in content creation. Emphasizing experiential learning, the programs include projects, workshops, and collaborative assignments that simulate real-world scenarios and challenges in digital media production. Students build a comprehensive portfolio of their work, displaying their skills and creativity to potential employers. Students also complete a capstone project of professional quality or at least one internship. The programs offer opportunities for networking and valuable insights into the media production industry.

Students immerse themselves in the creation of digital content, gaining expertise in various forms of media such as video, audio, animation, and interactive systems. Students have access to advanced technology and equipment, such as professional audio recording tools, graphic and animation software, and advanced video production equipment, distinctly integrated into the CT State Middlesex Center for New Media, an advanced, multi-million-dollar studio production environment.

Each of the New Media Production Associate of Applied Science degrees requires students to complete 21-22 credits of general education courses, 33 credits of directed program courses, and include 6 credits of open electives. In lieu of an associate degree, students may opt to take a certificate program that includes the same directed program courses without the general education or elective options.

The NMP: Digital Marketing associates-degree program is designed to prepare students to work in marketing careers where knowledge and skills in media are required. Students learn processes associated with digital marketing with an emphasis on hands-on, experiential learning. In addition, the Digital Marketing program is a unique program that works collaboratively across three disciplines: new media, business, and communications. While not designed as a transfer program, the curriculum includes several courses modeled after those offered by similar bachelor's degree programs and should allow for easy transfer to these types of programs.

Learning Outcomes for All New Media Production Programs

- Create digital media content through the application of relevant principles and theories.
- Use fundamental workflows involved in digital media production processes.
- Interpret the role of digital media in contemporary communication and society.
- Competently use industry-standard media technologies.
- Apply advanced media production techniques.
- Distinguish between different styles and genres of digital media.
- Critique digital media projects based on aesthetic value, technical quality, and their impact on audience engagement.

Digital Marketing Learning Outcomes

- Employ segmentation, targeting, positioning, branding, and the marketing mix in pursuit of long-term marketing objectives.
- Develop and apply integrated marketing strategies for different media platforms.
- Analyze principles, techniques and major functions of management and business organizations.
- Create Search Engine Marketing (SEM) & Conversion Rate Optimization (CRO) techniques (campaigns), evaluate their effectiveness and recommend changes that will improve an e-commerce campaign's conversion rates.
- Create online display ad campaigns and measure its return on ad spend based on budgeting for an e-commerce site.
- Interpret web analytics, determine the appropriate performance indicators, and make appropriate recommendations for an e-commerce website based on the analytics.
- Implement best practices in marketing to a database of current and potential customers via email.
- Create compelling content including titles, bylines and copy and utilize knowledge of social media tactics to design an effective social media campaign.
- Use new media including social media, blogs, web sites and online portfolios for course presentations and job preparation.

- Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and delivery systems.

New Media Production General Education Core (21-24 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher (MATH 1100 or higher required for transfer) *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- NMP 1001 - Digital Media Foundations *Credits: 3*
- **OR** NMP 1025 - New Media Production *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- NMP 1110 - Introduction to Digital Graphics *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- BMKT 2160 - Digital Marketing *Credits: 3*
- COMM 2502 - Social Media Strategy *Credits: 3*
- **OR** BMKT 2080 - Social Media Marketing *Credits: 3*
- COMM 1601 - Digital Video Production *Credits: 3*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2095 - Media Production Practicum *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*
- **OR** BUSN 2195 - Business Co-op Internship *Credits: 3*
- Program Elective - ACCT/BENT/BUSN/BMKT/COMM/GRA/NMP *Credits: 3*
- Program Elective - ACCT/BENT/BUSN/BMKT/COMM/GRA/NMP *Credits: 3*
- Open Electives - 1000 Level course or higher *Credits: 6*

Total Credits: 60-63

New Media Production: Film & Video Certificate (NFLC-CC-NMP)

The Film and Video certificate program teaches video production as applied to the broadcast television, film, corporate and digital media industries with an emphasis on narrative, documentary/news and informational programming. This hands-on program teaches all aspects of field, studio and video post-production on advanced technology in the college's Center for New Media. The Advanced Media Production and Internship act as capstone courses providing students with portfolio examples of professional work and on-site work experience in preparation for entry level positions or contract employment in the field.

This 30-credit certificate program is intended as a stackable credential for students looking to specialize in digital video production. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate degree or higher or are enrolled in the Digital Media Production associate degree program to improve employability upon graduation.

Learning Outcomes:

1. Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and delivery systems. Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Workflow analysis and instructor review
 - Review of effective project delivery across platforms
2. Use advanced technologies within a chosen area of specialization with the goal of successfully transitioning from school to working in the industry. Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Work site supervisor and evaluation
3. Plan, create and maintain a professional portfolio highlighting and marketing professional skills and capabilities. Showcase this portfolio via websites, blogs, and social media to achieve employment and educational goals. Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Continuous instructor review of online portfolio and social media presence
4. Demonstrate key competencies in media writing, video production, audio production, graphic design, interactive media, photography and other technologies within digital media arts. Assessment:
 - Equipment and software certification tests
 - Grading of written materials
 - Application of aesthetic techniques to class projects
 - Project and portfolio review
 - Thesis project instructor review and/or review by professional
5. Apply critical thinking and aesthetic judgments in creating collaborative Digital Media projects. Assessment:
 - Ability to apply aesthetics examined in media works to personal and class projects
 - Instructor review
 - Demonstrate successful collaboration with peers and professionals as needed
1. Communicate clearly, concisely, visually, verbally and in writing, using techniques appropriate for the intended audience. Assessment:
 - Demonstrate media literacy skills through presentation of written, aural and visual media
 - Research and evaluate media through audience analysis and critiques
 - Instructor review
2. Apply course knowledge and gain media production experience in a work environment through experiential learning including internships, practicums and community engaged learning. Assessment:
 - Instructor review of experiential learning blogs and logs
 - On-site work supervisor evaluations of student work ethic, projects and collaboration
 - Instructor review of student experiential learning evaluation

Required Courses

- COMM 1601 - Digital Video Production *Credits: 3*
- NMP 1047 - Digital Cinematography *Credits: 3*
- **OR** COMM 1612 - Audio Production *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- COMM 2513 - Scriptwriting for Media *Credits: 3*
- NMP 1053 - Film Production *Credits: 3*
- NMP 2020 - Television Studio Production *Credits: 3*
- NMP 2028 - News and Documentary Production *Credits: 3*
- NMP 2064 - Advanced Video Editing *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- *or Open Elective if ENG 1010 completed previously*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*

Total Credits: 30

New Media Production: Film and Video, AAS (NFLV-AAS-NMP)

The NMP: Film & Video program is a career-oriented degree program that is part of a family of programs in New Media Production.

The New Media Production programs are dynamic, hands-on programs designed for aspiring content creators. These programs focus on the practical aspects of new media production, design, and aesthetics; leverage a wide range of innovative technologies; utilize advanced media production facilities; and help students to work in one of several media industries. These programs are ideal for creative individuals who are enthusiastic about shaping the future of digital content and media production.

New Media Production programs provide experience with the latest software, tools, and equipment used in content creation. Emphasizing experiential learning, the programs include projects, workshops, and collaborative assignments that simulate real-world scenarios and challenges in digital media production. Students build a comprehensive portfolio of their work, displaying their skills and creativity to potential employers. Students also complete a capstone project of professional quality or at least one internship. The programs offer opportunities for networking and valuable insights into the media production industry.

Students immerse themselves in the creation of digital content, gaining expertise in various forms of media such as video, audio, animation, and interactive systems. Students have access to advanced technology and equipment, such as professional audio recording tools, graphic and animation software, and advanced video production equipment, distinctly integrated into the CT State Middlesex Center for New Media, an advanced, multi-million-dollar studio production environment.

Each of the New Media Production Associate of Applied Science degrees requires students to complete 21-22 credits of general education courses, 33 credits of directed program courses, and include 6 credits of open electives. In lieu of an associate degree, students may opt to take a certificate program that includes the same directed program courses without the general education or elective options.

The NMP: Film & Video program specifically teaches digital film and video production skills as applied to all areas where digital film and video may be used, including television, film, the Internet, social media, corporate and business communication, marketing, and other digital media industries. The program includes a balance between narrative story-telling approaches and documentary, news, and informational approaches. This hands-on program teaches all aspects of field, studio, and video post-production, including writing, producing, directing, acting and performance, interviewing, news gathering, camera operation, shot composition, digital cinematography and lighting, audio and music, non-linear editing, graphics, special effects, file management, exporting, and distribution. Equipment and facilities include advanced-level professional cameras, lights, microphones, audio recorders, a full television studio, editing suites and labs, and computers using the latest professional software programs.

Learning Outcomes for All New Media Production Programs:

- Create digital media content through the application of relevant principles and theories.
- Use fundamental workflows involved in digital media production processes.
- Interpret the role of digital media in contemporary communication and society.
- Competently use industry-standard media technologies.
- Apply advanced media production techniques.
- Distinguish between different styles and genres of digital media.
- Critique digital media projects based on aesthetic value, technical quality, and their impact on audience engagement.

Film & Video Learning Outcomes:

- Plan, develop, produce, shoot, and edit professional-quality film, video, and television projects.
- Use professional-level production equipment, studios, software, and technology appropriate for film and video production.
- Work both individually and collaboratively in the process of making film and video projects, including performing the role of a specialized job.
- Apply and evaluate knowledge of film and video aesthetics.
- Write effective scripts and proposals for media in the general areas of television, motion pictures, radio, and new media.

New Media Production General Education Core (21-24 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher (MATH 1100 or higher required for transfer) *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- NMP 1001 - Digital Media Foundations *Credits: 3*
- **OR** NMP 1025 - New Media Production *Credits: 3*
- COMM 1601 - Digital Video Production *Credits: 3*
- NMP 2003 - Media Literacy *Credits: 3*
- **OR** COMM 1201 - Film Study and Appreciation *Credits: 3*
- NMP 1053 - Film Production *Credits: 3*
- **OR** NMP 2028 - News and Documentary Production *Credits: 3*
- NMP 2020 - Television Studio Production *Credits: 3*
- COMM 2512 - Screenwriting *Credits: 3*
- **OR** COMM 2513 - Scriptwriting for Media *Credits: 3*
- NMP 2064 - Advanced Video Editing *Credits: 3*
- NMP 1047 - Digital Cinematography *Credits: 3*
- **OR** COMM 1612 - Audio Production *Credits: 3*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2095 - Media Production Practicum *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*
- Program Elective - COMM or NMP *Credits: 3*
- Program Elective - COMM or NMP *Credits: 3*
- Open Elective - Any course number 1000 or higher *Credits: 6*

Total Credits: 60-63

New Media Production: Multimedia Certificate (NMMC-CC-NMP)

The Multimedia (New Media Design) certificate program prepares students for careers in the field of interactive multimedia production used in business, marketing, education, entertainment, and the World Wide Web. Students learn interactive multimedia design, authoring and production including graphics, audio, video, and animation. Graduates leave with a portfolio of work and experience that prepare them for careers as multimedia producers, web designers, project managers or media production specialists.

This program offers students opportunities to integrate the world of computers, Internet, art and multimedia in completion of the certificate. It also covers relevant areas of web site construction, including designing and programming pages, developing multimedia content, as well as building and managing a web site.

This 30-credit certificate program is intended as a stackable credential for students looking to specialize in corporate media production. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate degree or higher or are enrolled in the Digital Media Production associate degree program to improve employability upon graduation.

Learning Outcomes:

- Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and delivery systems.
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Workflow analysis and instructor review
 - Review of effective project delivery across platforms
- Use advanced technologies within a chosen area of specialization with the goal of successfully transitioning from school to working in the industry
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Work site supervisor and evaluation
- Plan, create and maintain a professional portfolio highlighting and marketing professional skills and capabilities. Showcase this portfolio via websites, blogs, and social media to achieve employment and educational goals.
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Continuous instructor review of online portfolio and social media presence
- Demonstrate key competencies in media writing, video production, audio production, graphic design, interactive media, photography and other technologies within digital media arts.
Assessment:
 - Equipment and software certification tests
 - Grading of written materials
 - Application of aesthetic techniques to class projects

Program is eligible for Workforce Innovation and Opportunity Act (WIOA)

Required Courses

- ART 1210 - Two-Dimensional Design *Credits: 3*
- NMP 1110 - Introduction to Digital Graphics *Credits: 3*
- NMP 1120 - Image Editing and the Pixel *Credits: 3*
- NMP 1001 - Digital Media Foundations *Credits: 3*
- **OR** NMP 1025 - New Media Production *Credits: 3*

- NMP 2200 - Producing Interactive Media *Credits: 3*
- GRA 1501 - Graphic Design I *Credits: 3*
- **OR** NMP 2100 - Introduction to Animated Productions *Credits: 3*
- Elective - ART/COMM/GRA/NMP *Credits: 3*
- Elective - ART/COMM/GRA/NMP *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- *or Open Elective if ENG 1010 previously completed*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*

Total Credits: 30

New Media Production: Multimedia, AAS (NMMD-AAS-NMP)

New Media Production programs provide experience with the latest software, tools, and equipment used in content creation. Emphasizing experiential learning, the programs include projects, workshops, and collaborative assignments that simulate real-world scenarios and challenges in digital media production. Students build a comprehensive portfolio of their work, displaying their skills and creativity to potential employers. Students also complete a capstone project of professional quality or at least one internship. The programs offer opportunities for networking and valuable insights into the media production industry.

Students immerse themselves in the creation of digital content, gaining expertise in various forms of media such as video, audio animation, and interactive systems. Students have access to advanced technology and equipment, such as professional audiorecording tools, graphic and animation software, and advanced video production equipment, distinctly integrated into the CT State Middlesex Center for New Media, an advanced, multi-million-dollar studio production environment.

Each of the New Media Production Associate of Applied Science degrees requires students to complete 21-22 credits of general education courses, 33 credits of directed program courses, and include 6 credits of open electives. In lieu of an associate degree, students may opt to take a certificate program that includes the same directed program courses without the general education or elective options.

The NMP: Multimedia associates-degree program is designed to equip students with the skills and knowledge necessary for careers in several digital media production fields. The primary focus of the degree program is the creation and production of digital content.

Utilizing a broad range of media forms and technologies, the program emphasizes industry-standard production workflows, professional content creation strategies, foundational media design principles, production aesthetics, and user engagement techniques that are found in a wide array of interactive digital content creation areas, including digital image editing, web design, video production, audio and music production, animation, augmented and virtual reality, and interactive media.

Students learn the process of multimedia project development from concept to completion with an emphasis on hands-on, experiential learning. The program also includes some required coursework in foundational media design principles, production aesthetics, and user engagement techniques. While not designed as a transfer program, the curriculum includes several courses modeled after those offered by similar bachelor's degree programs and should allow for easy transfer to these types of programs.

Learning Outcomes for All New Media Production Programs

- Create digital media content through the application of relevant principles and theories.
- Use fundamental workflows involved in digital media production processes.
- Interpret the role of digital media in contemporary communication and society.
- Competently use industry-standard media technologies.
- Apply advanced media production techniques.
- Distinguish between different styles and genres of digital media.
- Critique digital media projects based on aesthetic value, technical quality, and their impact on audience engagement.

Multimedia Learning Outcomes

- Conceptualize, plan, and create original digital media content, including videos, images, animations, and interactive multimedia projects.
- Apply visual design principles, including color theory, typography, composition, and graphic design, to create visually appealing and effective digital media content.
- Apply skills in planning, shooting, and editing video to create high-quality video content for various digital media formats and projects.
- Apply sound recording, editing, and mixing skills, integrating sound design principles to achieve the production of high-quality audio for digital media projects with proficiency.
- Create and evaluate interactive digital media projects, including websites, non-linear applications, and AR/VR-related projects, utilizing innovative design and technology strategies.

- Analyze various forms of media, identify challenges in digital media production, and devise creative solutions.

New Media Production General Education Core (21-24 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher (MATH 1100 or higher required for transfer) *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 Credits)

- NMP 1001 - Digital Media Foundations *Credits: 3*
- **OR** NMP 1025 - New Media Production *Credits: 3*
- COMM 1601 - Digital Video Production *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- **OR** COMM 1201 - Film Study and Appreciation *Credits: 3*
- **OR** NMP 2003 - Media Literacy *Credits: 3*
- NMP 1110 - Introduction to Digital Graphics *Credits: 3*
- NMP 1120 - Image Editing and the Pixel *Credits: 3*
- NMP 2200 - Producing Interactive Media *Credits: 3*
- NMP 2110 - Visual Effects *Credits: 3*
- **OR** NMP 2210 - Web Productions Fundamentals *Credits: 3*
- GRA 1501 - Graphic Design I *Credits: 3*
- **OR** NMP 2100 - Introduction to Animated Productions *Credits: 3*
- NMP 1130 - Vector Graphics *Credits: 3*
- **OR** COMM 1612 - Audio Production *Credits: 3*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2095 - Media Production Practicum *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*
- Program Electives in ART, COMM, GRA, or NMP *Credits: 6*
- Open Elective *Credits: 3*

Total Credits: 60-63

New Media Production: News and Sports Certificate (NNSC-CC-NMP)

The News and Sports Production certificate program prepares students for entry-level positions in television news and sports production. Emphasis is on hands-on production skills used at broadcast television stations, media production companies and new media organizations. . Students will learn news and sports journalism as well as field, studio, and remote production in their courses. Graduates are prepared for positions such as associate producer, assignment editor, teleprompter operator, floor/studio manager, news photographer, video editor, associate producer, and digital and new media producers. NMP 2090 *Media Production Capstone* and NMP 2195 *Experiential Learning and Practice in Media Production* serve as capstone courses, providing students with portfolio work and on-site work experiences in preparation for employment.

This 30-credit certificate program is intended as a stackable credential for students looking to specialize in digital video production. When enrolling in this program as a standalone occupational certificate, it is recommended that students entering the program either have an associate degree or higher or are enrolled in the Digital Media Production associate degree program to improve employability upon graduation.

Learning Outcomes:

- Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and delivery systems.
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Workflow analysis and instructor review
 - Review of effective project delivery across platforms
- Use advanced technologies within a chosen area of specialization with the goal of successfully transitioning from school to working in the industry
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Work site supervisor and evaluation
- Plan, create and maintain a professional portfolio highlighting and marketing professional skills and capabilities. Showcase this portfolio via websites, blogs, and social media to achieve employment and educational goals.
Assessment:
 - Equipment and software certification tests
 - Project and instructor portfolio review
 - Continuous instructor review of online portfolio and social media presence
- Demonstrate key competencies in media writing, video production, audio production, graphic design, interactive media, photography and other technologies within digital media arts.
Assessment:
 - Equipment and software certification tests
 - Grading of written materials
 - Application of aesthetic techniques to class projects
 - Project and portfolio review
 - Thesis project instructor review and/or review by professional
- Apply critical thinking and aesthetic judgments in creating collaborative Digital Media projects.
Assessment:
 - Ability to apply aesthetics examined in media works to personal and class projects
 - Instructor review
 - Demonstrate successful collaboration with peers and professionals as needed
- Communicate clearly, concisely, visually, verbally and in writing, using techniques appropriate for the intended audience.
Assessment:
 - Demonstrate media literacy skills through presentation of written, aural and visual media

- Research and evaluate media through audience analysis and critiques
- Instructor review
- Apply course knowledge and gain media production experience in a work environment through experiential learning including internships, practicums and community engaged learning.

Assessment:

- Instructor review of experiential learning blogs and logs
- On-site work supervisor evaluations of student work ethic, projects and collaboration
- Instructor review of student experiential learning evaluation

Program is eligible for Workforce Innovation and Opportunity Act (WIOA)

Required Courses

- COMM 1601 - Digital Video Production *Credits: 3*
- NMP 1110 - Introduction to Digital Graphics *Credits: 3*
- **OR** NMP 1120 - Image Editing and the Pixel *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- *or Open Elective if ENG 1010 taken previously*
- COMM 2513 - Scriptwriting for Media *Credits: 3*
- NMP 2020 - Television Studio Production *Credits: 3*
- NMP 2028 - News and Documentary Production *Credits: 3*
- COMM 1401 - Journalism I *Credits: 3*
- NMP 2064 - Advanced Video Editing *Credits: 3*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*

Total Credits: 30

New Media Production: News and Sports, AAS (NNSP-AAS-NMP)

The NMP: News & Sports program is a career-oriented degree program that is part of a family of programs in New Media Production. The New Media Production programs are dynamic, hands-on programs designed for aspiring content creators. These programs focus on the practical aspects of new media production, design, and aesthetics; leverage a wide range of innovative technologies; utilize advanced media production facilities; and help students to work in one of several media industries. These programs are ideal for creative individuals who are enthusiastic about shaping the future of digital content and media production. New Media Production programs provide experience with the latest software, tools, and equipment used in content creation. Emphasizing experiential learning, the programs include projects, workshops, and collaborative assignments that simulate real-world scenarios and challenges in digital media production. Students build a comprehensive portfolio of their work, displaying their skills and creativity to potential employers. Students also complete a capstone project of professional quality or at least one internship.

The programs offer opportunities for networking and valuable insights into the media production industry.

Students immerse themselves in the creation of digital content, gaining expertise in various forms of media such as video, audio, animation, and interactive systems. Students have access to advanced technology and equipment, such as professional audio recording tools, graphic and animation software, and advanced video production equipment, distinctly integrated into the CT State Middlesex Center for New Media, an advanced, multi-million-dollar studio production environment.

Each of the New Media Production Associate of Applied Science degrees requires students to complete 21-22 credits of general education courses, 33 credits of directed program courses, and include 6 credits of open electives. In lieu of an associate degree, students may opt to take a certificate program that includes the same directed program courses without the general education or elective options.

The NMP: News and Sports associates degree program is designed to prepare students to work in journalism, news, and sports production careers. Students learn the process of news and sports media project development from concept to completion with an emphasis on hands-on, experiential learning. In addition, the News and Sports program includes coverage of principles, ethics, and practices of journalism as well as practical sports and sports-related content production. While not designed as a transfer program, the curriculum includes several courses modeled after those offered by similar bachelor's degree programs and should allow for easy transfer to these types of programs.

Learning Outcomes for All New Media Production Programs:

- Create digital media content through the application of relevant principles and theories.
- Use fundamental workflows involved in digital media production processes.
- Interpret the role of digital media in contemporary communication and society.
- Competently use industry-standard media technologies.
- Apply advanced media production techniques.
- Distinguish between different styles and genres of digital media.
- Critique digital media projects based on aesthetic value, technical quality, and their impact on audience engagement.

News & Sports Learning Outcomes:

- Plan, research, and produce effective news stories, both in written and digital media formats.
- Analyze the diverse factors influencing media messages within both globalized and local media contexts.
- Produce journalistic work that demonstrates an area of specialization and draws on the specific creativity and technical skills of the student.
- Produce news packages that engage audiences with relevant facts, visuals, sounds, and other appropriate components and demonstrates professional technical competence.
- Apply the principles of media and journalism ethics.
- Apply emotionally intelligent interviewing skills in the preparation of news stories for different forms of media.
- Apply writing, editing, and proof-reading skills to report the news.
- Evaluate news stories effectively.

New Media Production General Education Core (21-24 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher (MATH 1100 or higher required for transfer) *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- NMP 1001 - Digital Media Foundations *Credits: 3*
- **OR** NMP 1025 - New Media Production *Credits: 3*
- COMM 1601 - Digital Video Production *Credits: 3*
- COMM 1010 - Introduction to Mass Communication *Credits: 3*
- COMM 1401 - Journalism I *Credits: 3*
- NMP 2028 - News and Documentary Production *Credits: 3*
- NMP 2020 - Television Studio Production *Credits: 3*
- NMP 2064 - Advanced Video Editing *Credits: 3*
- ART 1450 - Digital Photography I *Credits: 3*
- **OR** NMP 1047 - Digital Cinematography *Credits: 3*
- **OR** COMM 1612 - Audio Production *Credits: 3*
- COMM 1502 - Sports Reporting *Credits: 3*
- **OR** COMM 2513 - Scriptwriting for Media *Credits: 3*
- NMP 2090 - Media Production Capstone *Credits: 3*
- **OR** NMP 2095 - Media Production Practicum *Credits: 3*
- **OR** NMP 2195 - Media Internship *Credits: 3*
- Program Elective - COMM or NMP *Credits: 3*
- Open Electives - Any course number 1000 or higher *Credits: 6*

Total Credits: 60-63

Photography Certificate (PHOT-CC)

The Photography Certificate program provides new and returning students with the knowledge and skills to compete for entry-level positions in the diverse field of photography and/or the opportunity to add or combine photography skills to related expertise in graphic design, journalism, communication or public relations. Courses in the Photography Certificate program help students build a working portfolio and can also be applied toward completing the Photography Option within the Visual Fine Art Associate of Arts Degree.

Learning Outcomes:

- Demonstrate an understanding of terminology, concepts, techniques and equipment relating to a broad range of photographic processes and procedures.
- Make informed and meaningful compositional/aesthetic decisions, with an emphasis on critical thinking, problem solving, creativity, project parameters and deadlines.
- Be able to use industry standard hardware and software to produce work suitable for a variety of entry-level positions in a very competitive field.

Required Courses

- ART 1450 - Digital Photography I *Credits: 3*
- ART 1460 - Digital Photography II *Credits: 3*
- **Choose 1 of the following 3-credit courses:**
 - ART 1410 - Darkroom Photography I
 - ART 1810 - Digital Video Art I
 - ART 2430 - Studio Photography I
 - ART 2470 - Commercial Photography
- **Choose 3 of the following courses (9 credits):**
 - ART 1110 - Drawing I
 - ART 1220 - Three-Dimensional Design
 - ART 1250 - Color Theory
 - ART 1410 - Darkroom Photography I
 - ART 1420 - Darkroom Photography II
 - ART 1810 - Digital Video Art I
 - ART 2095 - Art Internship
 - ART 2430 - Studio Photography I
 - ART 2470 - Commercial Photography
 - ART 2810 - Digital Painting & Drawing
 - ART 2090 - Portfolio Preparation I
 - GRA 1101 - Introduction to Computer Graphics

Total Credits: 18

Professional Writing Certificate (PWRT-CC)

*Disclaimer

The Professional Writing Certificate offers students the opportunity to develop skills in preparation for a career in writing or to improve and enhance their writing skills in any professional career. Students will learn to design and write texts that meet professional needs, such as reports, proposals, social media, scripts, and user manuals. Given the importance of clear written and multimodal communication in nearly every profession, the Professional Writing Certificate is an ideal complement to any degree path and a helpful and timely credential for working professionals to add to their resume. The variety of courses will enable students to develop their writing interests and goals, whether in business writing, rhetoric, creative writing, editing and publishing, or any combination of these.

Program Core Courses (13-15 Credits)

- ENG 1009 - Grammar for College and Professional Writing *Credits: 1*
- **OR** ESOL 1405 - Grammar IV: Low Advanced *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- ENG 2100 - Creative Writing *Credits: 3*
- COMM 2502 - Social Media Strategy *Credits: 3*

Discipline-Specific Options (3 Credits)

Choose One

- BMGT 2100 - Organizational Behavior *Credits: 3*
- ENG 1030 - Composition II and Non-fiction Texts *Credits: 3*
- COMM 2401 - Publications Workshop *Credits: 3*
- ENG 2150 - Literary Magazine Production I *Credits: 3*
- COMM 2513 - Scriptwriting for Media *Credits: 3*
- COMM 1502 - Sports Reporting *Credits: 3*
- THR 2232 - Scriptwriting *Credits: 3*
- THR 2230 - Playwriting *Credits: 3*
- CJS 2570 - Writing and Research for Criminal Justice *Credits: 3 **
- LGL 1002 - Legal Research and Writing *Credits: 3 **
- enrollment in these courses is restricted to program majors

Total Credits: 16-18

Spanish Studies - TAP/CSCU Transfer Degree, AA (SPAN-AA-TAP)

The CSCU Pathway Transfer Degree in Spanish Studies, A.A. prepares students to continue their education at any Connecticut State University (CSU) leading to a baccalaureate degree in Spanish. It is designed to strengthen and develop skills in Spanish expression: critical reading, writing, thinking, listening, speaking, and research through the study of language, literature, culture, and related disciplines.

Learning Outcomes:

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

- Demonstrate listening proficiency in the target language at the Intermediate Low level as per the American Council on the Teaching of Foreign Languages (ACTFL) guidelines*.
- Demonstrate speaking proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate reading proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate writing proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
- Demonstrate analytic, interpretative, and critical thinking skills in regard to language and the communication process.
- Recognize that understanding other cultures will enrich one's own life and result in lifelong learning.
- Apply critical thinking skills to the understanding of cultural differences and similarities.

* <https://www.actfl.org/publications/guidelines-and-manuals/actfl-proficiency-guidelines-2012>

This program is transfer focused. It is designed to prepare students with an interest in Spanish studies to transfer to a four-year college or university at the junior level in pursuit of a bachelor's degree.

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

At Central Connecticut State University:

- Spanish B.A.
- Spanish B.S.ED. (7-12)
- Spanish B.S.ED. SPANISH with Specialization in Inter-University Spanish Language and Culture

At Eastern Connecticut State University: Spanish B.A.

At Southern Connecticut State University:

- Spanish B.A.
- Spanish 7-12, B.S.
- Spanish B.S. Hispanic Studies
- Spanish B.S. Translation Studies
- Spanish B.S. Health and Human Service Professionals

At Western Connecticut State University:

- Spanish B.A.
- Spanish B.S. Secondary Education

Framework Courses (30-34 credits)

* At least one course with a lab must be taken in either **Scientific Reasoning** or **Scientific Knowledge and Understanding**.

- ENG 1010 - Composition *Credits: 3*
- Elective QUAX - Quantitative Reasoning Course *Credits: 3-4*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*

- COMM 1301 - Public Speaking *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30 credits)

- SPAN 1011 - Elementary Spanish I *Credits: 4* ^
- SPAN 1012 - Elementary Spanish II *Credits: 4* ^
- SPAN 2010 - Spanish for Heritage Speakers *Credits: 4* ^^
- **OR** SPAN 2011 - Intermediate Spanish I *Credits: 4* ^^
- SPAN 2012 - Intermediate Spanish II *Credits: 4* ^^
- COMM 1305 - Intercultural Communication *Credits: 3*
- **OR** GEOG 1010 - World Regional Geography *Credits: 3*
- **OR** HUM 1019 - Short-term Study Abroad *Credits: 3*
- **OR** Elective GLKY - Global Knowledge Course *Credits: 3*
- Elective CRTY - Creativity Course *Credits: 3*
- Unrestricted electives 8-20 *Credits*

Students who begin Spanish at a higher level than SPAN 1011 will receive additional unrestricted electives. They should consider taking additional upper-level Spanish courses such as SPAN 2111 Advanced Spanish I or SPAN 2112 Advanced Spanish II.

Students should consider beginning work on minor requirements of some CSUs. They may also complete other General Education requirements (for CCSU, WCSU, SCSU, and CO-but NOT ECSU)

Total Credits: 60-64

^Or students may elect to replace SPAN 1011 and SPAN 1012 with SPAN 1013 Elementary Spanish I & II (8 credits)

^^Or students may elect to replace (SPAN 2010 or SPAN 2011) and SPAN 2012 with SPAN 2013 Intermediate Spanish I & II (8 credits)

Theater Studies - CSCU Transfer Degree, AA (THTR-AA-TAP)

The Theater Studies Transfer Ticket degree provides students with the opportunity for educational, professional, and personal development through the study and practice of the theater arts. Opportunities include preparing for transfer to four-year institutions, conservatories, or individual studio training; employment in the theater profession; and the personal development of the essential skills inherent in theater practice, such as discipline, collaboration, and creativity.

Learning Outcomes:

- Demonstrate competency in the analysis of theatrical art.
- Demonstrate competency in the performance of theatrical art.
- Demonstrate competency in the production of theatrical art.
- Demonstrate competency in the standards and practices of the theater profession.
- Demonstrate competency in the skills essential for further education in theater studies.

The CSCU Pathway Transfer Degree in Theater Studies, A.A. is a 61-credit degree. Note that 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.

Students who declare the Transfer Ticket: CSCU Pathway Transfer Degree: Theatre Studies. A.A. can transfer to the following majors and universities:

- Central Connecticut State University: Theatre, Performance Emphasis, B.F.A. Theatre, Design Tech. Emphasis, B.F.A.
- Eastern Connecticut State University: Theatre, Acting Concentration, B.A. Theatre, Directing Concentration, B.A. Theatre, Dance & World Performance, B.A. Theatre, Design Technology & Management, B.A.
- Southern Connecticut State University: Theatre, B.A.
- Western Connecticut State University: Theatre Arts, Theatre Studies Option, B.A. Theatre Arts, Performance Option, B.A.

You are free to choose any courses at or above 1000-level to complete any available unrestricted electives. You can also complete other General Education requirements at Central and Western, but not at Eastern.

Finally, if you intend to transfer to Central CT State University in New Britain, you are strongly urged to begin work on the required minor. CCSU requires an 18-credit minor; you can complete up to 9 credits of that minor at CT State Community College. Your advisor will help you to determine which courses to select. Important: If you did not complete a 3rd year of a foreign language in high school or met the language requirement in some other way, you must use unrestricted elective credit to complete a second semester level of a foreign language course before transferring.

Framework Courses (30-33 credits)

- ENG 1010 - Composition *Credits: 3*
- Elective QUAX - Quantitative Reasoning Course *Credits: 3-4* (MATH 1100 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30 credits)

- THR 1102 - Theater History *Credits: 3*
- THR 1110 - Acting I *Credits: 3*
- THR 1112 - Voice and Diction *Credits: 3*

- THR 1120 - Stagecraft *Credits: 3*
- THR 2210 - Acting II *Credits: 3*
- Elective GLKY - Global Knowledge Course *Credits: 3*
- Unrestricted Electives Credits: 12

Total Credits: 60-63

Theater, AA (THTR-AA)

The CSCC Theater Program provides students with the opportunity for educational, professional, and personal development through the study and practice of the theater arts. Opportunities include preparing for transfer to four-year institutions, conservatories, or individual studio training; employment in the theater profession; and the personal development of the essential skills inherent in theater practice, such as discipline, collaboration, and creativity.

Program Learning Outcomes:

- Demonstrate competency in the analysis of theatrical art.
- Demonstrate competency in the performance of theatrical art.
- Demonstrate competency in the production of theatrical art.
- Demonstrate competency in the standards and practices of the theater profession.
- Demonstrate competency in the skills essential for further education in theater studies.

Graduates are afforded various theater employment or internship opportunities in theater production, education, design, and performance.

Theater General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Theater Program Core (24 credits)

- THR 1102 - Theater History *Credits: 3*
- THR 1110 - Acting I *Credits: 3*
- THR 2210 - Acting II *Credits: 3*
- THR 1112 - Voice and Diction *Credits: 3*
- THR 1114 - Movement and Expression *Credits: 3*
- THR 1120 - Stagecraft *Credits: 3*
- THR 1195 - Theater Practicum I *Credits: 3*
- THR 1113 - Improvisation *Credits: 3*

Electives (15 credits)

THR Elective *Credits: 12 (See Program Coordinator for Advising)*

Open Elective *Credits: 3*

Total Credits: 60-63

Theater: Design & Production, AA (THTR-AA-DES)

The CSCC Theater Program provides students with the opportunity for educational, professional, and personal development through the study and practice of the theater arts. Opportunities include preparing for transfer to four-year institutions, conservatories, or individual studio training; employment in the theater profession; and the personal development of the essential skills inherent in theater practice, such as discipline, collaboration, and creativity.

Program Learning Outcomes:

- Demonstrate competency in the analysis of theatrical art.
- Demonstrate competency in the performance of theatrical art.
- Demonstrate competency in the production of theatrical art.
- Demonstrate competency in the standards and practices of the theater profession.
- Demonstrate competency in the skills essential for further education in theater studies.

Graduates are afforded various theater employment or internship opportunities in theater production, education, design, and performance.

Theater General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Theater Program Core (24 credits)

- THR 1102 - Theater History *Credits: 3*
- THR 1110 - Acting I *Credits: 3*
- THR 2210 - Acting II *Credits: 3*
- THR 1112 - Voice and Diction *Credits: 3*
- THR 1114 - Movement and Expression *Credits: 3*
- THR 1120 - Stagecraft *Credits: 3*
- THR 1195 - Theater Practicum I *Credits: 3*
- THR 1113 - Improvisation *Credits: 3*

Design & Production Courses (15 credits)

- THR 1124 - Costume Design and Production *Credits: 3*
- THR 1125 - Scenic Design and Production *Credits: 3*
- THR 1123 - Lighting Design and Production *Credits: 3*
- THR 1122 - Sound Design and Production *Credits: 3*
- THR 2229 - Stage Management *Credits: 3*

Total Credits: 60-63

Theater: Musical Theater, AA (THTR-AA-MUS)

The CSCC Theater Program provides students with the opportunity for educational, professional, and personal development through the study and practice of the theater arts. Opportunities include preparing for transfer to four-year institutions, conservatories, or individual studio training; employment in the theater profession; and the personal development of the essential skills inherent in theater practice, such as discipline, collaboration, and creativity.

Program Learning Outcomes:

- Demonstrate competency in the analysis of theatrical art.
- Demonstrate competency in the performance of theatrical art.
- Demonstrate competency in the production of theatrical art.
- Demonstrate competency in the standards and practices of the theater profession.
- Demonstrate competency in the skills essential for further education in theater studies.

Graduates are afforded various theater employment or internship opportunities in theater production, education, design, and performance.

Theater General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Theater Program Core (24 credits)

- THR 1102 - Theater History *Credits: 3*
- THR 1110 - Acting I *Credits: 3*
- THR 2210 - Acting II *Credits: 3*
- THR 1112 - Voice and Diction *Credits: 3*
- THR 1114 - Movement and Expression *Credits: 3*
- THR 1120 - Stagecraft *Credits: 3*
- THR 1195 - Theater Practicum I *Credits: 3*
- THR 1113 - Improvisation *Credits: 3*

Musical Theater Courses (15 credits)

- DANC 1002 - Ballet: Renaissance to Romantic *Credits: 3*
- **OR** DANC 1011 - Jazz I: Afro-American/Caribbean *Credits: 3*
- **OR** DANC 1111 - Jazz II: Broadway and Film *Credits: 3*
- THR 2216 - Musical Theater Training I *Credits: 3*
- THR 2217 - Musical Theater Training II *Credits: 3*
- THR 2295 - Theater Practicum II *Credits: 3*
- MUS 1101 - Music Theory I *Credits: 3*

Total Credits: 60-63

Visual Art, AA (VART-AA)

The Visual Art Program is designed to expand the student's creative potential through a series of studio courses and academic electives. Students explore a range of media, solve visual problems, build formal, technical, and conceptual skills. The program prepares students for transfer to four-year programs in art. Additionally, the Photography Option prepares students for entry level positions in photography.

Learning Outcomes:

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

- Integrate skills, techniques, and the safe use of materials and equipment necessary for studio art creation.
- Combine an understanding of art, design concepts, critical thinking, and problem solving in order to apply these skills to art processes using a variety of media.
- Communicate and critique art and concepts using specific art vocabulary.
- Apply a strong fine arts foundation and high quality, relevant coursework in preparation for career or transfer.
- Analyze and evaluate the historical and cultural context of selected works of art.
- Develop an understanding of the principles and elements of two- and three-dimensional design and their applications to various studio disciplines.

Visual Art General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Visual Art Program Core (24 credits)

- ARTH 1001 - Global Art History Prehistory to 1500 CE *Credits: 3*
- **OR** ARTH 1002 - Global Art History 1500 CE to present *Credits: 3*
- ART 1110 - Drawing I *Credits: 3*
- ART 1120 - Drawing II *Credits: 3*
- **OR** ART 1130 - Figure Drawing I *Credits: 3*
- **OR** ART 1770 - Printmaking I *Credits: 3*
- ART 1210 - Two-Dimensional Design *Credits: 3*
- ART 1220 - Three-Dimensional Design *Credits: 3*
- **OR** ART 1310 - Sculpture I *Credits: 3*
- ART 1250 - Color Theory *Credits: 3*
- **OR** ART 1510 - Painting I *Credits: 3*
- ART 1410 - Darkroom Photography I *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- Elective ARTH - Art History Elective *Credits: 3*

Visual Art Electives (15 credits)

- Directed Studio Art Electives* (Choose two 6 contact hour courses) *Credits: 6*

- Directed Studio Art or Graphic Design or Digital Graphics Electives* (Choose two 6 contact hour courses) *Credits: 6*
- Open Elective *Credits: 3*

Total Credits: 60-62

Visual Art: Design, AA (VART-AA-DSN)

This program prepares students with a foundation of courses in art, graphic design, and digital media. This provides our students with a broad range of skills and the opportunity to explore a variety of career options.

Learning Outcomes:

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

- Demonstrate proficiency in the skills that are required in today's graphic design industry.
- Attain an expanded awareness and a critical understanding of graphic design products.
- Demonstrate proficiency with graphic design and digital media software that are industry standards.

Visual Art General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Visual Art Program Core (24 credits)

- ARTH 1001 - Global Art History Prehistory to 1500 CE *Credits: 3*
- **OR** ARTH 1002 - Global Art History 1500 CE to present *Credits: 3*
- ART 1110 - Drawing I *Credits: 3*
- ART 1120 - Drawing II *Credits: 3*
- **OR** ART 1130 - Figure Drawing I *Credits: 3*
- **OR** ART 1770 - Printmaking I *Credits: 3*
- ART 1210 - Two-Dimensional Design *Credits: 3*
- ART 1220 - Three-Dimensional Design *Credits: 3*
- **OR** ART 1310 - Sculpture I *Credits: 3*
- ART 1250 - Color Theory *Credits: 3*
- **OR** ART 1510 - Painting I *Credits: 3*
- ART 1410 - Darkroom Photography I *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- Elective ARTH - Art History Elective *Credits: 3*

Design Option Courses (15 credits)

- GRA 1501 - Graphic Design I *Credits: 3*
- Open Elective *Credits: 3*

Choose two electives from the following (6 credits)

- ART 1220 - Three-Dimensional Design *Credits: 3*
- ART 1810 - Digital Video Art I *Credits: 3*
- ART 1450 - Digital Photography I *Credits: 3*

- GRA 1101 - Introduction to Computer Graphics *Credits: 3*
- **OR** GRA 2300 - Digital Imaging I *Credits: 3*
- GRA 2502 - Graphic Design II *Credits: 3*
- **OR** GRA 2401 - Digital Page Design *Credits: 3*
- GRA 2201 - Illustration I *Credits: 3*

Directed Electives: Choose one elective from the following (3 credits)

- ART 2810 - Digital Painting & Drawing *Credits: 3*
- GRA 2001 - Typography *Credits: 3*
- GRA 2101 - Advanced Computer Graphics *Credits: 3*
- **OR** GRA 2301 - Digital Imaging II *Credits: 3*
- GRA 2502 - Graphic Design II *Credits: 3*
- **OR** GRA 2401 - Digital Page Design *Credits: 3*
- GRA 2600 - Web Design *Credits: 3*

Total Credits: 60-62

Visual Art: Illustration, AA (VART-AA-ILL)

This program prepares students with a foundation of courses in art and provides them with an opportunity to pursue a career as an illustrator or in a related field that includes animation, cartooning, and fine arts.

Learning Outcomes:

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

- Become competent in a variety of artistic and digital media.
- Develop the ability to identify, analyze, and solve design problems.
- Obtain an understanding of the aesthetics of illustration and of the history and current state of design.
- Become proficient in the selection and use of relevant technologies and computer software in illustration.
- Ability to use available software and non-digital processes to sketch, model, and produce an illustration.
- Design and develop an illustration from sketch to mockup to finished process. ^[1]_[SEP]
- Become proficient in presenting work as well as discussing and constructively critiquing the work of others.

Visual Art General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Visual Art Program Core (24 credits)

- ARTH 1001 - Global Art History Prehistory to 1500 CE *Credits: 3*
- **OR** ARTH 1002 - Global Art History 1500 CE to present *Credits: 3*
- ART 1110 - Drawing I *Credits: 3*
- ART 1120 - Drawing II *Credits: 3*
- **OR** ART 1130 - Figure Drawing I *Credits: 3*
- **OR** ART 1770 - Printmaking I *Credits: 3*
- ART 1210 - Two-Dimensional Design *Credits: 3*
- ART 1220 - Three-Dimensional Design *Credits: 3*
- **OR** ART 1310 - Sculpture I *Credits: 3*
- ART 1250 - Color Theory *Credits: 3*
- **OR** ART 1510 - Painting I *Credits: 3*
- ART 1410 - Darkroom Photography I *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- Elective ARTH - Art History Elective *Credits: Credits: 3*

Illustration Option Courses (15 credits)

- GRA 2201 - Illustration I *Credits: 3*
- ART, DGA or GRA elective (6 contact hour course) *Credits: 3*

Choose two electives from the following (6 credits):

- ART 1130 - Figure Drawing I *Credits: 3*
- ART 1220 - Three-Dimensional Design *Credits: 3*
- ART 1510 - Painting I *Credits: 3*
- **OR** ART 1550 - Watercolor I *Credits: 3*
- ART 1770 - Printmaking I *Credits: 3*
- GRA 1101 - Introduction to Computer Graphics *Credits: 3*
- **OR** GRA 2300 - Digital Imaging I *Credits: 3*
- GRA 1501 - Graphic Design I *Credits: 3*

Choose one elective from the following (3 credits):

- ART 2810 - Digital Painting & Drawing *Credits: 3*
- GRA 2101 - Advanced Computer Graphics *Credits: 3*
- **OR** GRA 2301 - Digital Imaging II *Credits: 3*
- GRA 2202 - Illustration II *Credits: 3*
- GRA 2306 - Digital Illustration *Credits: 3*

Total Credits: 60-62

Visual Art: Photography, AA (VART-AA-PHO)

The Photography Option, Visual Art associate degree program provides students with a series of courses that introduces fundamental photographic concepts and techniques and the necessary skills to transfer to the institution of their choice or succeed in an entry-level photography position.

Learning Outcomes:

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

- Demonstrate an understanding of terminology, concepts and techniques relating to photography.
- Demonstrate the ability to use a camera's creative controls to manifest intent.
- Demonstrate proficiency at traditional silver darkroom techniques including 35mm and medium format film processing and printing.
- Demonstrate proficiency at digital image capture, editing and output.
- Be able to use a variety of situation-specific natural and studio lighting techniques.
- Identify vocational and creative applications of the medium and an understanding of its cultural, historical and contemporary context.
- Be able to articulate and explain the decisions made as part of the image production process.
- Develop a quality photography portfolio.

Visual Art General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Visual Art Program Core (24 credits)

- ARTH 1001 - Global Art History Prehistory to 1500 CE *Credits: 3*
- **OR** ARTH 1002 - Global Art History 1500 CE to present *Credits: 3*
- ART 1110 - Drawing I *Credits: 3*
- ART 1120 - Drawing II *Credits: 3*
- **OR** ART 1130 - Figure Drawing I *Credits: 3*
- **OR** ART 1770 - Printmaking I *Credits: 3*
- ART 1210 - Two-Dimensional Design *Credits: 3*
- ART 1220 - Three-Dimensional Design *Credits: 3*
- **OR** ART 1310 - Sculpture I *Credits: 3*
- ART 1250 - Color Theory *Credits: 3*
- **OR** ART 1510 - Painting I *Credits: 3*
- ART 1410 - Darkroom Photography I *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- Elective ARTH - Art History Elective *Credits: Credits: 3*

Photography Option Courses (15 credits)

- ART 1410 - Darkroom Photography I *Credits: 3*
- **OR** ART 1450 - Digital Photography I *Credits: 3*
- Elective ART or GRA (6 contact hours) *Credits: 3*

Choose three photo/video electives (9 credits)

- ART 1420 - Darkroom Photography II *Credits: 3*
- ART 1810 - Digital Video Art I *Credits: 3*
- ART 2430 - Studio Photography I *Credits: 3*
- ART 2470 - Commercial Photography *Credits: 3*
- ART 1460 - Digital Photography II *Credits: 3*
- ART 2098 - Special Topics in Art *Credits: 3*
- ARTH 1011 - History of Photography *Credits: 3*

Total Credits: 60-62

Business & Hospitality

Accounting Certificate (ACCT-CC)

The Accounting certificate program is designed for students who are interested in specialized accounting coursework and/or those who already have a bachelor's degree and would like to change careers. This program also serves individuals currently interested in entry level positions in the accounting field. Credits earned can be used for transfer into the Associate in Science Accounting Degree.

Learning Outcomes:

Students who complete the Accounting Certificate will:

- Understand, create, and analyze basic financial statements and management reports
- Demonstrate an understanding of tax law as it applies to the individual and business world
- Apply computer skills to accounting transactions.

Required Courses

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- ACCT 1250 - Accounting Applications I *Credits: 3*
- ACCT 2410 - Federal Taxes I *Credits: 3*
- Business/Accounting Electives - select 2 courses from: ACCT, BENT, BFIN, BMGT BMKT, or BUSN *Credits: 6*

Total Credits: 18

Accounting, AS (ACCT-AS)

The Accounting associate degree program prepares students for employment as bookkeepers, and accounts receivable/payable and payroll associates.

Graduates will be able to maintain complete sets of accounting records and prepare financial statements and individual tax returns. Students have the opportunity to participate in the Volunteer Income Tax Assistance (VITA) program, in which they gain practical experience in the preparation of tax returns. Students interested in transferring to earn a bachelor's degree should enroll in the Business Studies A.A. Transfer degree program or in the Business Administration A.S. program.

Note: Students should meet with a faculty advisor to plan their program of study.

Learning Outcomes:

Upon successful completion of all accounting degree program requirements, graduates will

- Demonstrate relevant content knowledge in required core business disciplines (accounting, business law, management and organizational behavior, and marketing) and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
- Recognize proper business acumen and decorum in professional interactions; demonstrate appropriate interpersonal communication and presentation skills and demeanor; demonstrate the ability to use presentation and team interpersonal skills effectively in class presentations.
- Recognize and respond thoughtfully to situations that present ethical dilemma, demonstrating the ability to identify ethical dilemmas and social responsibilities of business, an ability to confront ethical dilemmas, and apply ethical principles to business situations using concepts learned.
- Apply accounting concepts and critical thinking skills to make sound financial decisions.
- Demonstrate an understanding of the interrelationships between accounting and business courses.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BUSN 2100 - Business Communications *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- ACCT 1250 - Accounting Applications I *Credits: 3*
- ACCT 2710 - Intermediate Accounting I *Credits: 3*
- ACCT 2720 - Intermediate Accounting II *Credits: 3*
- ACCT 2410 - Federal Taxes I *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3*
- **OR** BFIN 1100 - Personal Finance *Credits: 3*

- BUSN 1100 - Introduction to Business *Credits: 3*
- **OR** BENT 2180 - Entrepreneurship *Credits: 3*
- BUSN 2340 - Legal Environment of Business *Credits: 3*
- **OR** BUSN 2310 - Business Law I *Credits: 3*
- Business Electives - Select 3 courses from ACCT, BENT, BMGT, BFIN, BUSN, BMKT, MATH 1200, ECON
Credits: 9

Total Credits: 60-62

Banking, AS (BANK-AS)

This degree program is a career development opportunity for students currently working in banking or in a related industry, as well as students interested in pursuing a career in similar fields. The curriculum is designed to better prepare students for entry level, supervisory and middle-management roles in savings banks, commercial banks, savings and loan associations, credit unions and other financial institutions. The courses familiarize students with the various aspects of banking and financial services.

Learning Outcomes:

- Demonstrate an understanding of the basic theory and practice of business administration and banking.
- Demonstrate the ability to read, understand, and prepare standard types of business communications.
- Demonstrate analytical problem-solving and decision-making skills applicable to business administration and banking.
- Demonstrate proficiency in the use and interpretation of data and information as applied to the various applications in business administration and banking.
- Exhibit knowledge of financial services institutions

This program prepares graduates for careers in the Banking Industry and works in collaboration with and is supported by local banks.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- **OR** BUSN 2340 - Legal Environment of Business *Credits: 3*
- BFIN 1250 - Principles of Banking *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3*
- BFIN 2110 - Money & Banking *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BFIN 1100 - Personal Finance *Credits: 3*
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*
- **OR** BUSN 1150 - Business Software Applications *Credits: 3*

Choose two from: (6 credits)

- BFIN 2300 - Investment Principles *Credits: 3*
- BMKT 1060 - Principles of Selling *Credits: 3*

- BMKT 1230 - Principles of Customer Service *Credits: 3*
- BUSN 2195 - Business Co-op Internship *Credits: 3*

Total Credits: 60-62

Bookkeeping Certificate (BKPC-CC)

This 18-credit certificate program provides an education in various bookkeeping areas to prepare students for immediate entry into the job market. Students will study the fundamentals of accounting and learn to use basic software for bookkeeping, including QuickBooks and Excel. Students will have an opportunity to prepare for the national Certified Bookkeeper (CB) exam by AIPB American Institute of Professional Bookkeepers to expand their skills, knowledge, and market value. All courses can be applied towards the Accounting A.S. Degree.

Learning Outcomes:

- demonstrate an understanding of the vital role of a bookkeeper in recording and maintaining accurate and timely financial data.
- demonstrate an understanding of the importance of confidentiality and ethical behavior in processing financial data.
- perform accounting-related activities using spreadsheets and accounting software.
- recognize the importance of effective business communication as applied to accounting practices.
- identify career opportunities in the bookkeeping and accounting fields.

Required Courses

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1250 - Accounting Applications I *Credits: 3*
- BUSN 1100 - Introduction to Business *Credits: 3*
- **OR** BENT 2180 - Entrepreneurship *Credits: 3*
- BUSN 1150 - Business Software Applications *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- Business Elective - choose one course from ACCT, BENT, BFIN, BMGT, or BMKT *Credits: 3*
ACCT 1234 highly recommended to prepare for the AIPB national Certified Bookkeeper (CB) Exam.

Total Credits:18

Business Administration Certificate (BSAD-CC)

This six-course, 18-credit certificate program is designed to give students basic business skills and to be able to function adequately at a rudimentary level in a workplace environment immediately upon completion. All courses in a certificate program apply towards an associate degree. In addition, this certificate is also applicable for people who have a 4-year degree in a discipline other than business and need some of the core business courses required by most university M.B.A. programs.

Learning Outcomes:

- Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
- Define and evaluate principles, techniques and major functions of management and business organizations.
- Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
- Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
- Develop and interpret financial statements using accounting and finance principles to make evidence-based decisions.
- Apply quantitative and technical skills to analyze problems, formulate and develop a solution using appropriate technology, and effectively communicate results to stakeholders.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- **OR** BUSN 2340 - Legal Environment of Business *Credits: 3*
- Business Elective - Any course in ACCT, BMGT, BMKT, BUSN, BFIN, ECON, MATH *Credits: 3*

Total Credits: 18

Business Administration, AS (BSAD-AS)

Provides skills in accounting, ethics, finance, law, management, management information systems, and marketing which are needed to succeed in businesses from sole proprietorships through global corporations. This degree will prepare students to enter a variety of positions in business, start their own venture or continue to a bachelor's degree program.

This program is accredited by the Associate Degree Board of Commissioners of the Accreditation Council for Business Schools and Programs (ACBSP). T

Degree concentration areas are oriented towards career options for graduates and business electives may not transfer.

This is a parent degree that offers additional concentrations in the following areas:

- Business Administration: Entrepreneurship, AS (BENR-AS)
- Business Administration: Finance, AS (FINC-AS)
- Business Administration: Honors, AS (BSAD-AS-HON)
- Business Administration: Management, AS (MGMT-AS)
- Business Administration: Marketing, AS (BMKT-AS)

Students may earn only one of these associate degrees but additional credits certificates may be earned.

Learning Outcomes:

In addition to the General Education learning outcomes, upon successful completion of all program requirements, graduates will be able to:

- Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
- Define and evaluate principles, techniques and major functions of management and business organizations.
- Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
- Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
- Develop and interpret financial statements using accounting and finance principles to make evidence- based decisions.
- Apply quantitative and technical skills to analyze problems, formulate and develop solutions using appropriate technology, and effectively communicate results to stakeholders.

Business Administration General Education Core (21-23 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3 or higher*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Business Administration Program Core (24 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*

- BMKT 2010 - Principles of Marketing *Credits: 3*
- BUSN 2340 - Legal Environment of Business *Credits: 3*
- **OR** BUSN 2310 - Business Law I *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3* (recommended for transfer)
- **OR** BFIN 1100 - Personal Finance *Credits: 3*
- **Open Elective** ACCT 1250, BUSN 1150, or CIS 1141 recommended *Credits 3*
- **Open Elective** *Credits 3*

Business Elective Courses (15 credits)

Choose 5 electives from the list below. RECOMMEND: BUSN 1150 or ACCT 1250

- BENT 2180 - Entrepreneurship *Credits: 3*
- BENT 2170 - Small Business Management & Growth *Credits: 3*
- BENT 2300 - Business Plan *Credits: 3*
- BENT 2098 - Launch a Business *Credits: 3*
- BFIN 1100 - Personal Finance *Credits: 3*
- BFIN 1110 - Financial Literacy *Credits: 3*
- BFIN 1250 - Principles of Banking *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3*
- BFIN 2300 - Investment Principles *Credits: 3*
- BFIN 2110 - Money & Banking *Credits: 3*
- BFIN 2350 - International Finance *Credits: 3*
- BUSN 1100 - Introduction to Business *Credits: 3*
- BUSN 1150 - Business Software Applications *Credits: 3* (Recommended)
- BUSN 2100 - Business Communications *Credits: 3*
- BUSN 2250 - History of American Business *Credits: 3*
- BUSN 2150 - Global Business *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- BUSN 2320 - Business Law II *Credits: 3*
- BUSN 2340 - Legal Environment of Business *Credits: 3*
- BUSN 2400 - Business Ethics *Credits: 3*
- BUSN 2098 - Business Special Topics *Credits: 3*
- BUSN 2090 - Business Capstone *Credits: 3*
- BUSN 2195 - Business Co-op Internship *Credits: 3*
- BUSN 2095 - Business Practicum *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- BMGT 2040 - Managerial Communications *Credits: 3*
- BMGT 2100 - Organizational Behavior *Credits: 3*
- BMGT 2200 - Human Resource Management *Credits: 3*
- BMGT 2260 - Negotiation *Credits: 3*
- BMKT 1060 - Principles of Selling *Credits: 3*
- BMKT 1230 - Principles of Customer Service *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMKT 2070 - Consumer Behavior *Credits: 3*
- BMKT 2080 - Social Media Marketing *Credits: 3*
- BMKT 2140 - International Marketing *Credits: 3*
- BMKT 2160 - Digital Marketing *Credits: 3*
- BMKT 2210 - Sales Management *Credits: 3*

- BMKT 2350 - Public Relations *Credits: 3*
- BMKT 2410 - Principles of Advertising *Credits: 3*
- BMKT 2098 - Special Topics in Marketing *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3*
- MATH 1500 - Applied Business Math *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- MATH 2500 - Calculus for Business and Social Science *Credits: 3*
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*

Total Credits: 60-61

Business Administration: Entrepreneurship Certificate (BENR-CC)

This program will provide students the technical skills associated with becoming an entrepreneur, and/or a small business owner. This program will give students the option of gaining more concentrated knowledge in this discipline. The student will be able to pursue a career or apply courses to an associate of science degree. This certificate will prepare the student with the tools necessary to develop and start their own business. If one is considering opening their own business, regardless of their program of study, this certificate will help them get started.

Learning Outcomes:

- Demonstrate relevant content knowledge in required core business disciplines (accounting, business law, management and organizational behavior, and marketing) and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
- Recognize proper business acumen and decorum in professional interactions; demonstrate appropriate interpersonal communication and presentation skills and demeanor; demonstrate the ability to use presentation and team interpersonal skills effectively in class presentations.
- Recognize and respond thoughtfully to situations that present ethical dilemma, demonstrating the ability to identify ethical dilemmas and social responsibilities of business, an ability to confront ethical dilemmas, and apply ethical principles to business situations using concepts learned.
- Apply concepts in core business disciplines and critical thinking skills to make sound financial decisions.
- Demonstrate an understanding of the interrelationships between accounting and business courses.
- Recognize the vital role small business plays in the global economy. Develop and apply decision-making skills to strategic business planning

Required Courses

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BENT 2180 - Entrepreneurship *Credits: 3*
- ACCT 1250 - Accounting Applications I *Credits: 3*
- BENT 2170 - Small Business Management & Growth *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- **OR** BUSN 2340 - Legal Environment of Business *Credits: 3*
- **OR** Business Elective - Any course in ACCT, BENT, BMGT, BMKT, BUSN, BFIN, ECON, MATH *Credits: 3*

Total Credits: 18

Business Administration: Entrepreneurship, AS (BENR-AS)

A focus on entrepreneurship is one option under the Business Administration parent degree. The Entrepreneurship option prepares graduates with the tools necessary to develop and start their own business, grow their existing business or apply entrepreneurial skills to a corporate setting. Students also gain relevant knowledge to enhance their small business management skills.

Provides skills in accounting, ethics, finance, law, management, management information systems, and marketing which are needed to succeed in businesses from sole proprietorships through global corporations. This degree will prepare students to enter a variety of positions in business, start their own venture or continue to a bachelor's degree program.

Business Administration Learning Outcomes:

In addition to the General Education learning outcomes, upon successful completion of all program requirements, graduates will be able to:

- Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
- Define and evaluate principles, techniques and major functions of management and business organizations.
- Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
- Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
- Develop and interpret financial statements using accounting and finance principles to make evidence-based decisions.
- Apply quantitative and technical skills to analyze problems, formulate and develop solutions using appropriate technology, and effectively communicate results to stakeholders.

Entrepreneurship Learning Outcomes:

- Demonstrate relevant content knowledge in required core business disciplines (accounting, business law, management and organizational behavior, and marketing) and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
- Recognize proper business acumen and decorum in professional interactions; demonstrate appropriate interpersonal communication and presentation skills and demeanor; demonstrate the ability to use presentation and team interpersonal skills effectively in class presentations.
- Recognize and respond thoughtfully to situations that present ethical dilemma, demonstrating the ability to identify ethical dilemmas and social responsibilities of business, an ability to confront ethical dilemmas, and apply ethical principles to business situations using concepts learned.
- Apply concepts in core business disciplines and critical thinking skills to make sound financial decisions.
- Demonstrate an understanding of the interrelationships between accounting and business courses.
- Recognize the vital role small business plays in the global economy. Develop and apply decision-making skills to strategic business planning.

Business Administration General Education Core (21-23 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3 or higher*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Business Administration Program Core (24 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BUSN 2340 - Legal Environment of Business *Credits: 3*
- **OR** BUSN 2310 - Business Law I *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3* (recommended for transfer)
- **OR** BFIN 1100 - Personal Finance *Credits: 3*
- **Open Elective** ACCT 1250, BUSN 1150, or CIS 1141 recommended *Credits 3*
- **Open Elective** *Credits 3*

Entrepreneurship Courses (15 Credits)

- ACCT 1250 - Accounting Applications I *Credits: 3*
- BENT 2170 - Small Business Management & Growth *Credits: 3*
- BENT 2180 - Entrepreneurship *Credits: 3*
- BUSN 2150 - Global Business *Credits: 3*
- **Directed Elective:** choose from disciplines BENT, BFIN, BMGT, BMKT, BUSN, ECON, or MATH *Credits: 3*

Total Credits: 60-62

Business Administration: Finance Certificate (FINC-CC)

This option provides the student with an understanding of the principles and concepts of finance within the general framework of basic general business knowledge. It is designed for the student planning a career in financial or general business management. This program provides the preliminary knowledge required for transfer to a four- year institution and for an entry-level position in finance.

Certificate Learning Outcomes:

- Demonstrate an understanding of basic theory and practice of business administration and finance.
- Demonstrate the ability to read, understand, and prepare standard types of business communications.
- Demonstrate analytical, problem-solving, and decision-making skills applicable to business administration and finance.
- Demonstrate proficiency in the use and interpretation of data and information as applied to the various applications in business administration and finance.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- BFIN 1250 - Principles of Banking *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3*
- BFIN 2300 - Investment Principles *Credits: 3*
- BFIN 2350 - International Finance *Credits: 3*
- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- OR MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Total Credits: 27-28

Business Administration: Finance, AS (FINC-AS)

A focus on finance is one option under the Business Administration parent degree. The Finance provides the student with an understanding of the principles and concepts of finance within the general framework of basic general business knowledge. This program provides the preliminary knowledge required for transfer to a four-year institution and for an entry-level position in finance. Not all classes are fully transferable.

Students develop skills in accounting, ethics, finance, law, management, management information systems, and marketing which are needed to succeed in businesses from sole proprietorships through global corporations. This degree will prepare students to enter a variety of positions in business, start their own venture or continue to a bachelor's degree program.

Business Administration Learning Outcomes:

In addition to the General Education learning outcomes, upon successful completion of all program requirements, graduates will be able to:

- Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
- Define and evaluate principles, techniques and major functions of management and business organizations.
- Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
- Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
- Develop and interpret financial statements using accounting and finance principles to make evidence- based decisions.
- Apply quantitative and technical skills to analyze problems, formulate and develop solutions using appropriate technology, and effectively communicate results to stakeholders.

Finance Learning Outcomes:

- Demonstrate an understanding of basic theory and practice of business administration and finance.
- Demonstrate the ability to read, understand, and prepare standard types of business communications.
- Demonstrate analytical, problem-solving, and decision-making skills applicable to business administration and finance.
- Demonstrate proficiency in the use and interpretation of data and information as applied to the various applications in business administration and finance.

Program Requirements

Business Administration General Education Core (21-23 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3 or higher*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Business Administration Program Core (24 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*

- BMKT 2010 - Principles of Marketing *Credits: 3*
- BUSN 2340 - Legal Environment of Business *Credits: 3*
- **OR** BUSN 2310 - Business Law I *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3* (recommended for transfer)
- **OR** BFIN 1100 - Personal Finance *Credits: 3*
- **Open Elective** ACCT 1250, BUSN 1150, or CIS 1141 recommended *Credits 3*
- **Open Elective** *Credits 3*

Finance Courses (15 credits)

- BFIN 1250 - Principles of Banking *Credits: 3*
- BFIN 2110 - Money & Banking *Credits: 3*
- BFIN 2300 - Investment Principles *Credits: 3*
- BFIN 2350 - International Finance *Credits: 3*
- Elective BUS - Business Elective *Credits: 3* (Recommended: BUSN 1150 or ACCT 1250)

Total Credits: 60-62

Business Administration: Honors, AS (BSAD-AS-HON)

Students will gain skills in accounting, ethics, finance, law, management, management information systems, and marketing which are needed to succeed in businesses from sole proprietorships through global corporations. This degree will prepare students to enter a variety of positions in business, start their own venture or continue to a bachelor's degree program.

This option provides students with rigorous coursework which will enable student's entry into an AACSB accredited institution. This option focuses on the business core as well as an emphasis on critical Math curricula. A minimum GPA of 3.4 is required for this option.

Business Administration Program Student Learning Outcomes:

In addition to the General Education learning outcomes, upon successful completion of all program requirements, graduates will be able to:

- Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
- Define and evaluate principles, techniques and major functions of management and business organizations.
- Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
- Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
- Develop and interpret financial statements using accounting and finance principles to make evidence- based decisions.
- Apply quantitative and technical skills to analyze problems, formulate and develop solutions using appropriate technology, and effectively communicate results to stakeholders.

Honors Student Learning Outcomes:

- Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
- Define and evaluate principles, techniques and major functions of management and business organizations.
- Understand economic concepts and policies as they relate to both local and global markets.
- Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
- Develop and interpret financial statements using accounting and finance principles to make evidence- based decisions.
- Apply quantitative solutions to business problem solving.

Business Administration General Education Core (21-23 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3 or higher*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Business Administration Program Core (24 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*

- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BUSN 2340 - Legal Environment of Business *Credits: 3*
- **OR** BUSN 2310 - Business Law I *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3* (recommended for transfer)
- **OR** BFIN 1100 - Personal Finance *Credits: 3*
- **Open Elective** ACCT 1250, BUSN 1150, or CIS 1141 recommended *Credits 3*
- **Open Elective** *Credits 3*

Business Administration Honors Courses (15 Credits)

- MATH 1200 - Statistics I *Credits: 3*
- MATH 1500 - Applied Business Math *Credits: 3*
- BUSN 2400 - Business Ethics *Credits: 3*
- **OR** MATH 2500 - Calculus for Business and Social Science *Credits: 3*
- *if MATH 2500 is chosen, must be taken in the final semester*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- **Directed Elective:** choose from these disciplines BENT, BFIN, BMGT, BMKT, or BUSN (*Recommended: BUSN 2095 BUSN 2195*) *Credits: 3*

Total Credits: 60-62

Business Administration: Management Certificate (MGMT-CC)

This Certificate provides students with knowledge, techniques and perspectives in the theory and practice of management. It prepares students for entry level careers in management and administration.

Learning Outcomes:

- Demonstrate an understanding of basic theory and practice of business administration and management.
- Demonstrate the ability to read, understand, and prepare standard types of business communications.
- Demonstrate analytical, problem-solving, and decision-making skills applicable to business administration and management.
- Demonstrate proficiency in the use and interpretation of data and information as applied to the various applications in business administration and management.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- BUSN 2150 - Global Business *Credits: 3*
- BMGT 2200 - Human Resource Management *Credits: 3*
- BMGT 2100 - Organizational Behavior *Credits: 3*
- **OR** BMGT 2020 - Principles of Management *Credits: 3*
- BENT 2180 - Entrepreneurship *Credits: 3*
- Business Elective - Any course in ACCT, BMGT, BMKT, BUSN, BFIN, ECON *Credits: 3*

Total Credits: 18

Business Administration: Management, AS (MGMT-AS)

A focus on management is one option under the Business Administration parent degree. The Management option provides students with knowledge, techniques and perspectives in the theory and practice of management. It prepares students for entry level careers in management and administration. Not all classes are fully transferable.

Students develop skills in accounting, ethics, finance, law, management, management information systems, and marketing which are needed to succeed in businesses from sole proprietorships through global corporations. This degree will prepare students to enter a variety of positions in business, start their own venture or continue to a bachelor's degree program.

Business Administration Learning Outcomes:

In addition to the General Education learning outcomes, upon successful completion of all program requirements, graduates will be able to:

- Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
- Define and evaluate principles, techniques and major functions of management and business organizations.
- Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
- Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
- Develop and interpret financial statements using accounting and finance principles to make evidence- based decisions.
- Apply quantitative and technical skills to analyze problems, formulate and develop solutions using appropriate technology, and effectively communicate results to stakeholders.

Management Learning Outcomes:

- Demonstrate an understanding of basic theory and practice of business administration and management.
- Demonstrate the ability to read, understand, and prepare standard types of business communications.
- Demonstrate analytical, problem-solving, and decision-making skills applicable to business administration and management.
- Demonstrate proficiency in the use and interpretation of data and information as applied to the various applications in business administration and management.

Program Requirements

Business Administration General Education Core (21-23 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3 or higher*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Business Administration Program Core (24 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*

- BMKT 2010 - Principles of Marketing *Credits: 3*
- BUSN 2340 - Legal Environment of Business *Credits: 3*
- **OR** BUSN 2310 - Business Law I *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3* (recommended for transfer)
- **OR** BFIN 1100 - Personal Finance *Credits: 3*
- **Open Elective** ACCT 1250, BUSN 1150, or CIS 1141 recommended *Credits 3*
- **Open Elective** *Credits 3*

Management Courses (15 Credits)

- BUSN 2150 - Global Business *Credits: 3*
- BMGT 2200 - Human Resource Management *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BENT 2180 - Entrepreneurship *Credits: 3*
- Elective BUS - Business Elective *Credits: 3* (Recommended: BUSN 1150 or ACCT 1250)

Total Credits: 60-62

Business Administration: Marketing Certificate (BMKT-CC)

The Marketing Certificate is meant for either new students or younger professionals wishing to enhance their skills and knowledge through additional education. This certificate programs focuses on fundamental marketing concepts; including pricing, promotional strategies, marketing communications, and the use of digital technologies for marketing purposes.

Learning Outcomes:

- Critically analyze and discuss topics including marketing ethics, the marketing mix and global/domestic marketing strategies.
- Demonstrate the ability to effectively present marketing and promotion plans and to make an effective sales presentation, all of which reflect an understanding of customer behavior, segmentation and product and services positioning.
- Demonstrate the ability to collect, process, and analyze consumer and market data to make informed decisions.
- Demonstrate the ability to create and implement traditional and digital marketing communication strategies.
- Apply the knowledge, concepts, tools necessary to overcome challenges, and issues of marketing in a changing technological landscape.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMKT Electives - Choose any two BMKT courses *Credits: 6*
- Business Electives - Choose any two courses in ACCT, BMGT, BMKT, BUSN, BFIN, DGA or GRA *Credits: 6*

Total Credits: 18

Business Administration: Marketing, AS (BMKT-AS)

A focus on marketing is available under the Business Administration parent degree. The Management option provides students with knowledge, techniques, and perspectives in the theory and practice of marketing. The program prepares students for further study and a broad variety of entry level marketing careers and customer service roles. Not all classes are fully transferable.

Students develop skills in accounting, ethics, finance, law, management, management information systems, and marketing which are needed to succeed in businesses from sole proprietorships through global corporations. This degree will prepare students to enter a variety of positions in business, start their own venture or continue to a bachelor's degree program.

Business Administration Learning Outcomes:

In addition to the General Education learning outcomes, upon successful completion of all program requirements, graduates will be able to:

- Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society.
- Define and evaluate principles, techniques and major functions of management and business organizations.
- Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
- Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
- Develop and interpret financial statements using accounting and finance principles to make evidence- based decisions.
- Apply quantitative and technical skills to analyze problems, formulate and develop solutions using appropriate technology, and effectively communicate results to stakeholders.

Marketing Learning Outcomes:

In addition to the General Education learning outcomes, upon successful completion of all program requirements, graduates will be able to:

- Critically analyze and discuss topics including marketing ethics, the marketing mix and global/domestic marketing strategies.
- Demonstrate the ability to effectively present marketing and promotion plans and to make an effective sales presentation, all of which reflect an understanding of customer behavior, segmentation and product and services positioning.
- Demonstrate the ability to collect, process, and analyze consumer and market data to make informed decisions.
- Demonstrate the ability to create and implement traditional and digital marketing communication strategies.
- Apply the knowledge, concepts, tools necessary to overcome challenges, and issues of marketing in a changing technological landscape.

Program Requirements

Business Administration General Education Core (21-23 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3 or higher*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Business Administration Program Core (24 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BUSN 2340 - Legal Environment of Business *Credits: 3*
- **OR** BUSN 2310 - Business Law I *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3* (recommended for transfer)
- **OR** BFIN 1100 - Personal Finance *Credits: 3*
- **Open Elective** ACCT 1250, BUSN 1150, or CIS 1141 recommended *Credits 3*
- **Open Elective** *Credits 3*

Marketing Electives (15 Credits)

Choose 5 of the following courses:

- BMKT 2140 - International Marketing *Credits: 3*
- BMKT 2195 - Field Experience I *Credits: 3*
- BMKT 2350 - Public Relations *Credits: 3*
- BMKT 2410 - Principles of Advertising *Credits: 3*
- BMKT 1060 - Principles of Selling *Credits: 3*
- BMKT 1230 - Principles of Customer Service *Credits: 3*
- BMKT 2070 - Consumer Behavior *Credits: 3*
- BMKT 2080 - Social Media Marketing *Credits: 3*
- BMKT 2210 - Sales Management *Credits: 3*
- BMKT 2160 - Digital Marketing *Credits: 3*
- Elective BUS - Business Elective *Credits: 3* (Recommended: BUSN 1150 or ACCT 1250)

Total Credits: 60-61

Business Intelligence, AS (BSIN-AS)

The Business Intelligence Program is committed to creating critical thinkers, innovative solution seekers and well-rounded business professionals. Business intelligence (BI) combines business knowledge with data analytics, data modeling, analytic tools, and organizational infrastructure to aid businesses in making data-informed decisions. Degree candidates face the rigors of a business education that focuses on combining traditional business modalities with innovative data technology to produce graduates who are modern day leaders.

As a Business Intelligence degree candidate, you will:

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

Learning Outcomes:

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

- Explain the basics building blocks of a business.
- Apply analytic techniques to real-world data using statistics and programming languages.
- Develop the ability to make data-driven decisions.
- Create data visualizations with analytic platforms.
- Demonstrate the ability to communicate effectively both verbally and in writing.
- Develop leadership skills and critical decision-making techniques.
- Demonstrate ability to complete individual and team-based assignments.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Required Courses (43 credits)

- MATH 2200 - Statistics II *Credits: 3*
- CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CSC 1231 - Database Development I *Credits: 4*
- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3*
- DTS 2201 - Programming in Data Science *Credits: 3*

- DTS 2215 - Data Ethics and Security *Credits: 3*
- DTS 2220 - Introduction to Machine Learning *Credits: 3*
- DTS 2290 - Capstone Research *Credits: 3*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- BMKT 2160 - Digital Marketing *Credits: 3*
- DTS 2258 - Data Journalism *Credits: 3*

Total Credits: 64-66

Business Office Technology: Administrative Support Certificate (ADSS-CC-BOT)

This program is recommended for students interested in upgrading their skills to become more marketable in an increasingly technological work environment. Coursework focuses on business communications and computer applications to provide students with the skills necessary to secure entry-level administrative employment opportunities.

Learning Outcomes:

Upon successful completion of all Administrative Support Specialist certificate program requirements, graduates will:

- Demonstrate keyboarding and data-entry speed and accuracy, including proofreading, according to industry accepted standards.
- Create and modify standard types of business communications in both printed and electronic forms.
- Acquire up-to-date skills in the following areas: accounting, word processing, spreadsheet, database, project management, presentation, personal information management, web technologies, and speech recognition.
- Show effective time management and organizational skills.
- Display strong interpersonal and human relations skills required for success in a professional setting including: professionalism, adaptability to change, initiative, confidentiality, positive attitude and human relations and creativity.
- Demonstrate decision-making ability; acquire and utilize information to solve problems; demonstrate computer knowledge; communication skills and business procedures using ability-based projects; and demonstrate responsibility, positive attitude, self-management, honesty, and confidentiality.
- Contribute as a productive team member in a culturally and intellectually diverse global environment.

At the time of publication, this certificate is a WIOA-approved program:

http://www1.ctdol.state.ct.us/etc/program_det.asp?strProgPrevious=proglis&intProgramID=1492

Upon completion of this option, graduates gain direct entry into the local general administrative support job market in such positions (titles vary depending on the organization) as: Executive Assistant, Administrative Assistant, Project Coordinator/Project Assistant, Administrative Specialist/Associate, Program Assistant, Accounting Clerk, Office Manager, Office Clerk, School Secretary, Sales/Marketing Assistant, Human Resources Assistant, Customer Service Representative, Property Management Assistant, Mortgage Assistant, Claims Processor, Dispatcher, Data Entry Verification Specialist, and Receptionist.

Upon completion of this option, graduates can elect to take the following industry-recognized certifications:

- Microsoft Office Specialist (certifications by exam per application)
- Certified Administrative Professional (CAP)

Required Courses

- BOT 1101 - Keyboarding and Document Production I *Credits: 3*
- BOT 1604 - Office Accounting *Credits: 3*
- **OR** ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- **OR** BMGT 2040 - Managerial Communications *Credits: 3*
- BOT 2200 - Digital Workplace Technologies *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- BOT 2095 - Cooperative Work Experience *Credits: 3*
- **OR** BOT 2195 - Administrative Practicum *Credits: 4*

Choose 2 Applications Electives Credits: 6

- BOT 1102 - Keyboarding and Document Production II *Credits: 3*

- BOT 1307 - Word Processing Applications *Credits: 3*
- BOT 2109 - Integrated Applications *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*
- CIS 1001 - Introduction to Computers *Credits: 3*

Total Credits: 24-25

Business Office Technology: Customer Service Specialist Certificate (CSSS-CC-BOT)

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.

Learning Outcomes:

Upon successful completion of all Office Support Specialist certificate program requirements, graduates will:

- Key and format business documents and demonstrate proofreading skills.
- Demonstrate technical proficiency in office applications software including: word processing, personal information management, spreadsheet, database management, presentation, speech recognition, and web conferencing tools.
- Be able to resolve customer-focused problems in a timely fashion.
- Exhibit verbal, non-verbal and written communication 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.

Required Courses

- BOT 1101 - Keyboarding and Document Production I *Credits: 3*
- **OR** BOT 1307 - Word Processing Applications *Credits: 3*
- BOT 2200 - Digital Workplace Technologies *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** COMM 1302 - Interpersonal Communication *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- **OR** BMGT 2040 - Managerial Communications *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- **OR** BMKT 2200 - Sales *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*

Total Credits: 18

Business Office Technology: Electronic Health Records Specialist (EHRS-CC-BOT)

The extensive use of electronic health records by all types of healthcare providers will lead to an increased need for medical administrative professionals to organize and manage the associated information in all areas of the healthcare industry. According to the Bureau of Labor Statistics, employment of medical records and health information technicians is expected to increase by 8 percent from 2019 to 2029, faster than the average for all occupations. This growth is a direct result of the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009, which was passed to promote and expand the adoption of health information technology as well as an aging workforce in this specialty area, which is promoting continued demand for these highly skilled health care professionals.

Students will demonstrate proficiency via hands-on Labs, software simulations and integrated projects.

Learning Outcomes:

Upon successful completion of this certificate, graduates will be able to

- Demonstrate advanced keyboarding speed and accuracy using industry accepted methods
- Demonstrate competency in the use of standard medical office equipment including practice management systems
- Use the common features and functions of specialized EHR applications
- Review electronic health records for timeliness, completeness, accuracy, and appropriateness of health data
- Protect health information for confidentiality, authorized release of information, and data security
- Demonstrate professionalism and positive work habits necessary for success in today's medical office

Upon completion of this option, graduates can elect to take the following national industry-recognized certifications:

- Certified Electronic Health Record Specialist (CEHRS) via the National Healthcareer Association (NHA)

Required Courses

- BOT 1101 - Keyboarding and Document Production I *Credits: 3*
- BOT 1800 - Medical Terminology and Anatomy *Credits: 3*
- HIMT 2110 - Health Information Management Principles *Credits: 3*
- **OR** BOT 2095 - Cooperative Work Experience *Credits: 3*
- **OR** BOT 2195 - Administrative Practicum *Credits: 4*
- BOT 1801 - Medical Coding I *Credits: 3*
- BOT 2808 - Medical Practice Management Applications *Credits: 3*
- BOT 2810 - Electronic Health Records *Credits: 3*

Total Credits: 18-19

Business Office Technology: Legal Administrative Support Specialist (LASS-CC-BOT)

The duties of a legal administrative support specialist vary depending on the specialty of the law office. However, all legal administrative support professionals 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 support specialist.

Learning Outcomes:

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

- Develop effective oral, written, and technology skills for a career in the legal environment
- Differentiate between various types of legal specialties such as law offices, courts, corporate, and others
- Proofread and edit legal documents accurately
- Demonstrate skills in law office procedures and legal document processing and distribution

Required Courses

- BOT 1101 - Keyboarding and Document Production I *Credits: 3*
- **OR** BOT 1307 - Word Processing Applications *Credits: 3*
- BOT 1604 - Office Accounting *Credits: 3*
- **OR** ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- **OR** BMGT 2040 - Managerial Communications *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- BOT 2200 - Digital Workplace Technologies *Credits: 3*
- BUSN 2320 - Business Law II *Credits: 3*
- BOT 2701 - Legal Document Production *Credits: 3*
- **OR** BOT 1102 - Keyboarding and Document Production II *Credits: 3*
- BOT 2702 - Legal Administrative Procedures *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- BOT 2095 - Cooperative Work Experience *Credits: 3*
- **OR** BOT 2195 - Administrative Practicum *Credits: 4*

Total Credits: 30-31

Business Office Technology: Medical Insurance Specialist (MCOD-CC-BOT)

With the numerous changes in the health care industry due to federal incentives for the conversion to electronic automation of managing healthcare information the Medical Insurance Specialist will continue to play an important part in the health care industry through proper documentation oversight. This certificate program is designed to prepare students to manage the medical insurance specialist process along with coding and billing insurance claims in doctors' offices, hospitals, HMOs and other health care facilities.

Learning Outcomes:

Upon successful completion of this certificate, graduates will be able to

- Create and modify standard types of business communications in both printed and electronic forms.
- Demonstrate strong interpersonal and human relations skills required for success in a professional setting.
- Demonstrate proficiency in the use of ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification) and CPT (Current Procedural Terminology), HCPCS (Healthcare Common Procedure Coding System) coding in entering and/or processing medical insurance claims.
- Acquire up-to-date technology skills using medical office computer applications.
- Understand and adhere to the importance of federal regulations, medical ethics, legal implications, and patient confidentiality when handling protected health information.

Upon completion of this option, graduates can elect to take the following national industry-recognized certifications:

- Certified Professional Coder (CPC) via the American Association of Professional Coders (AAPC)
- Certified Professional Biller (CPB) via the American Association of Professional Coders (AAPC)
- Certified Billing and Coding Specialist (CBCS) via the National Healthcareer Association (NHA)
- Certified Medical Reimbursement Specialist (CMRS) via American Medical Billing Association (AMBA)

Required Courses

- BOT 1101 - Keyboarding and Document Production I *Credits: 3*
- BOT 1800 - Medical Terminology and Anatomy *Credits: 3*
- BOT 2200 - Digital Workplace Technologies *Credits: 3*
- BOT 1801 - Medical Coding I *Credits: 3*
- BOT 1802 - Medical Coding II *Credits: 3*
- BIO 1100 - Principles of the Human Body *Credits: 3*
- BIO 1100L - Principles of the Human Body Lab *Credits: 1*
- BOT 2807 - Foundations/Management of Medical Insurance *Credits: 3*

Total Credits: 22

Business Office Technology: Medical Option, AS (MEDO-AS-BOT)

In today's fast-paced, technology-driven workplace, administrative support professionals are highly valued members of any organization. They must use technology to originate, access, manage and manipulate information. In addition, they function independently in initiating office communications, accessing and tracking records and information, and problem-solving the various details of the day-to-day office operations. As contributing members of management teams, administrative professionals must assume a high level of responsibility and work independently to exercise initiative and judgment and to adapt to new technologies and procedures.

Highly skilled administrative medical professionals are essential in any health care setting. This option prepares students with the competencies and knowledge necessary to excel and contribute as a positive team member in the medical administrative environment. Students become proficient in word processing, medical terminology, computerized communication, health information principles, medical coding and reimbursement, and state-of-the-art medical software simulations integrating practice management and Electronic Health Records applications.

The national and local job market continues to be strong for students enrolled in this option. According to the Bureau of Labor Statistics, employment of medical records and health information technicians is expected to increase by 8 percent from 2019 to 2029, faster than the average for all occupations. This growth is a direct result of the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009, which was passed to promote and expand the adoption of health information technology as well as an aging workforce in this specialty area, which is promoting continued demand for these highly skilled health care professionals. Subsequently, the extensive use of electronic health records by all types of healthcare providers will lead to an increased need for medical administrative professionals to organize and manage the associated information in all areas of the healthcare industry.

Learning Outcomes:

Business Office Technology:

Upon successful completion of all Business Office Technology degree program requirements, graduates will be able to:

- Demonstrate keyboarding and data-entry speed and accuracy, including proofreading, using industry accepted standards.
- Create and modify standard types of business communications in both printed and electronic forms.
- Acquire up-to-date skills in the following areas: accounting, word processing, spreadsheet, database, project management, presentation, personal information management, web technologies, and speech recognition.
- Show effective time management and organizational skills.
- Display strong interpersonal and human relations skills required for success in a professional setting including: professionalism, adaptability to change, initiative, confidentiality, positive attitude and human-relations and creativity.
- Demonstrate decision-making ability; acquire and utilize information to solve problems; demonstrate computer knowledge; communication skills and business procedures using ability-based projects; and demonstrate responsibility, positive attitude, self-management, honesty and confidentiality.
- Contribute as a productive team member in a culturally and intellectually diverse global environment.

In Business Office Technology, students pursuing an associates degree choose between the Medical Option and the Office Option. Certificates are also available in other areas of focus.

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

- Define and apply medical terminology.
- Execute medical office procedures used in today's technological work environment.
- Understand and perform medical practice management/patient accounting operations.
- Demonstrate accuracy in medical billing and coding procedures.
- Understand and adhere to the importance of federal regulations, medical ethics, legal implications, and patient confidentiality when handling protected health information.

Upon completion of this option, graduates can elect to take the following national industry-recognized certifications:

- Certified Professional Coder (CPC) via the American Association of Professional Coders (AAPC)
- Certified Professional Biller (CPB) via the American Association of Professional Coders (AAPC)
- Certified Electronic Health Record Specialist (CEHRS) via the National Healthcareer Association (NHA)
- Certified Billing and Coding Specialist (CBCS) via the National Healthcareer Association (NHA)
- Certified Medical Reimbursement Specialist (CMRS) via American Medical Billing Association (AMBA)

General Education Courses (22-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1100 - Principles of the Human Body *Credits: 3* AND BIO 1100L Lab *Credits: 1*
- **OR** BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- SOC 1001 - Principles of Sociology *Credits: 3*
- **OR** PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Core Courses (24-25 credits)

- BOT 1101 - Keyboarding and Document Production I *Credits: 3*
- BOT 1604 - Office Accounting *Credits: 3*
- **OR** ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BOT 2200 - Digital Workplace Technologies *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- BOT 2095 - Cooperative Work Experience *Credits: 3*
- **OR** BOT 2195 - Administrative Practicum *Credits: 4*
- **OR** CIS 1143 - Project Management *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- **OR** BMGT 2200 - Human Resource Management *Credits: 3*

Application Electives: Choose 2 from the following list:

- BOT 1102 - Keyboarding and Document Production II *Credits: 3*
- BOT 1307 - Word Processing Applications *Credits: 3*
- BOT 2109 - Integrated Applications *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*

Medical Option Required Courses (15 credits)

- BOT 1800 - Medical Terminology and Anatomy *Credits: 3*
- **OR** HIMT 1000 - Medical Terminology *Credits: 3*
- BOT 1801 - Medical Coding I *Credits: 3*
- BOT 1802 - Medical Coding II *Credits: 3*
- BOT 2808 - Medical Practice Management Applications *Credits: 3*
- **OR** HIMT 2110 - Health Information Management Principles *Credits: 3*
- BOT 2807 - Foundations/Management of Medical Insurance *Credits: 3*
- **OR** BOT 2810 - Electronic Health Records *Credits: 3*

Total Credits: 61-63

Business Office Technology: Office Application Skills Update (OFFC-CC-BOT)

Office application and computer technology skills are essential in today's workplace. This certificate is designed for office professionals as well as those returning to the workforce to enhance their computer application skills. It provides students an opportunity to improve their employment prospects and advance in their careers. Students utilize state of the art software applications including word processing, personal information management, spreadsheet, database management, presentation, speech recognition, and web conferencing tools.

Learning Outcomes:

Upon successful completion of all Office Applications Skills Update certificate program requirements, graduates will be able to:

- Key and format business documents and demonstrate proofreading skills.
- Demonstrate technical proficiency in office applications software including: word processing, personal information management, spreadsheet, database management, presentation, speech recognition, and web conferencing tools.
- 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.

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 or higher education.

Required Courses

- BOT 1101 - Keyboarding and Document Production I *Credits: 3*
- **OR** BOT 1307 - Word Processing Applications *Credits: 3*
- BOT 2200 - Digital Workplace Technologies *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*
- **OR** CSA 2112 - Database Applications *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*

Total Credits: 12

Business Office Technology: Office Option, AS (OFFC-AS-BOT)

In today's fast-paced, technology-driven workplace, administrative support professionals are highly valued members of any organization. They must use technology to originate, access, manage and manipulate information. In addition, they function independently in initiating office communications, accessing and tracking records and information, and problem-solving the various details of the day-to-day office operations. As contributing members of management teams, administrative professionals must assume a high level of responsibility and work independently to exercise initiative and judgment and to adapt to new technologies and procedures.

This option provides students with the skills necessary to excel in this rapidly changing and challenging office environment. Students will become skilled in keyboarding, word processing, business and computerized communication, and office applications and procedures.

Graduates of this program have gained entry-level employment in a variety of administrative support settings throughout the local communities. Graduates have recently been placed in positions at colleges and universities, insurance carriers, elementary and secondary schools, construction companies, municipalities, home health and social organizations, etc.

Learning Outcomes:

Upon successful completion of all Business Office Technology degree program requirements, graduates will be able to:

- Demonstrate keyboarding and data-entry speed and accuracy, including proofreading, using industry accepted standards.
- Create and modify standard types of business communications in both printed and electronic forms.
- Acquire up-to-date skills in the following areas: accounting, word processing, spreadsheet, database, project management, presentation, personal information management, web technologies, and speech recognition.
- Show effective time management and organizational skills.
- Display strong interpersonal and human relations skills required for success in a professional setting including: professionalism, adaptability to change, initiative, confidentiality, positive attitude and human relations and creativity.
- Demonstrate decision-making ability; acquire and utilize information to solve problems; demonstrate computer knowledge; communication skills and business procedures using ability-based projects; and demonstrate responsibility, positive attitude, self-management, honesty, and confidentiality.
- Contribute as a productive team member in a culturally and intellectually diverse global environment.

In Business Office Technology, students pursuing an associates degree choose between the Medical Option and the Medical Option. Certificates are also available in other areas of focus.

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

- Exhibit verbal, non-verbal and written communication skills.
- Perform advanced business application skills.
- Develop a portfolio that showcases talents, promotes self-evaluation, and provides validation for employment or promotion.
- Apply business concepts and critical thinking skills to make sound professional and ethical decisions in the workplace.

Upon completion of this option, graduates can elect to take the following industry-recognized certifications:

- Microsoft Office Specialist (certifications by exam per application)
- Certified Associate in Project Management (CAPM)
- Certified Administrative Professional (CAP)

General Education Courses (22-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*

- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- SOC 1001 - Principles of Sociology *Credits: 3*
- **OR** PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** BUSN 2100 - Business Communications *Credits: 3*
- BIO 1100 - Principles of the Human Body *Credits: 3* **AND** BIO 1100L - Principles of the Human Body Lab *Credits: 1*
- **OR** BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- CCS 1001 - College & Career Success *Credits: 3*

Program Core Courses (24-25 credits)

- BOT 1101 - Keyboarding and Document Production I *Credits: 3*
- BOT 1604 - Office Accounting *Credits: 3*
- **OR** ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BOT 2200 - Digital Workplace Technologies *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- BOT 2095 - Cooperative Work Experience *Credits: 3*
- **OR** BOT 2195 - Administrative Practicum *Credits: 4*
- **OR** CIS 1143 - Project Management *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- **OR** BMGT 2200 - Human Resource Management *Credits: 3*

Application Electives:

Choose 2 from the following list:

- BOT 1102 - Keyboarding and Document Production II *Credits: 3*
- BOT 1307 - Word Processing Applications *Credits: 3*
- BOT 2109 - Integrated Applications *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*

Office Option Required Courses (15 credits)

- CIS 1001 - Introduction to Computers *Credits: 3*
- **OR** CIS 1002 - Foundations of Computing *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- **OR** ENG 1030 - Composition II and Non-fiction Texts *Credits: 3*
- CSA 2112 - Database Applications *Credits: 3*
- **OR** CSA 2113 - Advanced Applications *Credits: 3*

Business/Ethics Electives :

Choose 2 from the following list:

- BUSN 2310 - Business Law I *Credits: 3*
- BUSN 2340 - Legal Environment of Business *Credits: 3*
- BMGT 2040 - Managerial Communications *Credits: 3*
- BENT 2180 - Entrepreneurship *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMKT 2200 - Sales *Credits: 3*
- BUSN 2400 - Business Ethics *Credits: 3*
- PHIL 1012 - Bioethics *Credits: 3*

Total Credits: 61-64

Business Office Technology: Social Media Specialist Certificate (SOCM-CC-BOT)

This certificate program combines digital technology, communications, and marketing coursework to equip graduates with the skills they need in this fast-changing field. It is designed to provide relevant training in key areas such as website design, social media, consumer behavior, search engine optimization, and project management.

Working in the social media field requires flexibility and the ability to juggle multiple tasks at once. The Social Media Specialist may be responsible for developing and implementing a company's social media strategy to increase its online presence and improve marketing and sales efforts. The understanding of how search, content, and social media all work together is important along with attention to detail. A typical day may require you to monitor tweets, respond to posts, analyze trends, and engage with brand advocates. Customer engagement is at the top of the list so skills such as building creative content and understanding different media formats that resonate with target audiences are important.

The Social Media Specialist certificate can boost a resume, enhance an existing degree, or provide a foundation for pursuing a degree in digital marketing, public relations, communications, entrepreneurship and business.

Learning Outcomes:

Upon successful completion of all Social Media Specialist certificate program requirements, graduates will:

- Build and execute social media strategies through competitive research, data interpretation, benchmarking, messaging, and audience identification.
- Implement and maintain an organization's social media strategy, developing brand awareness and boosting product adoption.
- Maintain a website and use related content management tools.
- Report on the process of applying various social media tactics using digital and media tracking tools.
- Develop social media marketing campaigns.
- Demonstrate professionalism and positive work habits necessary for success in today's business world.

Required Courses

- CIS 1002 - Foundations of Computing *Credits: 3*
- COMM 1306 - Social Media in Contemporary Society *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- **OR** COMM 1304 - Introduction to Public Relations *Credits: 3*
- **OR** BMKT 2080 - Social Media Marketing *Credits: 3*
- CSC 1271 - Web Development and Design I *Credits: 4*
- CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*

Total Credits: 19

Business Studies - CSCU Transfer Degree, AA (BSAD-AA-TAP)

CSCU Pathway Transfer, A.A. degree programs are for Connecticut Community College students who wish to transfer to one of the Connecticut State Universities or Charter Oak without either losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. Community college students can complete associate degree programs that transfer seamlessly to all Connecticut State Universities and Charter Oak State College offering their major. Upon transfer, students are guaranteed full junior status and can complete a bachelor's degree in their major without losing any credits or be required to take any extra credits.

This 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. Students will declare a specific field when they 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- 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.

Learning Outcomes:

Upon successful completion of all courses in the program, students will be able to:

- demonstrate both accounting and finance concepts as applied to the sound fiscal management of a business enterprise
- demonstrate various micro- and macroeconomic principles and their influence on the organizational decision-making process
- demonstrate marketing's role in the development of a successful business strategy
- demonstrate the impact of leadership, employee behavior and organizational culture in attaining organizational goals and objectives

- demonstrate both the ethical and legal implications of managerial decisions and the effect of those decisions on organizational stakeholders
- demonstrate the integration of knowledge and apply learned skills for real-world business decision making
- demonstrate group dynamics and the benefits of a team-based approach in business

Framework Courses (30-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3 **
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30-31 credits)

Minimum grades are required for transfer, students should speak with their advisor.

- ECON 1002 - Principles of Microeconomics *Credits: 3*
- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- MATH 1500 - Applied Business Math *Credits: 3*
- **OR** MATH 2600 - Calculus I *Credits: 4*
- **OR** MATH 2500 - Calculus for Business and Social Science *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- **OR** BUSN 2340 - Legal Environment of Business *Credits: 3*
- Elective BUS - Business Elective *Credits: 3 **
- Unrestricted Elective *Credits: 3*

Total Credits: 61-65

*these two requirements represent a correction made on 12/12/2024 which broadens options as approved. Questions should be directed to your advisor.

Culinary Arts Certificate (CULI-CC)

The Culinary Arts Certificate program is the first step toward pursuing a career in commercial food preparation. Academic credits from this program may be transferred to associate degree programs in other CT State Hospitality Programs.

The American Culinary Federation Education Foundation, Inc. Accrediting Commission/Committee accredits the Culinary Arts and Foodservice Management programs. Along with classroom and laboratory study, students will participate in an individually planned, 150 or 300-hour cooperative work experience course, earning credit toward graduation while employed. Graduates may transfer credits and earn baccalaureate degrees at various institutions of higher learning. Students may enroll in this program full or part-time, day or evening.

Graduates from Accredited programs may apply to the American Culinary Federation (ACF) to become a Certified Fundamentals Cook®, Certified Culinarian®, both nationally recognized certifications. The American Culinary Federation Education Foundation, Inc. Accrediting Commission/Committee accredits the Culinary Arts and Foodservice Management programs.

Learning Outcomes:

Upon successful completion of all Culinary Arts certificate program requirements, graduates will:

- **Professionalism:** Summarize basic principles and concepts of the hospitality industry with its varied career tracks, and apply personal skills, including but not limited to adherence to accepted professional standards and codes of conduct.
- **Leadership:** Develop and meet the highest standards of professionalism in ethical standards and behavior in management.
- **Teamwork:** Recognize the importance of working groups, mutual responsibility, and diversity of thought to effective outcomes.
- **Culinary Skills:** Analyze theory and techniques skills of food preparation and presentation.
- **Safety & Sanitation:** Safely operate commercial kitchen equipment in an efficient manner and apply safety and environmental sanitation standards of foodservice operations to obtain a ServSafe® certificate.
- **Service:** Analyze methods of service and management principles for all hospitality operations and learn beverage service through varied styles and menu offerings.
- **Cost Controls:** Apply basic accounting principles and procedures in the acquisition, costing and inventory controls related to the hospitality and food service industry.
- **Technology:** Apply technology to food service and hospitality operations.
- **Baking Skills:** Develop knowledge and skills in basic baking and pastry arts.
- **International Cuisine:** Study world cuisines in contemporary cooking as well as their cultural impact on current culinary trends.
- **Production:** Prepare a business plan which includes menu design, execution and production, which includes catering, classical cold foods preparation, carvings and displays.
- **Classical Techniques:** Learn the basics of classical techniques in culinary and pastry arts and how they apply to current trends.
- **Nutrition:** Analyze theory of nutritional standards and how they can be applied to various food service operations.
- **Cooperative Experience:** Transfer knowledge and apply skills in a production environment to obtain experience in the food service industry.

Industry Certifications Offered within program: ServSafe® Food Protection Manager, and TIPS® Training Industry Certifications prepared for by program: Certified Fundamentals Cook®, Certified Culinarian.

Required Courses

- HOSP 1101 - Principles of Food Preparation *Credits: 3*
- HOSP 1103 - Principles of Baking I *Credits: 3*
- HOSP 1109 - Food Safety Certification *Credits: 1*
- HOSP 1212 - Advanced Food Preparation *Credits: 4*

- HOSP 1135 - Service Management *Credits: 3*
- NTRN 1002 - Nutrition I: Principles of Nutrition *Credits: 3*
- **OR** BIO 1011 - Introduction to Nutrition *Credits: 3*
- HOSP 2201 - International Foods *Credits: 4*
- HOSP 1215 - Principles of Baking II *Credits: 3*
- HOSP 2210 - Catering Management *Credits: 4*
- HOSP 2294 - Cooperative Education/Work Experience *Credits: 3*

Total Credits: 31

Culinary Arts, AS (CULI-AS)

The Culinary Arts associate degree program will give students the knowledge, tools, and skills necessary to be successful in the food service industry. Students will also take general education courses to improve employability, job performance and course transferability to another college or university.

The American Culinary Federation Education Foundation, Inc. Accrediting Commission/Committee accredits the Culinary Arts and Foodservice Management programs. Along with classroom and laboratory study, students will participate in an individually planned, 150 or 300-hour cooperative work experience course, earning credit toward graduation while employed. Graduates may transfer credits and earn baccalaureate degrees at various institutions of higher learning. Students may enroll in this program full or part-time, day or evening.

In addition to this degree, by taking additional credit hours, students may earn an associate degree in Foodservice Management or Hotel-Tourism Management. Graduates from this program may apply to the American Culinary Federation (ACF) to become a Certified Fundamentals Cook®, Certified Culinarian®, both nationally recognized certifications.

Learning Outcomes:

Upon successful completion of all Culinary Arts degree program requirements, graduates will:

- **Professionalism:** Summarize basic principles and concepts of the hospitality industry with its varied career tracks, and apply personal skills, including but not limited to adherence to accepted professional standards and codes of conduct.
- **Leadership:** Develop and meet the highest standards of professionalism in ethical standards and behavior in management.
- **Teamwork:** Recognize the importance of working groups, mutual responsibility, and diversity of thought to effective outcomes.
- **Culinary Skills:** Analyze theory and techniques skills of food preparation and presentation.
- **Safety & Sanitation:** Safely operate commercial kitchen equipment in an efficient manner and apply safety and environmental sanitation standards of foodservice operations to obtain a ServSafe® certificate.
- **Service:** Analyze methods of service and management principles for all hospitality operations and learn beverage service through varied styles and menu offerings.
- **Cost Controls:** Apply basic accounting principles and procedures in the acquisition, costing and inventory controls related to the hospitality and food service industry.
- **Sustainable:** Explain and describe the importance of a variety of sustainable practices in a food service operation and how they relate to the environment and the success of the organization.
- **Technology:** Apply technology to food service and hospitality operations.
- **Baking Skills:** Develop knowledge and skills in basic baking and pastry arts, including cake decorating and artisan breads.
- **International Cuisine:** Study world cuisines in contemporary cooking as well as their cultural impact on current culinary trends.
- **Production:** Prepare a business plan which includes menus design, execution and production, which include, catering, classical cold foods preparation, carvings and displays.
- **Classical Techniques:** Learn the basics of classical techniques in culinary and pastry arts and how they apply to current trends.
- **Nutrition:** Analyze theory of nutritional standards and how they can be applied to various food service operations.
- **Cooperative Experience:** Transfer knowledge and apply skills in a production environment to obtain experience in the food service industry.
- **General Education:** Complete the comprehensive learning outcomes identified with the General Education Core.

Industry Certifications Offered within program: ServSafe® Food Protection Manager, and TIPS® Training Industry Certifications prepared for by program: Certified Fundamentals Cook®, Certified Culinarian®, Certified Fundamentals Pastry Cook™, or Certified Pastry Culinarian®

General Education Courses (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1001 - Quantitative Literacy *Credits: 3* (or higher - college level)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1011 - Introduction to Nutrition *Credits: 3*
- **OR** NTRN 1002 - Nutrition I: Principles of Nutrition *Credits: 3*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (43 credits)

- HOSP 1100 - Introduction to the Hospitality Industry *Credits: 3*
- HOSP 1101 - Principles of Food Preparation *Credits: 3*
- HOSP 1103 - Principles of Baking I *Credits: 3*
- HOSP 1109 - Food Safety Certification *Credits: 1*
- HOSP 1212 - Advanced Food Preparation *Credits: 4*
- HOSP 1135 - Service Management *Credits: 3*
- HOSP 2201 - International Foods *Credits: 4*
- HOSP 2210 - Catering Management *Credits: 4*
- HOSP 2111 - Food & Beverage Cost Control *Credits: 3*
- HOSP 1107 - Icing Artistry I *Credits: 3*
- **OR** HOSP 2216 - Artisan Bread *Credits: 3*
- **OR** HOSP 2225 - Principles of Baking III: Chocolates and Confections *Credits: 3*
- HOSP 1215 - Principles of Baking II *Credits: 3*
- HOSP 2230 - Sustainable Food Service Management *Credits: 3*
- HOSP 2290 - Classical Cuisine *Credits: 3*
- HOSP 2294 - Cooperative Education/Work Experience *Credits: 3*

Total Credits: 64-65

Dietary Supervision Certificate (DITS-CC)

The certificate is designed primarily for health care food service personnel seeking professional development. To satisfy industry standards, students must successfully complete the following credit courses with a grade of "C" or better and pass the ServSafe Food Protection Manager Certification offered through the Educational Foundation of the National Restaurant Association. Credits may be applied toward the degree program in Foodservice Management.

Learning Outcomes:

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

- Identify agents and vectors of food-borne illness.
- Employ proper sanitary procedures in the purchasing, receiving, storing, issuing, preparing, and serving of food products.
- Design basic sanitation training for foodservice employees.
- Discuss federal, state, and local regulations and standards of foodservice sanitation.
- Inspect, from a sanitation viewpoint, equipment, and facility design.
- Qualify for certification in applied foodservice sanitation from the Educational Foundation of the National Restaurant Association.
- Define, discuss, and employ basic food preparation theories and techniques.
- Recognize and use a variety of kitchen tools, equipment, and raw food products.
- Plan, organize, prepare, and evaluate finished food items from the raw state.
- Interpret, and evaluate written recipes; mathematically expand and reduce these recipes; be able to pre- cost the recipes; understand computer applications regarding these calculations.
- Define, discuss, and explain the importance of nutrition to health status.
- Apply acquired nutrition knowledge to daily food preparation.

Required Courses

- HOSP 1101 - Principles of Food Preparation *Credits: 3*
- **OR** HOSP 1212 - Advanced Food Preparation *Credits: 4*
- HOSP 1109 - Food Safety Certification *Credits: 1*
- BIO 1011 - Introduction to Nutrition *Credits: 3*

Total Credits: 7-8

Economics Studies - CSCU Transfer Degree, AA (ECON-AA-TAP)

This program is a CSCU Transfer Ticket degree in Economics Studies, A.A. that is intended for Connecticut Community College students to transfer to Connecticut State Universities (Southern CT State University, Central CT State University, Eastern State University, Western State University) and Charter Oak State College without either losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline.

Program Outcomes:

- Complete an Associate of Arts degree in Economic Studies.
- Transfer seamlessly into a Bachelor of Arts or Science Degree in Economics with junior-level status in the receiving CSCU institution as part of the CSCU Transfer Tickets program.

Student Learning Outcomes:

- Students will be able to analyze and evaluate real world economic problems using statistical methods.
- Students will be able to effectively communicate economic based solutions to multiple audiences.
- Students will be able to demonstrate an understanding of macroeconomic concepts, theories, measurements and policies.
- Students will be able to demonstrate an understanding of microeconomic concepts, theories, measurements and policies.

Framework Courses (30-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 2500 - Calculus for Business and Social Science *Credits: 3*
- **OR** MATH 2600 - Calculus I *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30-31 credits)

- Elective CRTY - Creativity Course *Credits: 3*
- Elective GLKY - Global Knowledge Course *Credits: 3*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*
- Unrestricted Electives *Credits: 15*

Total Credits: 60-65

Fashion Merchandising and Retail Management Certificate (FMRM-CC)

The certificate program is designed to offer a concentrated study in fashion merchandising and retail management to prepare for entry work in these industries or to build upon an existing degree to provide additional career opportunities. Students will be able to apply all the credits earned towards an AS degree in Fashion Merchandising and Retail Management.

Learning Outcomes:

- Identify core concepts of fashion merchandising and retail management and their role in society and the global economy,
- Describe the legal and ethical environments of the fashion and retail industries,
- Demonstrate information literacy through research skills and the use of technology,
- Apply effective written and oral communications skills to business situations,
- Identify jobs and career paths in the fashion and retail industries.

Required Courses

- BENT 2180 - Entrepreneurship *Credits: 3*
- BMKT 1003 - Principles of Retailing *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMKT 2015 - Principles of eBusiness *Credits: 3*
- BMKT 2055 - Introduction to the Fashion Industry *Credits: 3*
- BMKT 2057 - Textiles *Credits: 3*
- BMKT 2410 - Principles of Advertising *Credits: 3*

Total Credits: 21

Fashion Merchandising and Retail Management, AS (FMRM-AS)

Fashion and retailing are exciting and vital industries in our economy. This degree program will focus on the business side of the fashion industry, which included retailing, marketing, manufacturing, visual merchandising, consumer behavior, fashion cycles, and store planning. Students will study the complete supply chain from materials to manufacturing and buying to promotion and selling of fashion and related products. This program prepares students for careers with retail, wholesale, and manufacturing organizations in buying, merchandising, fashion coordination, sales, 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.

Learning Outcomes:

- Identify core concepts of retail management and fashion merchandising and their roles in society and the global economy,
- 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,
- Describe the legal and ethical environments of the fashion and retail industries.
- Apply effective written and oral communication skills to business situations,
- Examine career opportunities in the global fashion and retail industries.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1001 - Quantitative Literacy *Credits: 3* (or higher - college level)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- PSY 1011 - General Psychology I *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*

Program Courses (39 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BENT 2180 - Entrepreneurship *Credits: 3*
- BMKT 1003 - Principles of Retailing *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMKT 2015 - Principles of eBusiness *Credits: 3*
- BMKT 2200 - Sales *Credits: 3*
- BMKT 2410 - Principles of Advertising *Credits: 3*
- BMKT 2055 - Introduction to the Fashion Industry *Credits: 3*
- BMKT 2057 - Textiles *Credits: 3*
- BMKT 2195 - Field Experience I *Credits: 3*
- BMKT 2295 - Field Experience II *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*
- **OR** CSA 1111 - Spreadsheet Applications *Credits: 3*
- Business Elective - course in ACCT, BENT, BFIN, BMGT, BMKT, BUSN, ECON, CSA, HOSP 2244 *Credits: 3*

Total Credits: 60-62

Foodservice Management, AS (FODS-AS)

The Foodservice Management Associate degree program provides education and training in subjects ranging from food production to food protection, marketing, and management. Students will also take general education courses to improve employability, job performance and course transferability to another college or university.

The American Culinary Federation Education Foundation, Inc. Accrediting Commission/Committee accredits the Culinary Arts and Foodservice Management programs. Along with classroom and laboratory study, students will participate in an individually planned, 150 or 300-hour cooperative work experience course, earning credit toward graduation while employed. Graduates may transfer credits and earn baccalaureate degrees at various institutions of higher learning. Students may enroll in this program full or part-time, day or evening.

In addition to this degree, by taking additional credit hours, students may earn an associate degree in Culinary Arts or Hotel-Tourism Management. Graduates from this program may apply to the American Culinary Federation (ACF) to become a Certified Fundamentals Cook®, Certified Culinarian™, both nationally recognized certifications.

Learning Outcomes:

Upon successful completion of all Food Service Management degree program requirements, graduates will:

- **Professionalism:** Summarize basic principles and concepts of the hospitality industry with its varied career tracks, and apply personal skills, including but not limited to adherence to accepted professional standards and codes of conduct.
- **Leadership:** Develop and meet the highest standards of professionalism in ethical standards and behavior in management.
- **Teamwork:** Recognize the importance of working groups, mutual responsibility, and diversity of thought to effective outcomes.
- **Culinary Skills:** Analyze theory and techniques skills of food preparation and presentation.
- **Safety & Sanitation:** Safely operate commercial kitchen equipment in an efficient manner and apply safety and environmental sanitation standards of foodservice operations to obtain a ServSafe® certificate.
- **Service:** Analyze methods of service and management principles for all hospitality operations and learn beverage service through varied styles and menu offerings.
- **Cost Controls:** Apply basic accounting principles and procedures in the acquisition, costing and inventory controls related to the hospitality and food service industry.
- **Financial Acumen:** Knowledge and understanding of basic financial and accounting principles, costing, inventory control, in order to have sound judgment when making decisions.
- **Sustainable:** Explain and describe the importance of a variety of sustainable practices in a food service operation and how they relate to the environment and the success of the organization.
- **Technology:** Apply technology to food service and hospitality operations.
- **Nutrition:** Analyze theory of nutritional standards and how they can be applied to various food service operations.
- **International Cuisine:** Study world cuisines in contemporary cooking as well as their cultural impact on current culinary trends.
- **Production:** Prepare a business plan which includes menu design, execution, and production, which includes catering, classical cold foods preparation, carvings and displays.
- **Classical Techniques:** Learn the basics of classical techniques in culinary and pastry arts and how they apply to current trends.
- **Sales and Marketing:** Differentiate styles of marketing, sales analysis, and planning for the hospitality industry.
- **Human Resource:** Analyze how human resources practices can support an organization's strategic and operational objectives and enhance long-term performance maximizing individual and group performance.
- **Customers Relations:** Recognize and value the importance of the hospitality consumer, their needs, experience, and diversity, in both the operational and strategic context.
- **Cooperative Experience:** Transfer knowledge and apply skills in a production environment to obtain experience in the food service industry.

- **General Education:** Complete the comprehensive learning outcomes identified with the General Education Core. Industry Certifications Offered within program: ServSafe® Food Protection Manager, and TIPS® Training Industry Certifications prepared for by program: Certified Fundamentals Cook®, Certified Culinarian®

General Education Courses (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1001 - Quantitative Literacy *Credits: 3* (or higher - college level)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1011 - Introduction to Nutrition *Credits: 3*
- **OR** NTRN 1002 - Nutrition I: Principles of Nutrition *Credits: 3*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- HOSP 1100 - Introduction to the Hospitality Industry *Credits: 3*
- HOSP 1101 - Principles of Food Preparation *Credits: 3*
- HOSP 1109 - Food Safety Certification *Credits: 1*
- HOSP 1212 - Advanced Food Preparation *Credits: 4*
- HOSP 1135 - Service Management *Credits: 3*
- HOSP 2201 - International Foods *Credits: 4*
- **OR** HOSP 2210 - Catering Management *Credits: 4*
- HOSP 2111 - Food & Beverage Cost Control *Credits: 3*
- HOSP 2230 - Sustainable Food Service Management *Credits: 3*
- HOSP 2233 - Hospitality Human Resources Management *Credits: 3*
- HOSP 2237 - Hospitality Marketing *Credits: 3*
- HOSP 2238 - Customer Relationship Management *Credits: 3*
- HOSP 2294 - Cooperative Education/Work Experience *Credits: 3*
- ACCT 1130 - Principles of Financial Accounting *Credits: 3*

Total Credits: 60-61

Hospitality and Tourism Management Certificate (HTMG-CC)

Students will be exposed to a broad range of subjects covering the inter-related areas of the tourism industry, both by means of theoretical and practical work within the college, and by internships in recognized hotels, restaurants, or related institutions, as an integral part of the program. The objective is to train students to a level of all-around competence in the varied operations of the hospitality industry by confronting students with the contemporary issues and challenges that face the industry and by developing their abilities to initiate and manage change and to produce a solid foundation on which a future management career may be built. Graduates will be prepared to embark upon their careers with confidence, armed with the knowledge, the basic experience and the interpersonal skills that will allow them to succeed in the hotel-tourism industry.

Learning Outcomes:

Upon successful completion of all Hospitality & Tourism Management certificate requirements, graduates will

- **Professionalism:** Summarize basic principles and concepts of the hospitality industry with its varied career tracks, and apply personal skills, including but not limited to adherence to accepted professional standards and codes of conduct.
- **Leadership:** Develop and meet the highest standards of professionalism and ethical standards of behavior in management.
- **Teamwork:** Recognize the importance of working groups, mutual responsibility, and diversity of thought to effective outcomes.
- **Culinary Skills:** Analyze theory and techniques skills of food preparation and presentation.
- **Safety & Sanitation:** Safely operate commercial kitchen equipment in an efficient manner and apply safety and environmental sanitation standards of foodservice operations to obtain a ServSafe® certificate.
- **Service:** Analyze methods of service and management principles for all hospitality operations and learn beverage service through varied styles and menu offerings.
- **Technology:** Apply technology to food service and hospitality operations.
- **Customer Relations:** Recognize and value the importance of the hospitality consumer, their needs, experience, and diversity, in both the operational and strategic context
- **Critical Thinking:** Demonstrate creativity and sound thinking in solving management problems.
- **Sales and Marketing:** Differentiate styles of marketing, sales analysis, and planning for the hospitality industry.
- **Human Resource:** Analyze how human resources practices can support an organization's strategic and operational objectives and enhance long-term performance maximizing individual and group performance.
- **Intercultural Awareness:** Comprehend how various cultural differences impact the hospitality industry from a local, regional, national, and international perspective.
- **Communication:** Communicate effectively using written, oral, and nonverbal techniques in the gathering and presenting of information in hospitality enterprises
- **Cooperative Experience:** Transfer knowledge and apply skills in a performance environment to demonstrate the unique professional requirements necessary for a successful career in the hospitality industry.

Required Courses

- HOSP 1101 - Principles of Food Preparation *Credits: 3*
- HOSP 1109 - Food Safety Certification *Credits: 1*
- HOSP 1135 - Service Management *Credits: 3*
- HOSP 2242 - Hotel Management *Credits: 3*
- HOSP 2233 - Hospitality Human Resources Management *Credits: 3*
- HOSP 2237 - Hospitality Marketing *Credits: 3*
- HOSP 2238 - Customer Relationship Management *Credits: 3*
- HOSP 1141 - Principles of Tourism and Travel *Credits: 3*
- HOSP 2244 - Meetings, Conventions & Special Events Management *Credits: 3*
- HOSP 2294 - Cooperative Education/Work Experience *Credits: 3*

Total Credits: 28

Hospitality and Tourism Management, AS (HTMG-AS)

The Associate in Science degree in Hospitality and Tourism Management provides students with learning opportunities that introduce and reinforce academic and occupational knowledge, skills, and attitudes required for sustainable careers. Industry-focused courses, such as Principles of Food Preparation, Service Management, Meeting, Convention and Special Events Management, Hotel Management, Hospitality Marketing and Guest Relations provide a solid foundation needed for success in hospitality operations. The Internship is a key component of the program, giving students real industry experience and a course focused on career development and real-world workplace issues.

Learning Outcomes:

Upon successful completion of all Hospitality & Tourism degree program requirements, graduates will:

- **Professionalism:** Summarize basic principles and concepts of the hospitality industry with its varied career tracks, and apply personal skills, including but not limited to adherence to accepted professional standards and codes of conduct.
- **Leadership:** Develop and meet the highest standards of professionalism and ethical standards of behavior in management.
- **Teamwork** Recognize the importance of working groups, mutual responsibility, and diversity of thought to effective outcomes
- **Culinary Skills:** Analyze theory and techniques skills of food preparation and presentation.
- **Safety & Sanitation:** Safely operate commercial kitchen equipment in an efficient manner and apply safety and environmental sanitation standards of foodservice operations to obtain a ServSafe® certificate.
- **Service:** Analyze methods of service and management principles for all hospitality operations and learn beverage service through varied styles and menu offerings.
- **Cost Controls:** Apply basic accounting principles and procedures in the acquisition, costing and inventory controls related to the hospitality and food service industry.
- **Financial Acumen:** Knowledge and understanding of basic financial and accounting principles, costing, inventory control, in order to have sound judgment when making decisions.
- **Technology:** Apply technology to food service and hospitality operations.
- **Nutrition:** Analyze theory of nutritional standards and how they can be applied to various food service operations.
- **Customer Relations** Recognize and value the importance of the hospitality consumer, their needs, experience, and diversity, in both the operational and strategic context
- **Critical Thinking** Demonstrate creativity and sound thinking in solving management problems.
- **Sales and Marketing:** Differentiate styles of marketing, sales analysis, and planning for the hospitality industry.
- **Human Resource:** Analyze how human resources practices can support an organization's strategic and operational objectives and enhance long-term performance maximizing individual and group performance.
- **Intercultural Awareness** Comprehend how various cultural differences impact the hospitality industry from a local, regional, national, and international perspective
- **Communication** Communicate effectively using written, oral, and nonverbal techniques in the gathering and presenting of information in hospitality enterprises
- **Cooperative Experience:** Transfer knowledge and apply skills in a performance environment to demonstrate the unique professional requirements necessary for a successful career in the hospitality industry
- **General Education:** Complete the comprehensive learning outcomes identified with the General Education Core.

This program prepares students to begin or advance in careers in hotel, food service and tourism management, convention and event planning, and hospitality sales. Graduates enter the growing hospitality industry as operational trainees and entry level supervisory positions. Although the program is not primarily intended to prepare students to transfer to a bachelor's degree program, many students do transfer to bachelor's degree programs in hospitality and tourism management.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*

- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1011 - Introduction to Nutrition *Credits: 3*
- GEOG 1010 - World Regional Geography *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40 credits)

- HOSP 1100 - Introduction to the Hospitality Industry *Credits: 3*
- HOSP 1101 - Principles of Food Preparation *Credits: 3*
- HOSP 1109 - Food Safety Certification *Credits: 1*
- BMGT 2020 - Principles of Management *Credits: 3*
- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- HOSP 1135 - Service Management *Credits: 3*
- HOSP 2111 - Food & Beverage Cost Control *Credits: 3*
- HOSP 2233 - Hospitality Human Resources Management *Credits: 3*
- **OR** BMGT 2200 - Human Resource Management *Credits: 3*
- HOSP 2237 - Hospitality Marketing *Credits: 3*
- HOSP 2238 - Customer Relationship Management *Credits: 3*
- HOSP 1141 - Principles of Tourism and Travel *Credits: 3*
- HOSP 2242 - Hotel Management *Credits: 3*
- HOSP 2244 - Meetings, Conventions & Special Events Management *Credits: 3*
- HOSP 2294 - Cooperative Education/Work Experience *Credits: 3*

Total Credits: 61-63

Paralegal Certificate (PARL-CC)

The Paralegal Certificate Program is designed for students who have or will concurrently receive an educational (not vocational) associate or baccalaureate degree in a major other than paralegal or legal studies from an accredited institution. The certificate program provides them with the opportunity to enroll in a paralegal studies program that meets guidelines set by the American Bar Association. Students must submit an official transcript, evidencing an undergraduate degree, to the Admissions office for review.

A paralegal is a person, qualified by education, training or work experience who is employed or retained by a lawyer, law office, corporation, governmental agency or other entity and who performs specifically delegated substantive legal work for which a lawyer is responsible. Paralegals may not provide legal services directly to the public except as permitted by law. Paralegals may not give legal advice or engage in the unauthorized practice of law.

The paralegal curriculum prepares qualified individuals to carry out complex tasks involved in rendering skilled assistance to lawyers, including in banks, insurance companies, private law firms, corporate offices, and public and agencies. Paralegals may be asked to conduct research and prepare memoranda; to draft pleadings and motions, deeds or contracts; to interview clients or witnesses; to prepare responses to discovery requests; or to digest depositions. Paralegals may prepare inventories, accounts and tax returns in connection with estates and trusts; perform real estate title searches and UCC searches; calendar and track important deadlines; or organize and maintain client files. An option in the program is a cooperative education/work experience course in which students gain practical experience in a legal setting while earning academic credit.

The Paralegal Program offers a new career opportunity in a rapidly expanding field for people who have had no previous experience with legal work. For people already employed in legal work, the program will deepen their knowledge and upgrade their skills. Professional ethics and the paralegal's role within the legal profession are emphasized throughout the curriculum.

The Manchester Community College Paralegal Certificate Program is currently approved by the American Bar Association and has been since 1998. Effective July 1, 2023, Manchester Community College will become a campus of CT State Community College and the Paralegal Certificate Program will be offered at Manchester as well as at the additional locations of Housatonic, Naugatuck Valley, Norwalk, and Tunxis.

Learning Outcomes

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

- Recognize and describe the proper role of the paralegal in the delivery of legal services to the public and apply the ethical rules that govern the conduct of the legal profession.
- Demonstrate critical thinking, reasoning and analytical skills; conduct factual and legal research using print and computerized methods; and organize and present information effectively, both orally and in writing.
- Describe the organization of the American legal system, apply procedural law to litigation and administrative agency law, and demonstrate substantive knowledge of principles of law.
- Draft and interpret legal documents, including pleadings, deeds, mortgages, probate documents, court forms, business documents, and contracts for review by the supervising attorney.
- Perform file and case management tasks in accordance with office policy and court procedures, using problem-solving, organizational and computer skills.
- Recognize opportunities for professional development through continuing education and affiliation with professional organizations.

Admission Requirement

Students in the Paralegal Certificate Program must have an undergraduate degree before they can receive the certificate. Students must submit an official copy of their undergraduate transcript, showing that they have been awarded an undergraduate degree.

Legal Specialty Transfer Credit Policy

Legal Specialty Credits Earned at A College Outside of the State of Connecticut Community College System

Up to six (6) credits of legal specialty coursework may be transferred toward the requirements of the Paralegal Certificate.

Students must have earned a minimum grade of "C" in order to transfer these credits. These courses must be the equivalent of a paralegal course offered at the Connecticut State Community College, and they must be from an accredited institution that is approved by the American Bar Association or in substantial compliance with ABA Guidelines.

Legal specialty credits earned at an institution other than Connecticut State Community College or the former Manchester Community College, Naugatuck Valley Community College, Norwalk Community College or Tunxis Community College can only be transferred by approval of the Paralegal Program Director. The Paralegal Program Director will review the course descriptions, outlines, and/or syllabi supplied by the student to determine if the course to be transferred meets the transfer criteria.

All students seeking to transfer legal specialty credits must provide documentation that will show the format in which the intended transfer course was taken - traditional (face-to-face), online, hybrid, accelerated, compressed or other. If documentation cannot be provided, the Program Director has the discretion to not accept the transfer of legal specialty credits.

Synchronous Instruction Requirement for Legal Specialty Courses

Pursuant to American Bar Association guidelines, students are required to take at least nine (9) credits of legal specialty courses through synchronous instruction. At CT State, legal specialty courses taught in the TRAD and LRON formats satisfy the synchronous instruction requirement.

Program Requirements

- LGL 1001 - Introduction to Legal Studies *Credits: 3*
- **OR** POLS 1020 - Introduction to Law *Credits: 3*
- LGL 1002 - Legal Research and Writing *Credits: 3*
- LGL 2008 - Litigation *Credits: 3*
- LGL 2020 - Computer Applications in Law *Credits: 3*

Choose Two of These (6 credits)

- LGL 1004 - Real Estate Practice *Credits: 3*
- LGL 2009 - Probate Practice& Estate Admin *Credits: 3*
- LGL 2011 - Business Organization *Credits: 3*

Choose Two Legal Electives (6 credits)

- LGL 1004 - Real Estate Practice *Credits: 3*
- LGL 2004 - Criminal Procedure *Credits: 3*
- LGL 2006 - Bankruptcy Law *Credits: 3*
- LGL 2009 - Probate Practice& Estate Admin *Credits: 3*
- LGL 2010 - Family Law *Credits: 3*
- LGL 2011 - Business Organization *Credits: 3*
- LGL 2012 - Contract Law *Credits: 3*
- LGL 2016 - Administrative Law *Credits: 3*
- LGL 2090 - Advanced Legal Issues Seminar *Credits: 3*
- LGL 2190 - Legal Studies Capstone *Credits: 3*
- LGL 2095 - Coop Ed Work Experience *Credits: 3*
- LGL 2195 - Legal Internship *Credits: 3*

Total Credits: 24

Paralegal, AS (PARL-AS)

A paralegal is a person, qualified by education, training or work experience who is employed or retained by a lawyer, law office, corporation, governmental agency or other entity and who performs specifically delegated substantive legal work for which a lawyer is responsible. Paralegals may not provide legal services directly to the public except as permitted by law. Paralegals may not give legal advice or engage in the unauthorized practice of law.

The paralegal curriculum prepares qualified individuals to carry out, in a professional manner, many of the complex tasks involved in rendering skilled assistance to lawyers, including in banks, insurance companies, private law firms, corporate offices, and public and agencies. Paralegals may be asked to conduct research and prepare memoranda; to draft pleadings and motions, deeds or contracts; to interview clients or witnesses; to prepare responses to discovery requests; or to digest depositions. Paralegals may prepare inventories, accounts and tax returns in connection with estates and trusts; perform real estate title searches and UCC searches; calendar and track important deadlines; or organize and maintain client files.

The Paralegal Program offers a new career opportunity in a rapidly expanding field for people who have had no previous experience with legal work. For people already employed in legal work, the program will deepen their knowledge and upgrade their skills. Professional ethics and the paralegal's role within the legal profession are emphasized throughout the curriculum.

Learning Outcomes

Upon successful completion of all Paralegal degree program requirements, graduates will

- Recognize and describe the proper role of the paralegal in the delivery of legal services to the public and apply the ethical rules that govern the conduct of the legal profession.
- Demonstrate critical thinking, reasoning and analytical skills, conduct factual and legal research using print and computerized methods, and organize and present information effectively, both orally and in writing.
- Describe the organization of the American legal system, apply procedural law to litigation and administrative agency law, and demonstrate substantive knowledge of principles of law.
- Draft and interpret legal documents, including pleadings, deeds, mortgages, probate documents, court forms, business documents, and contracts for review by the supervising attorney.
- Perform file and case management tasks in accordance with office policy and court procedures, using problem-solving, organizational and computer skills.
- Recognize opportunities for professional development through continuing education and affiliation with professional organizations.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

The Manchester Community College Paralegal Degree Program is currently approved by the American Bar Association and has been since 1984. Effective July 1, 2023, Manchester Community College will become a campus of CT State Community College and the Paralegal Degree Program will be offered at Manchester as well as at the additional locations of Housatonic, Naugatuck Valley, Norwalk, and Tunxis.

Legal Specialty Transfer Credit Policy

Legal Specialty Credits Earned at A College Outside of the State of Connecticut Community College System

Up to nine (9) credits of legal specialty coursework may be transferred toward the requirements of the Paralegal A.S. degree. Students must have earned a minimum grade of "C" in order to transfer these credits. These courses must be the equivalent of a paralegal course offered at the Connecticut State Community College, and they must be from an accredited institution that is approved by the American Bar Association or in substantial compliance with ABA Guidelines.

Legal specialty credits earned at an institution other than Connecticut State Community College or the former Manchester Community College, Naugatuck Valley Community College, Norwalk Community College or Tunxis Community College can only be transferred by approval of the Paralegal Program Director. The Paralegal Program Director will review the course descriptions, outlines, and/or syllabi supplied by the student to determine if the course to be transferred meets the transfer criteria.

All students seeking to transfer legal specialty credits must provide documentation that will show the format in which the intended transfer course was taken - traditional (face-to-face), online, hybrid, accelerated, compressed or other. If documentation cannot be provided, the Program Director has the discretion to not accept the transfer of legal specialty credits.

Synchronous Instruction Requirement for Legal Specialty Courses

Pursuant to American Bar Association guidelines, students are required to take at least nine (9) credits of legal specialty courses through synchronous instruction. At CT State, legal specialty courses taught in the TRAD and LRON formats satisfy the synchronous instruction requirement.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 - Mathematics of Finance *Credits: 3 or higher* (college level)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- LGL 1001 - Introduction to Legal Studies *Credits: 3*
- **OR** POLS 1020 - Introduction to Law *Credits: 3*
- LGL 1002 - Legal Research and Writing *Credits: 3*
- LGL 1004 - Real Estate Practice *Credits: 3*
- LGL 2008 - Litigation *Credits: 3*
- LGL 2009 - Probate Practice & Estate Admin *Credits: 3*
- LGL 2011 - Business Organization *Credits: 3*
- LGL 2190 - Legal Studies Capstone *Credits: 3*
- **OR** LGL 2195 - Legal Internship *Credits: 3*
- LGL 2020 - Computer Applications in Law *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- **OR** BUSN 2340 - Legal Environment of Business *Credits: 3*
- Elective OPEN - Any 1000 or 2000 level course *Credits: 3*

LGL Electives

Choose 3 courses from:

- LGL 2004 - Criminal Procedure *Credits: 3*
- LGL 2006 - Bankruptcy Law *Credits: 3*
- LGL 2010 - Family Law *Credits: 3*
- LGL 2012 - Contract Law *Credits: 3*
- LGL 2016 - Administrative Law *Credits: 3*
- LGL 2090 - Advanced Legal Issues Seminar *Credits: 3*
- LGL 2095 - Coop Ed Work Experience *Credits: 3*
- LGL 2013 - Juvenile Law *Credits: 3*
- LGL 2003 - Criminal Law *Credits: 3*

Total Credits: 60-62

Professional Baker Certificate (PBKC-CC)

The Professional Baker Certificate program is designed to further education and training for those already in the field, as well as accommodate people entering careers in the Culinary Arts. Academic credits from this program may be transferred to associate degree programs in Culinary Arts and Foodservice Management.

Along with classroom and laboratory study, students will participate in an individually planned, 150 or 300-hour cooperative work experience course, earning credit toward graduation while employed. Graduates may transfer credits and earn baccalaureate degrees at various institutions of higher learning. Students may enroll in this program full or part-time, day or evening.

Learning Outcomes:

Upon successful completion of all Professional Baker certificate program requirements, graduates will

- **Professionalism:** Summarize basic principles and concepts of the hospitality industry with its varied career tracks, and apply personal skills, including but not limited to adherence to accepted professional standards and codes of conduct.
- **Teamwork:** Recognize the importance of working groups, mutual responsibility, and diversity of thought to effective outcomes.
- **Culinary Skills:** Analyze theory and techniques skills of food preparation and presentation.
- **Safety & Sanitation:** Safely operate commercial kitchen equipment in an efficient manner and apply safety and environmental sanitation standards of foodservice operations to obtain a ServSafe® certificate.
- **Technology:** Apply technology to food service and hospitality operations.
- **Baking Skills:** Develop knowledge and skills in basic baking and pastry arts, including cake decorating and artisan breads.
- **Classical Techniques:** Learn the basics of classical techniques in culinary and pastry arts and how they apply to current trends.
- **Cooperative Experience:** Transfer knowledge and apply skills in a production environment to obtain experience in the food service industry.

Industry Certifications Offered within program:

ServSafe® Food Protection Manager, and TIPS® Training Industry Certifications prepared for by program: Certified Fundamentals Cook®, Certified Culinarian®.

Required Courses

- HOSP 1103 - Principles of Baking I *Credits: 3*
- HOSP 1107 - Icing Artistry I *Credits: 3*
- HOSP 1109 - Food Safety Certification *Credits: 1*
- HOSP 2207 - Icing Artistry II *Credits: 3*
- **OR** HOSP 1101 - Principles of Food Preparation *Credits: 3*
- HOSP 1215 - Principles of Baking II *Credits: 3*
- HOSP 2216 - Artisan Bread *Credits: 3*
- HOSP 2225 - Principles of Baking III: Chocolates and Confections *Credits: 3*
- HOSP 2294 - Cooperative Education/Work Experience *Credits: 3*

Total Credits: 22

Public Utility Management Certificate (PUTM-CC)

The Public Utility Management Certificate Program provides students with the knowledge necessary for a wide variety of career options in the electricity, natural gas, drinking water and wastewater public utility fields. The program's goal is to provide a credential, recognized by public utilities, that provides persons with the skills needed to make a significant contribution toward a public utility in a variety of career fields.

- 1) Demonstrate proficiencies and apply the principles of quality public utility management
- 2) Develop and explain ideas into logical steps that utilize resources and establish best practices with colleagues for customers and suppliers/vendors
- 3) Establish programs for the management of assets and infrastructure for public utilities.
- 4) Articulate and understand how public utility rates are determined and managed,
- 5) Evaluate and clarify legal and/or regulatory implications of business and utility management.

Required Courses

- BMGT 1410 - Public Utility Management *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- BMGT 2416 - Rates and Revenues *Credits: 3*
- BMGT 2419 - Asset and Infrastructure Management *Credits: 3*
- BMGT 2421 - Customer Relations *Credits: 3*
- ENV 1120 - Environmental and Energy Law and Regulations *Credits: 3*

Total Credits: 18

Public Utility Management, AS (PUTM-AS)

The Public Utility Management program will provide graduates with a wide variety of career options in the electricity, natural gas, drinking water and wastewater public utility fields. 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. Credits from the Certificate in Water Management count toward an associate degree in Public Utility Management. Earning an Associate of Science Degree in Public Utility Management 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.

Learning Outcomes:

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

- Describe and apply the operations of public utility management
- Apply effective written and oral communication skills to articulate opportunities, ideas, and problems identified, as well as appropriate strategic responses across the economic social, environmental, public and political spheres
- Formulate team dynamics and working in groups, particularly in relation to the functioning of critical incident response teams
- Devise and translate ideas into logical steps that utilize resources and establish best practices with colleagues for customers and suppliers/vendors
- Employ and make use of written documents such as Environmental Protection 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
- Perform laboratory testing and analyses required for operational control and regulatory compliance

This program transfers to Southern Connecticut State University's Business Administration - Public Utility Management B.S. degree.

General Education Courses (22 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- **OR** ENG 1030 - Composition II and Non-fiction Texts *Credits: 3*
- ENV 1010 - Introduction to Environmental Science *Credits: 3* AND ENV 1010L *Credits: 1*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (42 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- BMGT 1410 - Public Utility Management *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- BUSN 2400 - Business Ethics *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- BMGT 2416 - Rates and Revenues *Credits: 3*
- BMGT 2419 - Asset and Infrastructure Management *Credits: 3*
- BMGT 2421 - Customer Relations *Credits: 3*
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- ENV 1100 - Environmental Regulations *Credits: 3*

- CSA 1111 - Spreadsheet Applications *Credits: 3*
- **OR** ENV 1120 - Environmental and Energy Law and Regulations *Credits: 3*

Choose 2 courses from: (6 credits)

- BUSN 2095 - Business Practicum *Credits: 3*
- BUSN 2195 - Business Co-op Internship *Credits: 3*
- MFG 1413 - Principles of Quality Control *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- WMTR 1001 - Water Treatment and Distribution *Credits: 6*
- WMTR 1002 - Special Topics in Water Treatment *Credits: 3*
- WMTR 1003 - Special Topics in Water Distribution *Credits: 3*

Total Credits: 64

Small Business and Entrepreneurship Certificate (SBME-CC)

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.

Learning Outcomes:

- 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.

Required Courses

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BENT 2180 - Entrepreneurship *Credits: 3*
- BENT 2170 - Small Business Management & Growth *Credits: 3*
- BENT 2300 - Business Plan *Credits: 3*
- **OR** BENT 2098 - Launch a Business *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- Business Electives - Chooses two courses from: ACCT, BENT, BUSN, BFIN, BMGT, BMKT, ECON, HOSP 2244, CSA *Credits: 6*

Total Credits: 21

Small Business and Entrepreneurship, AS (SBME-AS)

Small businesses are vital to the growth of our economy and will create most 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.

Program Learning Outcomes:

1. Identify core concepts of entrepreneurial ventures and small business management and their impact on society and the global economy.
2. Describe the legal and ethical environments for entrepreneurs and small businesses.
3. Demonstrate analytical, problem-solving, and decision-making skills applicable to entrepreneurial ventures and small business management
4. Demonstrate information literacy through research skills and the use of technology.
5. Apply effective written and oral communication skills to business situations.

Program Descriptors:

This is a career/workforce specialized degree. The Small Business Management and Entrepreneurship students utilize the Gateway Small Business Center, and the Werth Center for Innovation and Entrepreneurship at Housatonic Community College. The Werth Center provides mentoring, workshops, MakerSpace, and a student store/website. In the Launch a Business (BES 295) capstone course, students focus on launching businesses or growing their existing businesses. The BES 295 course is currently taught jointly with Gateway and Housatonic students. This degree program can be completed fully online.

Note: According to the *Wall Street Journal* on Nov. 29, 2021, "The pandemic has unleashed a historic burst in entrepreneurship and self-employment. Hundreds of thousands of Americans are striking out on their own as consultants, retailers, and small-business owners. The number of unincorporated self-employed workers has risen by 500,000 since the start of the pandemic, Labor Department data show, to 9.44 million. That is the highest total since the financial-crisis year 2008, except for this summer. The total amounts to an increase of 6% in the self-employed, while the overall U.S. employment total remains 3% lower than before the pandemic."

General Education Courses (21-23)

- ENG 1010 - Composition *Credits: 3*
- MATH 1001 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4* Recommended: ART, ENG, or GRA
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1250 - Accounting Applications I *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- BUSN 2195 - Business Co-op Internship *Credits: 3*
- BENT 2180 - Entrepreneurship *Credits: 3*
- BENT 2170 - Small Business Management & Growth *Credits: 3*
- BENT 2300 - Business Plan *Credits: 3*

- **OR** BENT 2098 - Launch a Business *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMKT 2015 - Principles of eBusiness *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*
- **OR** CSA 1111 - Spreadsheet Applications *Credits: 3*
- Business Electives - choose from: ACCT, BENT, BUSN, BFIN, BMGT, BMKT, ECON, HOSP 2244, CSA. With approval of program coordinator, course related to starting a business can be selected from outside of the business department. *Credits: 9*

Total Credits: 60-62

Sport and Leisure Management, AS (SLMT-AS)

The Sport and Leisure Management program is designed to provide knowledge in the areas of recreational management, fitness and training, facility design and management, business, marketing, and risk management. Students receiving an Associate's of Science degree in Sport and Leisure Management could pursue entry level careers in recreation and athletic facilities, commercial sport facilities, camps, golf courses and the travel and leisure industry.

Learning Outcomes:

- Demonstrate an understanding of management issues and trends in the sport and exercise field.
- Understand the connection between various management functions and coordination of agency resources and programs.
- Demonstrate knowledge of the concept of activities of daily living and its importance in the overall health of the individual.
- Analyze the developmental characteristics for each stage of life that are the most relevant to the design and delivery of leisure and recreation service.
- Identify key aspects of facility design, maintenance, equipment maintenance and cleaning, and staffing.
- Develop and evaluate various strategies for program design and effective scheduling of facilities.
- Identify common areas of potential litigation in the athletic/recreational facility.
- Demonstrate knowledge in event management.

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- MATH 1003 - Elementary Statistics *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- BIO 1100 - Principles of the Human Body *Credits: 3*
- **AND** BIO 1100L - Principles of the Human Body Lab *Credits: 1*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- SLM 1001 - Introduction to Recreation and Sports Leisure Studies *Credits: 3*
- SLM 1010 - Introduction to Sports Management *Credits: 3*
- SLM 1028 - Lifetime Fitness *Credits: 3*
- SLM 2002 - Event Management *Credits: 3*
- SLM 2018 - Organization and Administration for Sports and Leisure *Credits: 3*
- SLM 2035 - Prevention and Treatment of Athletic Injuries *Credits: 3*
- SLM 2095 - Sport and Leisure Practicum *Credits: 3*
- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- HLTH 1055 - Personal Health *Credits: 3*

Total Credits: 61-62

Sport Management, AS (SPMG-AS)

The Sport Management program prepares students for a career in the sport industry with sectors including sport organizations, interscholastic sports, sport facility management and more, while also providing a seamless transfer to Southern Connecticut State University's Sport Management program. Sport courses, including specialties in marketing, finance, and media, can all be completed online allowing students throughout the state and beyond to complete some or all of the program online.

Program Learning Outcomes:

- Demonstrate working knowledge of the scope of the sport industry, along with professional practices of working in the sport management profession.
- Demonstrate knowledge of the historical and philosophical foundations of the sport management profession.
- Explain the importance of budgeting and financial management to sport-related organizations and be able to evaluate micro- and macro-economic principles as they relate to the sport industry.
- Explain legal concepts relevant to the sport industry and evaluate situations in sport settings that may have legal implications for sport organizations, entities, or participants.
- Explain and apply principles of mass media, communication, promotion, and public relations particularly as they relate to sport management.
- Communicate effectively and professionally via presentation and public speaking opportunities, and in writing to internal and external audiences.
- Explain the importance of and the procedure for organizing the workplace and defining tasks, responsibilities, and relationships.

General Education Courses (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- **OR** ARTH 1001 - Global Art History Prehistory to 1500 CE *Credits: 3*
- **OR** ARTH 1002 - Global Art History 1500 CE to present *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- BFIN 1100 - Personal Finance *Credits: 3*
- **OR** BENT 2180 - Entrepreneurship *Credits: 3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- BMGT 2200 - Human Resource Management *Credits: 3*
- BUSN 1047 - Introduction to Sport Management *Credits: 3*
- BMKT 2102 - Sports Marketing *Credits: 3*
- BUSN 2101 - Sports Media & Public Relations *Credits: 3*
- BFIN 2113 - Sports Finance *Credits: 3*
- HOSP 2244 - Meetings, Conventions & Special Events Management *Credits: 3*

Total Credits: 60-61

Engineering & Technology

Architecture: Architectural Design Technology, AS (ARDT-AS)

The Architectural Design Technology program extends opportunities for those interested in the design and construction of the built environment, preparing students for transfer into baccalaureate and professional-degree architecture programs or for entry-level technical positions in architecture, engineering or construction firms.

The program builds mastery of valuable skill-sets, establishing techniques in traditional design and drawing that build a foundation for state-of-the-art digital design and modeling, reinforced by courses that form the technical core consisting of blueprint reading, construction materials, codes and regulations, and typical project documentation. The course flow guides students through a sequence of architecture courses that explore creativity, exercise the design process and problem-solving skills, and instills the values of sustainable and responsible development of the built environment.

Upon completion, students will have built a portfolio of work useful for transfer or to pursue an entry-level technical position in an architecture, engineering or construction firm; municipal building and planning offices; or the transportation, utility, and construction material industries.

Learning Outcomes:

- Understand the history of the built environment and appraise geographic adaptation when considering modern solutions to: natural resource utilization; sustainable harvest, refinement and transport of construction materials; and performance of designs and systems, accounting for climate change.
- Develop a self-reflective design process that considers alternative solutions validated by sound research, evaluation, and synthesis of a wide range of variables.
- Utilize traditional and emerging digital media for two- and three-dimensional graphic representation to develop, refine, and communicate the architectural design process and implement written industry documentation used to convey typical project information.
- Demonstrate knowledge of building systems as integrated into the design process, informing decisions on materials, assemblies, and life safety aspects.
- Perform and communicate effectively as a contributing individual or team member.
- Appreciate the importance of lifelong learning and continuous improvement associated with professional, ethical, and social responsibilities.

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- ARCH 1002 - Architecture of the World *Credits: 3*
- PHYS 1201 - General Physics I *Credits: 4*
- Social Science Elective *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (37 credits)

- ARCH 1005 - Architecture Fundamentals I *Credits: 4*
- ARCH 1008 - Construction Materials & Methods *Credits: 3*
- ARCH 2005 - Architecture Fundamentals II *Credits: 4*
- ARCH 2029 - Structures *Credits: 3*
- ARCH 2015 - Construction Documents *Credits: 3*
- ARCH 2020 - Architectural Design I *Credits: 4*
- ARCH 2030 - CAD 3D Architectural Parametric *Credits: 3*
- ARCH 2025 - Architectural Design II *Credits: 4*
- ARCH 2040 - Environmental Systems *Credits: 3*

- Business Elective or Business Internship *Credits: 3*
- Elective - Open Elective *Credits: 3*

ARCH Elective (3 Credits)

Choose one ARCH course

- ARCH 1010 - Introduction to Building Physics & Sustainability *Credits: 3*
- ARCH 1011 - Building Codes & Ordinances *Credits: 3*
- ARCH 1012 - Introduction to Geographic Information Systems *Credits: 3*
- ARCH 2010 - Site Design *Credits: 3*
- CAD 1140 - Architectural CAD *Credits: 3*
- CAD 2204 - CAD 3D Architectural *Credits: 3*

Total Credits: 62

Architecture: Construction Technology Certificate (CTEC-CC)

The Construction Technology certificate program extends opportunities to students desiring a career in the construction industry by preparing them with essential entry-level skills. This two-semester certificate program includes a broad range of courses required for basic performance in offices which support the construction industry, including construction companies, architecture, and engineering firms. Entry level knowledge and competencies in drafting, CAD, construction materials, documents & codes, and project management principles, prepare graduates with industry entry-level skills along with being prepared to transfer into associate or bachelor's degree programs in construction management.

Learning Outcomes:

- Utilize traditional and emerging digital media for 2- and 3-dimensional graphic representation to develop, refine, and communicate construction graphics and implement written industry documentation used to convey typical project information.
- Demonstrate knowledge of building systems including materials, assemblies, mechanical systems, and life safety features.
- Practice execution of industry forms and documents, code and regulation research, and preparation of typical industry submittals.
- Demonstrate and apply construction management skills including site logistics, critical path, procurement, scheduling, and equipment & labor.
- Perform and communicate effectively as a contributing individual or team member and understand the importance of workplace safety and ethics, and effective teamwork.
- Appreciate the value of life-long learning and intellectual growth as an integral part of a career in construction technology due to ever-evolving components and systems.

Required Courses

- ARCH 1002 - Architecture of the World *Credits: 3*
- ARCH 1005 - Architecture Fundamentals I *Credits: 4*
- ARCH 1008 - Construction Materials & Methods *Credits: 3*
- ARCH 1011 - Building Codes & Ordinances *Credits: 3*
- ARCH 1129 - Fundamentals of Construction Management *Credits: 3*
- ARCH 2015 - Construction Documents *Credits: 3*
- ARCH 2229 - Construction Estimating *Credits: 3*
- ARCH 2030 - CAD 3D Architectural Parametric *Credits: 3*
- ARCH 2040 - Environmental Systems *Credits: 3*

Total Credits: 28

Automotive Technology: Advanced Engine Performance Certificate (AUTO-CC-AEP)

The Advanced Engine Performance program enables a practicing automotive technician to develop the technical knowledge and skills associated with the advanced computer/electronic diagnostic systems and emission systems of today's automobile.

Purpose:

- To provide an understanding of automobile engine operation and repair.
- To provide an understanding of advanced electronic diagnosis and automotive emissions.
- To provide an understanding of the relationship between scientific principles and their application in the automobile.

Target Population:

- Individuals seeking employment opportunities in the automotive service field.
- Individuals seeking to upgrade their technical skills.
- Individuals preparing for career advancement opportunities in the automotive service field.

Learning Outcomes:

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

- Use scientific methods and critical thinking to solve problems in science related to the occupation, including but not limited to: electricity, chemical reactions, heat, motion, and hydraulics.
- Demonstrate workplace skills related to the occupation including but not limited to: preparing a resume, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics and teamwork.
- Apply knowledge of theory and safety to accomplish certain tasks related to the occupation.
- Identify and use appropriate tools, testing and measurement equipment to accomplish certain tasks related to the occupation.
- Use current reference and training materials from accepted industry publications and standards to accomplish certain tasks related to the occupation.
- Apply knowledge of general engine diagnosis and repair: including but not limited to the engine's: cylinder heads, valve train, block, lubrication, and cooling system.
- Apply knowledge of general electrical/electronic systems, including but not limited to: starting, charging, lighting, wiring, accessories, diagnosis and repair.
- Apply knowledge of general engine performance, including but not limited to: computer controls, ignition, fuel, exhaust, and emission systems, and their maintenance, diagnosis, adjustments, and repair.

The courses in the program are accredited by Automotive Service Excellence Education Foundation (A.S.E.).

This Certificate will prepare students for the Automotive Service Excellence Education Foundation (A.S.E.) G1, A1, A6, A8, L1 exams as well as additional automotive elective area selected.

Required Courses

- AUTO 1030 - Automotive Maintenance and Light Repair *Credits: 3*
- AUTO 1033 - Electrical/Electronics Systems *Credits: 3*
- AUTO 1031 - Engine Repair *Credits: 3*
- AUTO 1037 - Engine Performance *Credits: 3*
- AUTO 2038 - Advanced Engine Performance *Credits: 3*
- Automotive Elective *Credits: 3*

Total Credits: 18

Automotive Technology: Automotive Management, AS (AUTO-AS-AM)

The complexity of the automobile requires more sophisticated technicians and specialists than ever before. The need for qualified personnel has expanded beyond the bay into service and shop management. Until now students had to decide whether to take the Automotive Technician Program Degrees or a Business Degree if they aspired towards Automotive Management. The Management Option creates a sensible way for employers to fill management positions.

Learning Outcomes:

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

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

General Education Courses (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- Elective MATH 1000 or higher Elective *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- AUTO 1030 - Automotive Maintenance and Light Repair *Credits: 3*
- AUTO 1033 - Electrical/Electronics Systems *Credits: 3*
- AUTO 1031 - Engine Repair *Credits: 3*
- AUTO 1038 - Brake Systems *Credits: 3*
- AUTO 1036 - Suspension and Steering *Credits: 3*
- AUTO 2030 - Service and Parts Department Management *Credits: 3*
- BUSN 1100 - Introduction to Business *Credits: 3*
- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BENT 2170 - Small Business Management & Growth *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- BUSN 2310 - Business Law I *Credits: 3*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*

Total Credits: 60-63

Automotive Technology: Comprehensive Automotive Repair and Service (CARS) Certificate (AUTO-CC-CAR)

The objective of the Comprehensive Automotive Repair and Service (CARS) Certificate 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 Connecticut and the nation. 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 employment, transfer, and lifelong learning." The automotive curriculum is designed to meet all Automotive Service Excellence Education Foundation (A.S.E.) Accredited Training Program requirements for national accreditation at the Master Automotive Service Technician (MAST) level.

Learning Outcomes:

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

- Meet all the Automotive Service Excellence Education Foundation (A.S.E.) Accredited Training Program required outcomes for Master certification (MAST) Level.
- 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.

The Automotive Technology: Comprehensive Automotive Repair and Service (CARS) program at Gateway Community College is accredited by the Automotive Service Excellence (ASE) Education Foundation as an ASE Accredited Training Program.

This Program will prepare Students for the G1, A1, A2, A3, A4, A5, A6, A7, A8 & L1 ASE exams upon completion of work length time requirements. Students interested in continuing to a bachelor's degree should pursue the Comprehensive Automotive Repair and Service Associates (CARS) of Applied Science Degree program which will prepare them for to prepare for C1 and P1 ASE exams.

Required Courses

- AUTO 1030 - Automotive Maintenance and Light Repair *Credits: 3*
- AUTO 1031 - Engine Repair *Credits: 3*
- AUTO 1033 - Electrical/Electronics Systems *Credits: 3*
- AUTO 1036 - Suspension and Steering *Credits: 3*
- AUTO 1037 - Engine Performance *Credits: 3*
- AUTO 1038 - Brake Systems *Credits: 3*
- AUTO 1194 - Co-op Work Experience I *Credits: 3*
- AUTO 2033 - Manual Drivetrain and Axles *Credits: 3*
- AUTO 2035 - Automotive Transmission/Transaxle *Credits: 3*
- AUTO 2037 - Heating and Air Conditioning *Credits: 3*
- AUTO 2038 - Advanced Engine Performance *Credits: 3*
- AUTO 2294 - Co-op Work Experience II *Credits: 3*

Total Credits: 36

Automotive Technology: Comprehensive Automotive Repair and Service (CARS), AS (AUTO-AS-CAR)

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 Connecticut and the nation. 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 employment, transfer, and lifelong learning." The automotive curriculum is designed to meet all Automotive Service Excellence Education Foundation (A.S.E.) Accredited Training Program requirements for national accreditation.

Learning Outcomes:

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

- Meet all the Automotive Service Excellence Education Foundation (A.S.E.) Accredited Training Program required outcomes for Master 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.

The Automotive Technician program at Naugatuck Valley Community College is accredited by the Automotive Service Excellence (ASE) Education Foundation as an ASE Accredited Training Program. This Program will prepare Students for the G1, A1, A2, A3, A4, A5, A6, A7, A8 & L1 ASE exams upon completion of work length time requirements. Students interested in continuing to a bachelor's degree should pursue the Comprehensive Automotive Repair and Service Associates (CARS) of Applied Science Degree program which will prepare them for to prepare for C1 and P1 ASE exams.

General Education Courses (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- Elective MATH 1000 or higher *Credits 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- AUTO 1030 - Automotive Maintenance and Light Repair *Credits: 3*
- AUTO 1033 - Electrical/Electronics Systems *Credits: 3*
- AUTO 1031 - Engine Repair *Credits: 3*
- AUTO 1038 - Brake Systems *Credits: 3*

- AUTO 2037 - Heating and Air Conditioning *Credits: 3*
- AUTO 1036 - Suspension and Steering *Credits: 3*
- AUTO 1037 - Engine Performance *Credits: 3*
- AUTO 2038 - Advanced Engine Performance *Credits: 3*
- AUTO 2033 - Manual Drivetrain and Axles *Credits: 3*
- AUTO 2035 - Automotive Transmission/Transaxle *Credits: 3*
- AUTO 1194 - Co-op Work Experience I *Credits: 3*

Directed Electives:

Choose 2 courses from:

- AUTO 1090 - Introduction to Welding *Credits: 3*
- AUTO 2039 - Light Vehicle Diesel Engines *Credits: 3*
- AUTO 2294 - Co-op Work Experience II *Credits: 3*
- AUTO 2394 - Co-op Work Experience III *Credits: 3*
- AUTO 2030 - Service and Parts Department Management *Credits: 3*

Total Credits: 60-63

Automotive Technology: Fundamentals Certificate (AUTO-CC-AF)

The Automotive Fundamentals program seeks to meet the needs of individuals interested in a basic exposure to and/or an exploratory opportunity in the automotive technology field.

Purpose:

- To provide an understanding of the basic operating principles of an automobile.
- To provide in-depth theory of brake, steering and suspension systems.

Target Population: Individuals interested in a basic exposure to automotive systems. Individuals interested in an exploratory opportunity in automotive technology.

Learning Outcomes:

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

- Relate knowledge of theory and safety to accomplish certain tasks related to the occupation.
- Identify and use appropriate tools, testing and measurement equipment to accomplish certain tasks related to the occupation.
- Use current reference and training materials from accepted industry publications and standards to accomplish certain tasks related to the occupation.
- Relate knowledge of general engine diagnosis and repair, including but not limited to the engine's: cylinder heads, valve train, block, lubrication, and cooling system.
- Relate knowledge of suspension and steering systems (including wheel and tire), diagnosis, service, adjustments, alignment and repair.
- Relate knowledge of general disc and/or drum brake system, hydraulics, power assist, and ABS (antilock brakes), maintenance, adjustment, diagnosis, and repair.

The courses in the program are accredited by Automotive Service Excellence Education Foundation (A.S.E.).

This Certificate will prepare students for the Automotive Service Excellence Education Foundation (A.S.E.) G1, A1, A4, A5, A6 exams.

Required Courses

- AUTO 1030 - Automotive Maintenance and Light Repair *Credits: 3*
- AUTO 1033 - Electrical/Electronics Systems *Credits: 3*
- AUTO 1038 - Brake Systems *Credits: 3*
- AUTO 1036 - Suspension and Steering *Credits: 3*
- AUTO 1031 - Engine Repair *Credits: 3*
- Automotive Elective *Credits: 3*

Total Credits: 18

Automotive Technology: General Auto Service Certificate (AUTO-CC-GAS)

The General Automotive Service program is designed to accommodate individuals desiring an understanding of engine operation and repair, along with knowledge of automotive electrical, brake, steering, and suspension systems.

Purpose:

- To provide an understanding of automobile engine operation and repair.
- To provide an understanding of automotive electrical theory and its application.
- To provide in-depth theory of brake, steering, and suspension systems.
- To provide an understanding of the relationship between scientific principles and their application in the automobile.

Target Population:

- Individuals seeking entry-level employment opportunities in the automotive service field.
- Individuals seeking to upgrade their technical skills.
- Individuals preparing for career advancement opportunities in the automotive service field.

Learning Outcomes:

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

- Use scientific methods and critical thinking to solve problems in science related to the occupation, including but not limited to electricity, chemical reactions, heat, motion, and hydraulics.
- Demonstrate workplace skills related to the occupation, including but not limited to: 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 certain tasks related to the occupation.
- Apply knowledge of general engine diagnosis and repair, including but not limited to the engine's: cylinder heads, valve train, block, lubrication, and cooling system.
- Apply knowledge of suspension and steering systems (including wheel and tire), diagnosis, service, adjustments, alignment, and repair.
- Apply knowledge of general disc and/or drum brake system, hydraulics, power assist, and ABS (antilock brakes), maintenance, adjustment, diagnosis, and repair.
- Apply knowledge of general electrical/electronic systems, including but not limited to, starting, charging, lighting, wiring, accessories, diagnosis, and repair.

The courses in the program are accredited by Automotive Service Excellence Education Foundation (A.S.E.)

This Certificate will prepare students for the Automotive Service Excellence Education Foundation (A.S.E.) G1, A1, A4, A5, A6, A7 exams as well as additional automotive elective area selected.

Program Certificate Requirements (21 credits)

- AUTO 1030 - Automotive Maintenance and Light Repair *Credits: 3*
- AUTO 1033 - Electrical/Electronics Systems *Credits: 3*
- AUTO 1038 - Brake Systems *Credits: 3*
- AUTO 1036 - Suspension and Steering *Credits: 3*
- AUTO 1031 - Engine Repair *Credits: 3*
- AUTO 2037 - Heating and Air Conditioning *Credits: 3*
- Automotive Elective *Credits: 3*

Total Credits: 21

Automotive Technology: General Motors Automotive Service Certificate (AUTO-CC-GMS)

The Automotive Service Certificate was designed by General Motors (GM) and Gateway Community College, now Gateway campus of CT State 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 Professor Daniel Fuller, Program Coordinator at (203) 285-2370 or e-mail at (dfuller@gatewayct.edu).

Learning Outcomes:

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

- Meet ASE Accredited Training Program required outcomes for Automotive Service Technician(AST) certified programs.
- Demonstrate workplace skills including but not limited to resume preparation, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics, and teamwork.
- Apply knowledge of automotive theory to safely perform the duties of an entry level automotive technician.
- Identify and use appropriate tools, testing, and measurement equipment to perform the duties of an entry level service technician.
- Use current reference and training materials from accepted industry publications and standards to accomplish duties required of an entry level service technician.
- Receive corporate credit for web based and embedded classroom / laboratory training in the GM Center of Learning Training Web Site
- Demonstrate knowledge and understanding of all fundamental automotive concepts as outlined by ASE Accredited Training Program requirements.
- Meet the industry ASE accreditation training outcome requirements for General Motors Steering and Suspension, Braking, Engine Propulsion, Electrical, Engine Performance, Transmission/Transaxle and Climate Control/Safety systems as assessed by existing instruments in the current course
- 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:

This program is offered only at the North Haven campus. 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 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. Students must purchase required tool set that meets program standards.

The Automotive Technology: General Motors - Automotive Service Education (ASEP) program at Gateway Community College is accredited by the Automotive Service Excellence (ASE) Education Foundation as an ASE Accredited Training Program. During their final semester 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. Once students are selected for enrollment into the program, they will have until August 30 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

This program prepares students to sit for the Automotive Service Excellence (ASE) exams A1-A8, G1 and L1.

Students may also receive industry credentials through ProCut (on vehicle rotor service), Snap-on (ShopKey Information System) AllData (Service Information), and Fluke (Digital Meter). Students also receive credit from the General Motors Center of

Learning for GM courses that are embedded in the curriculum. Successful Students receive credit for approximately 80% of the GM Service Training Standard courses and are well on their way to Master Certification.

Students receive industry experience through mandatory paid internships at participating General Motors dealerships or qualified AC Delco independent service facilities. This experience is credited toward the ASE hands-on requirements that must be met prior to sitting for the certification exams.

Internship requirements:

Students will be required to successfully complete paid internships at sponsoring GM dealerships or AC Delco repair facilities. 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.

Students seeking acceptance into the General Motors Automotive Service Certificate will have to apply to the program by July 1 prior to their enrollment in the program. Requirements to apply are:

- Interview with the GM Automotive Service Education Program (ASEP) Program Coordinator to verify eligibility
- Be eligible for college level Math
- Be eligible for college level English
- Complete the Automotive Program placement exam if required
- Have a valid driver's license issued by one of the 50 states that does not have any restrictions that would prohibit the student from operating an automotive on public roads

Required Courses

- AUTO 1010 - Introduction to General Motors Automotive Systems *Credits: 2*
- AUTO 1014 - General Motors Steering & Suspension Systems *Credits: 3*
- AUTO 1012 - General Motors Braking Systems *Credits: 3*
- AUTO 1195A - General Motors Internship 1A *Credits: 1*
- AUTO 1195B - General Motors Internship 1B *Credits: 1*
- AUTO 1018 - General Motors Engine Propulsion Systems *Credits: 3*
- AUTO 1016 - General Motors Electrical Systems *Credits: 3*
- AUTO 1195C - General Motors Internship 1C *Credits: 1*
- AUTO 1295 - General Motors Internship 2 *Credits: 3*
- AUTO 2001 - General Motors Powertrain Control System *Credits: 3*
- AUTO 2003 - General Motors Manual Drivetrain Systems *Credits: 3*
- AUTO 2395A - General Motors Internship 3A *Credits: 1*
- AUTO 2395B - General Motors Internship 3B *Credits: 1*
- AUTO 2395C - General Motors Internship 3C *Credits: 1*
- AUTO 2005 - General Motors Automatic Drivetrain Systems *Credits: 3*
- AUTO 2007 - General Motors Climate Control and Safety Systems *Credits: 3*

Total Credits: 35

Automotive Technology: General Motors Automotive Service Education Program (ASEP), AAS (AUTO-AAS-ASE)

The Automotive Service Education Program (ASEP) was designed by General Motors (GM) and Gateway Community College, now Gateway campus of CT State Community College. This unique, cooperative program educates students for a challenging career in General Motors and AC Delco sponsored automotive service 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. Vehicles, parts, engines, specialized tools, service information, and materials are provided by General Motors Corporation. The automotive curriculum is designed to meet all Automotive Service Excellence (ASE) Accredited Training Program requirements for national accreditation. This program is offered at the North Haven campus only.

Program Entry Requirements

Prospective students must obtain paid internship sponsorship through a GM dealership or AC Delco affiliated independent service center. Students must meet employment eligibility guidelines for the sponsoring employer. Students must 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

Students must purchase required tool set that meets program standards.

Internship Requirements

Students receive industry experience through mandatory paid internships at participating General Motors dealerships or qualified AC Delco independent service facilities. This experience is credited toward the ASE hands-on requirements that must be met prior to sitting for the certification exams. 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.

Students seeking acceptance into the Automotive Technology (GM-ASEP) A.A.S. degree program will have to apply to the program by June 1 prior to their enrollment in the program. Requirements to apply are:

- Interview with the GM ASEP Program Coordinator to verify eligibility
- Be eligible for college level Math
- Be eligible for college level English
- Complete the Automotive Program 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

Selection of students will be completed by July 1 and students will be notified shortly after. Once students are selected for enrollment into the program, they will have until August 30th 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. Upon completion of the ASEP program, students will receive an Associate in Applied Science degree in Automotive Technology from Connecticut State 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*. During their final semester students are encouraged to take the (ASE) exams for each of the eight automotive subject areas for national certification.

Learning Outcomes:

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

- Meet ASE Accredited Training Program required outcomes for Master Automotive Service Technology (MAST) certified programs.

- Demonstrate workplace skills including but not limited to resume preparation, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics, and teamwork.
- Apply knowledge of automotive theory to safely perform the duties of an entry level automotive technician.
- Identify and use appropriate tools, testing, and measurement equipment to perform the duties of an entry level service technician.
- Use current reference and training materials from accepted industry publications and standards to accomplish duties required of an entry level service technician.
- Earn corporate credit for web based and embedded classroom / laboratory training in the GM Center of Learning Training Web Site
- Demonstrate knowledge and understanding of all fundamental automotive concepts as outlined by ASE Accredited Training Program requirements.
- Meet the industry ASE accreditation training outcome requirements for General Motors Steering and Suspension, Braking, Engine Propulsion, Electrical, Engine Performance, Transmission/Transaxle and Climate Control/Safety systems as assessed by existing instruments in the current course
- Demonstrate practical application of all above outcomes by successful completion of an in-dealership internship as assessed by existing instruments in current course.

This program follows a 12-week semester format. Students alternate between 12 weeks of on-campus instruction and 12 weeks of paid internship work.

The Automotive Technology: General Motors - Automotive Service Education (ASEP) program at CT State - Gateway Campus is accredited by the Automotive Service Excellence (ASE) Education Foundation as an ASE Accredited Training Program. During their final semester students are encouraged to take the ASE exams for each of the eight automotive subject areas for national certification.

Once students are selected for enrollment into the program, they will have until August 30 to find a sponsor for their paid internships at a GM automotive dealership or AC Delco repair facility in order to remain in the degree program.

Sponsorship of students is a requirement throughout the program to include at the time of graduation. This program is offered at the North Haven campus only.

This program prepares students to sit for the Automotive Service Excellence (ASE) exams A1-A8, G1 and L1. Students may also receive industry credentials through ProCut (on vehicle rotor service), Snap-on (ShopKey Information System) AllData (Service Information), and Fluke (Digital Meter). Students also receive credit from the General Motors Center of Learning for GM courses that are embedded in the curriculum. Successful Students receive credit for approximately 80% of the GM Service Training Standard courses and are well on their way to Master Certification.

Program Requirements

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1001 - Quantitative Literacy *Credits: 3*
- **OR** MATH 1002 - Math for Science and Technology *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (41 credits)

- AUTO 1010 - Introduction to General Motors Automotive Systems *Credits: 2*
- AUTO 1014 - General Motors Steering & Suspension Systems *Credits: 3*
- AUTO 1012 - General Motors Braking Systems *Credits: 3*
- AUTO 1195A - General Motors Internship 1A *Credits: 1*
- AUTO 1195B - General Motors Internship 1B *Credits: 1*
- AUTO 1018 - General Motors Engine Propulsion Systems *Credits: 3*
- AUTO 1016 - General Motors Electrical Systems *Credits: 3*
- AUTO 1195C - General Motors Internship 1C *Credits: 1*
- AUTO 1295 - General Motors Internship 2 *Credits: 3*
- AUTO 2001 - General Motors Powertrain Control System *Credits: 3*
- AUTO 2003 - General Motors Manual Drivetrain Systems *Credits: 3*
- AUTO 2030 - Service and Parts Department Management *Credits: 3*
- AUTO 2395A - General Motors Internship 3A *Credits: 1*
- AUTO 2395B - General Motors Internship 3B *Credits: 1*
- AUTO 2395C - General Motors Internship 3C *Credits: 1*
- AUTO 2005 - General Motors Automatic Drivetrain Systems *Credits: 3*
- AUTO 2007 - General Motors Climate Control and Safety Systems *Credits: 3*
- AUTO 2495 - General Motors Internship 4 *Credits: 3*

Total Credits: 62-64

Automotive Technology: Honda Professional Auto Career Training (PACT) Auto Service Certificate (AUTO-CC-PCT)

The Automotive Service Certificate was designed by American Honda Co. (AHM) Professional Automotive Career Training (PACT) and Gateway Community College, now Gateway campus of CT State Community College. This unique, cooperative program educates students for an entry-level maintenance position in Honda or Acura sponsored automotive repair facilities. Through a special arrangement, students attend classes and labs at the North Haven Campus and then obtain practicum experience at a sponsoring Honda or Acura facility. Students in the Honda PACT Certificate program receive instruction on AHM products. Vehicles, parts, engines, specialized tools, service information, and materials are provided by AHM. For more information, contact Professor Giuseppe Vertucci, Program Coordinator at (203) 285-2434 or e-mail at (gvertucci@gatewayct.edu).

Program Entry Requirements

Prospective students must obtain sponsorship through a AHM dealership. Students must meet employment eligibility guidelines for the sponsoring employer. Students must 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. Students will be required to provide their own hand tools and personal protective equipment.

Practicum Requirements

Students will be required to successfully complete paid practicums at sponsoring AHM dealerships. Practicums will be tracked and monitored by the Honda PACT program coordinator. Successful practicum completion requires that all assigned Honda Interactive Network (IN) training courses be completed with a minimum grade of Pass.

Students seeking acceptance into the Automotive Technology: Honda PACT degree program will have to apply to the program. Requirements to apply are:

- Interview with the Honda PACT Program Coordinator to verify eligibility
- Be eligible for college level Math
- Be eligible for college level English
- Complete the Automotive Program placement exam if required
- Have a valid driver's license issued by one of the 50 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 and students will be notified shortly after. Once students are selected for enrollment into the program, they will have to find a sponsor for their practicums at an AHM automotive dealership to remain in the Automotive Technology: Honda PACT degree program. Sponsorship of students is a requirement throughout the program to include at the time of graduation. Upon completion of the program, students will receive a certificate in Automotive Technology from CT State Community College as well as Honda PACT Certification. This program has been evaluated by the National Institute for Automotive Service Excellence (ASE) and is certified as an *ASE Accredited Training Program*. During their final semester 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.

Learning Outcomes:

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

- Meet ASE Accredited Training Program required outcomes for Master Automotive Service Technician (MAST) certified programs.
- Demonstrate workplace skills including but not limited to resume preparation, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics, and teamwork.
- Apply knowledge of automotive theory to safely perform the duties of an entry level automotive technician.
- Identify and use appropriate tools, testing, and measurement equipment to perform the duties of an entry level service technician.

- Use current reference and training materials from accepted industry publications and standards to accomplish duties required of an entry level service technician.
- Receive corporate credit for web based and embedded classroom / laboratory training in the Honda IN Training Web Site
- Demonstrate knowledge and understanding of all fundamental automotive concepts as outlined by ASE Accredited Training Program requirements.
- Meet the industry ASE accreditation training outcome requirements for AHM Steering and Suspension, Braking, Power Plant, Electrical, Engine Performance, Drivetrain and Climate Control/Safety systems as assessed by existing instruments in the current course
- Demonstrate practical application of all above outcomes by successful completion of an in-dealership practicum as assessed by existing instruments in current course.

The Automotive Technology: Honda PACT program at CT State - Gateway campus is accredited by the Automotive Service Excellence (ASE) Education Foundation as an ASE Accredited Training Program. During their final semester 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. Once students are selected for enrollment into the program, they will have until August 30 to find a sponsor for their practicums at an AHM automotive dealership to remain in the certificate program. Sponsorship of students is a requirement throughout the program to include at the time of graduation.

This program prepares students to sit for the Automotive Service Excellence (ASE) exams A1-A8, G1 and L1.

Students may also receive industry credentials through ProCut (on vehicle rotor service), Snap-on (ShopKey Information System) AllData (Service Information), and Fluke (Digital Meter). Students also receive credit from the Honda PACT for AHM courses that are embedded in the curriculum. Successful students receive credit for approximately 70% of the Honda/ Acura Technician Training Standard courses and are well on their way to Honda Master Certification.

Students receive industry experience through mandatory paid practicums at participating AHM dealerships. This experience is credited toward the ASE hands-on requirements that must be met prior to sitting for the certification exams.

Required Courses

- AUTO 1055 - Honda Power Plant Systems Theory *Credits: 2*
- AUTO 1056 - Honda Power Plant Systems Lab *Credits: 2*
- AUTO 1041 - Honda Express Service and Shop Practices Theory *Credits: 1*
- AUTO 1042 - Honda Express Service and Shop Practices Lab *Credits: 2*
- AUTO 1057 - Honda Electrical Systems Theory *Credits: 2*
- AUTO 1058 - Honda Electrical Systems Lab *Credits: 2*
- AUTO 1065 - Honda Steering & Suspension Systems Theory *Credits: 2*
- AUTO 1066 - Honda Steering & Suspension Systems Lab *Credits: 2*
- AUTO 1067 - Honda Braking Systems Theory *Credits: 2*
- AUTO 1068 - Honda Braking Systems Lab *Credits: 2*
- AUTO 1595 - Honda Practicum 1 *Credits: 1*
- AUTO 2595 - Honda Practicum 2 *Credits: 1*
- AUTO 2011 - Honda Engine Management Systems Theory *Credits: 2*
- AUTO 2012 - Honda Engine Management Systems Lab *Credits: 2*
- AUTO 2013 - Honda Drivetrain Systems Theory *Credits: 2*
- AUTO 2014 - Honda Drivetrain Systems Lab *Credits: 2*
- AUTO 2055 - Honda Advanced Electrical Systems Theory *Credits: 2*
- AUTO 2056 - Honda Advanced Electrical Systems Lab *Credits: 2*
- AUTO 2057 - Honda Climate Control & Safety Systems Theory *Credits: 2*
- AUTO 2058 - Honda Climate Control & Safety Systems Lab *Credits: 2*
- AUTO 2695 - Honda Practicum 3 *Credits: 1*
- AUTO 2795 - Honda Practicum 4 *Credits: 1*
- AUTO 2895 - Honda Practicum 5 *Credits: 1*

Total Credits: 40

Automotive Technology: Honda Professional Automotive Career Training (PACT), AAS (AUTO-AAS-PCT)

The Automotive Technology: Honda Professional Automotive Career Training (PACT) degree program was designed by American Honda Co. (AHM) Professional Automotive Career Training (PACT) and Gateway Community College, now Gateway campus of CT State Community College. This unique, cooperative program educates students for an entry level maintenance position in Honda or Acura sponsored automotive repair facilities. Through a special arrangement, students attend classes and labs at the North Haven Campus and then obtain practicum experience at a sponsoring Honda or Acura facility. Students in the Automotive Technology: Honda PACT degree program receive instruction on AHM products. Vehicles, parts, engines, specialized tools, service information, and materials are provided by AHM. For more information, contact Professor Giuseppe Vertucci, Program Coordinator at (203) 285-2434 or e-mail at (gvertucci@gatewayct.edu).

Program Entry Requirements

Prospective students must obtain sponsorship through a AHM dealership. Students must meet employment eligibility guidelines for the sponsoring employer. Students must 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. Students will be required to provide their own hand tools and personal protective equipment.

Practicum Requirements

Students will be required to successfully complete paid practicums at sponsoring AHM dealerships. Practicums will be tracked and monitored by the Honda PACT program coordinator. Successful practicum completion requires that all assigned Honda Interactive Network (IN) training courses be completed with a minimum grade of Pass.

Students seeking acceptance into the Automotive Technology: Honda PACT degree program will have to apply to the program. Requirements to apply are:

- Interview with the Honda PACT Program Coordinator to verify eligibility
- Be eligible for college level Math
- Be eligible for college level English
- Complete the Automotive Program placement exam if required
- Have a valid driver's license issued by one of the 50 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 and students will be notified shortly after. Once students are selected for enrollment into the program, they will have to find a sponsor for their practicums at an AHM automotive dealership to remain in the Automotive Technology: Honda PACT degree program. Sponsorship of students is a requirement throughout the program to include at the time of graduation. Upon completion of the program, students will receive a degree in Automotive Technology from CT State Community College as well as Honda PACT Certification. This program has been evaluated by the National Institute for Automotive Service Excellence (ASE) and is certified as an *ASE Accredited Training Program*. During their final semester 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.

Learning Outcomes:

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

- Meet ASE Accredited Training Program required outcomes for Master Automotive Service Technician (MAST) certified programs.
- Demonstrate workplace skills including but not limited to resume preparation, seeking employment, maintaining a safe and healthy workplace environment, demonstrating workplace ethics, and teamwork.
- Apply knowledge of automotive theory to safely perform the duties of an entry level automotive technician.

- Identify and use appropriate tools, testing, and measurement equipment to perform the duties of an entry level service technician.
- Use current reference and training materials from accepted industry publications and standards to accomplish duties required of an entry level service technician.
- Receive corporate credit for web based and embedded classroom / laboratory training in the Honda IN Training Web Site
- Demonstrate knowledge and understanding of all fundamental automotive concepts as outlined by ASE Accredited Training Program requirements.
- Meet the industry ASE accreditation training outcome requirements for AHM Steering and Suspension, Braking, Power Plant, Electrical, Engine Performance, Drivetrain and Climate Control/Safety systems as assessed by existing instruments in the current course
- Demonstrate practical application of all above outcomes by successful completion of an in-dealership practicum as assessed by existing instruments in current course.

The Automotive Technology: Honda PACT program at Gateway Community College is accredited by the Automotive Service Excellence (ASE) Education Foundation as an ASE Accredited Training Program. During their final semester 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. Once students are selected for enrollment into the program, they will have until August 30 to find a sponsor for their practicums at an AHM automotive dealership to remain in the certificate program. Sponsorship of students is a requirement throughout the program to include at the time of graduation.

This program prepares students to sit for the Automotive Service Excellence (ASE) exams A1-A8, G1 and L1.

Students may also receive industry credentials through ProCut (on vehicle rotor service), Snap-on (ShopKey Information System) AllData (Service Information), and Fluke (Digital Meter). Students also receive credit from the Honda PACT for AHM courses that are embedded in the curriculum. Successful students receive credit for approximately 70% of the Honda/ Acura Technician Training Standard courses and are well on their way to Honda Master Certification.

Students receive industry experience through mandatory paid practicums at participating AHM dealerships. This experience is credited toward the ASE hands-on requirements that must be met prior to sitting for the certification exams.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40 credits)

- AUTO 1055 - Honda Power Plant Systems Theory *Credits: 2*
- AUTO 1056 - Honda Power Plant Systems Lab *Credits: 2*
- AUTO 1041 - Honda Express Service and Shop Practices Theory *Credits: 1*
- AUTO 1042 - Honda Express Service and Shop Practices Lab *Credits: 2*
- AUTO 1057 - Honda Electrical Systems Theory *Credits: 2*
- AUTO 1058 - Honda Electrical Systems Lab *Credits: 2*
- AUTO 1065 - Honda Steering & Suspension Systems Theory *Credits: 2*
- AUTO 1066 - Honda Steering & Suspension Systems Lab *Credits: 2*

- AUTO 1067 - Honda Braking Systems Theory *Credits: 2*
- AUTO 1068 - Honda Braking Systems Lab *Credits: 2*
- AUTO 1595 - Honda Practicum 1 *Credits: 1*
- AUTO 2595 - Honda Practicum 2 *Credits: 1*
- AUTO 2011 - Honda Engine Management Systems Theory *Credits: 2*
- AUTO 2012 - Honda Engine Management Systems Lab *Credits: 2*
- AUTO 2013 - Honda Drivetrain Systems Theory *Credits: 2*
- AUTO 2014 - Honda Drivetrain Systems Lab *Credits: 2*
- AUTO 2055 - Honda Advanced Electrical Systems Theory *Credits: 2*
- AUTO 2056 - Honda Advanced Electrical Systems Lab *Credits: 2*
- AUTO 2057 - Honda Climate Control & Safety Systems Theory *Credits: 2*
- AUTO 2058 - Honda Climate Control & Safety Systems Lab *Credits: 2*
- AUTO 2695 - Honda Practicum 3 *Credits: 1*
- AUTO 2795 - Honda Practicum 4 *Credits: 1*
- AUTO 2895 - Honda Practicum 5 *Credits: 1*

Total Credits 61-63

Aviation Maintenance Technology (AVIA-AS)

To be eligible for an Associate in Science degree in 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 30 credits of college instruction must be completed for the Associate in Science degree. FAA schools can be found at <https://av-info.faa.gov/MaintenanceSchool.asp>.

Learning Outcomes:

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

- 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

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.

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- PHYS 1201 - General Physics I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (11 Credits)

- MATH 1610 - Precalculus *Credits: 4*
- CENT 1016 - Computer Applications for Technology *Credits: 3*
- PHYS 1202 - General Physics II *Credits: 4*

Airframe and Powerplant Mechanics Program (30 credits)

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.

Total Credits: 63-64

Biomedical Engineering Technology, AS (BMDT-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. CT State Community College's Biomedical Engineering Technology Associate Degree program will qualify students for these demanding careers.

Learning 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
- Display 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 CT State CC's program are also capable of dealing with most types of nonmedical electronics. This program is offered at the Gateway Campus.

General Education Courses (23-24 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- PHYS 1201 - General Physics I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40 credits)

- CENT 1016 - Computer Applications for Technology *Credits: 3*
- BMED 1010 - Biomedical Technology *Credits: 2*
- BMED 1016 - Physiological Systems *Credits: 4*
- BMED 2010 - Biomedical Instrumentation *Credits: 4*
- BMED 2012 - Biomedical Equipment Design *Credits: 4*
- BMED 2014 - Advanced Biomedical Instrumentation *Credits: 4*
- BMED 2020 - Biomedical Practicum *Credits: 3*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- CENT 1010 - Electric Circuits for Technology *Credits: 4*
- CENT 1036 - Electronics for Technology *Credits: 4*
- CENT 2052 - Digital Electronics for Technology *Credits: 4*

Total Credits: 63-64

Clean Water Management Certificate (CWTR-CC)

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 Energy and Environmental Protection (DEEP). 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.

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 Connecticut DEP Wastewater Treatment Plant Operator Certification Examinations

Required Courses

- CWM 1006 - Introduction to Utility Management *Credits: 3*
- CWM 1008 - Clean Water Chemistry, Biology & Math *Credits: 4*
- CWM 1011 - Clean Water I *Credits: 3*
- **OR** CWM 1012 - Clean Water II *Credits: 3*
- CWM 1012 - Clean Water II *Credits: 3*
- **OR** CWM 1013 - Clean Water III *Credits: 3*
- ENV 1100 - Environmental Regulations *Credits: 3*
- Biology Elective *Credits: 4*
- Elective CWM/ENV/EVS/WMT *Credits: 3*
- Elective CWM/ENV/EVS/WMT *Credits: 3*

Total Credits: 26

Computer Engineering Technology, AS (CETC-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.

Learning 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 communications systems
- Use diagnostic software and testing equipment to troubleshoot problems Install and configure computer hardware and software
- Apply 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).

General Education Courses (23-24)

- ENG 1010 - Composition *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- PHYS 1201 - General Physics I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- CENT 1016 - Computer Applications for Technology *Credits: 3*
- CAD 1026 - Electronics Graphics CAD *Credits: 3*
- CENT 1024 - Structured Programming *Credits: 4*
- CENT 1026 - Computer Servicing *Credits: 4*
- CENT 2010 - Computer Systems Software *Credits: 4*
- CST 1121 - Networking I *Credits: 3*
- CYS 1101 - Practices in Security Management *Credits: 3*
- CENT 1010 - Electric Circuits for Technology *Credits: 4*
- CENT 1036 - Electronics for Technology *Credits: 4*
- CENT 2052 - Digital Electronics for Technology *Credits: 4*
- CENT 2095 - Computer Engineering Technology Practicum *Credits: 3*

Total Credits: 62-63

Computer Information Systems: Cloud Computing (CISC-AS)

The Computer Information Systems (CIS) degree program offers students a diverse technical curriculum that provides an understanding of many areas of information technology (IT). The program features a core of technical courses that cover topics such as database design, operating systems, and project management, and differentiated options that allow students to concentrate their learning in a particular area.

Students also have an opportunity to experience the workplace in an internship course, or via a simulated workplace capstone that allows them to work directly with employers or in a case study environment. They can leverage the skills acquired in this diverse program to prepare for employment, industry-recognized certification credentials or to pursue baccalaureate degrees. The CIS program allows students to tailor their degree to their interests by offering a wide range of electives. Certificates are also provided as a guide to assist students in the selection of electives.

Learning Outcomes:

- Develop the ability to analyze and design solutions through knowledge and comprehension of information systems concepts and skills.
- Develop strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs.
- Develop the ability to identify and solve unstructured problems in unfamiliar settings and exercise judgment based on facts.
- Develop mastery in communication by gaining proficiency in oral/written/electronic communication skills and the ability to explain systems development concepts and related technical issues to various stakeholders.
- Develop leadership skills by learning to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
- Develop the skills to apply current technology, analyze business problems, and design software and solve technical issues; apply word processing, spreadsheet, database, presentation, email, and collaborative software skills in a professional context.
- Develop the skills to communicate using network technologies, access information via the internet, and understand information integrity and security issues.
- Understand and respect the employer-employee relationship and appreciate the need to produce high quality work.
- Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

Cloud Computing Option

The Cloud Computing option recognizes the need to educate students on cloud computing frameworks and technologies. Students will learn more about how organizations evaluate and implement cloud-based technology solutions. Hardware, software, and infrastructure aspects of the Cloud are covered. Students will develop foundational and practical knowledge of developing and deploying cloud-based solutions in modern day integrated business environments. Aspects of computing virtualization and vendor management will also be covered.

Learning outcomes:

- Describe the concepts, characteristics, delivery models and benefits of cloud computing
- Describe the key security and compliance challenges of cloud computing
- Demonstrate understanding of key technical and organizational challenges with a focus on business integration
- Analyze business requirements for implementation to map the distinctive characteristics of public, private and hybrid cloud models

Program Requirements*

*CSC 1201 *Introduction to Programming* and CSC 2213 *Object Oriented Programming* are not allowed in this program. Students are encouraged to take CSC 1211 - Java I or other programming language.

Computer Information System General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1010 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Computer Information System Program Core (24-26 credits)

- CIS 1001 - Introduction to Computers *Credits: 3*
- CIS 1211 - Database Design I *Credits: 3*
- **OR** CSC 1231 - Database Development I *Credits: 4*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*
- CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- CIS 2994 - Coop Ed/Work Experience *Credits: 3*
- **OR** CIS 2990 - Capstone Research *Credits: 3*
- Open Elective *Credits: 3*
- Directed Elective - Any CIS, CSA, CST, CYS, or DTS course; CSC courses excluding CSC 1201 and CSC 2213 *Credits: 3-4*

Specialization Courses (15-16 credits)

- CIS 2131 - Fundamentals of Cloud Computing *Credits: 3*
- CST 1121 - Networking I *Credits: 3*
- CST 2161 - Virtualization & Cloud Computing *Credits: 3*
- CIS 2144 - Systems Analysis and Design *Credits: 3*
- Directed Elective - Any CIS, CST, CYS, or DTS course; CSC courses excluding CSC 1201 and CSC 2213 *Credits: 3 - 4*

Total Credits: 60-66

Computer Information Systems: Cloud Computing Certificate (CISC-CC)

The Cloud Computing certificate educates students in areas of cloud computing technologies. Students will learn more about how organizations evaluate and implement cloud-based technology solutions. The program will cover several aspects of the Cloud including hardware, software, and infrastructure. Students will develop foundational and practical knowledge of developing and deploying cloud-based solutions in modern day integrated business environments. Aspects of computing virtualization and vendor management will also be covered.

Certificate Learning Outcomes:

- Describe the concepts, characteristics, delivery models and benefits of cloud computing
- Describe the key security and compliance challenges of cloud computing
- Demonstrate understanding of key technical and organizational challenges with a focus on business integration
- Analyze business requirements for implementation to map the distinctive characteristics of public, private and hybrid cloud models

Required Courses*

**CSC 1201 Introduction to Programming* and *CSC 2213 Object Oriented Programming* are not allowed in this program. Students are encouraged to take *CSC 1211 - Java I* or other programming language.

- CIS 2131 - Fundamentals of Cloud Computing *Credits: 3*
- CST 1121 - Networking I *Credits: 3*
- CIS 2232 - Designing and Deploying Cloud Applications *Credits: 3*
- Elective CPL - Computer Programming Language Course *Credits: 3-4*
- CSC 2235 - Introduction to Database Design *Credits: 3*
- **OR** CSC 1231 - Database Development I *Credits: 4*
- **OR** Elective CPL - Computer Programming Language Course *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- **OR** CIS 2144 - Systems Analysis and Design *Credits: 3*

Total Credits: 19-20

Computer Information Systems: Computer Networking Certificate (CISN-CC)

The Computer Networking certificate is designed for those individuals who desire an understanding of networks and their use in the workplace. The course of study will provide the student with knowledge of local area network design, network management, installation, servicing and support. The Computer Networking certificate may be applied to the Computer Information Systems Associate degree

Learning Outcomes:

- Provide the student with the personal computer skills necessary to effectively function in today's workplace.
- Offer a "hands-on" learning experience in the personal computer networking software most commonly used in business and industry.
- Provide the opportunity for a more advanced technical understanding of personal computer local area networks, their design, installation and management.
- Provide entry-level opportunities to individuals seeking positions requiring computer networking skills.
- Upgrade the skills of individuals currently employed.

This degree will begin to prepare students for common certification exams such as:

- CCNA (CISCO Certified Network Associate) exam.
- CompTia Network+
- CompTIA Security+

Required Courses*

CSC 1201 Introduction to Programming and *CSC 2213 Object Oriented Programming* are not allowed in this program. Students are encouraged to take *CSC 1211 - Java I* or other programming language.

- CIS 1104 - Introduction to Operating Systems *Credits: 3*
- CST 1121 - Networking I *Credits: 3*
- CYS 2111 - Network Security *Credits: 3*
- CST 2142 - Windows Server Administration *Credits: 4*

Choose two directed electives (6-7 credits)

- CST 2124 - Voice over IP Networking *Credits: 3*
- **OR** CST 1111 - Computer Hardware *Credits: 4*
- CST 2122 - Networking II *Credits: 3*
- CST 2123 - Networking III *Credits: 3*
- CIS 2994 - Coop Ed/Work Experience *Credits: 3*

Total Credits: 19-20

Computer Information Systems: Computer Programming Certificate (CISP-CC)

The Computer Programming certificate educates students in the areas of programming and systems design. Courses are designed to educate students for positions in the industry and provide a solid foundation for continuation in our two-year associate degree in Computer Information Systems Technology.

Learning Outcomes:

- Demonstrate the use of objects in application programs.
- Define and implement efficient object-oriented solutions using C++, JAVA, and Visual Basic, Python, or others
- Write, compile, and execute programs using a programming language.
- Create applications using object-oriented features.
- Use inheritance and interfaces to create robust, reusable, programming code.
- Demonstrate a basic understanding of relational database concepts.
- Preparedness to advance one's career, or move on to more advanced study in MIS, CIS, or related fields.

Required Courses*

CSC 1201 Introduction to Programming and *CSC 2213 Object Oriented Programming* are not allowed in this program. Students are encouraged to take *CSC 1211 - Java I* or other programming language.

- CIS 1001 - Introduction to Computers *Credits: 3*
- **OR** CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CSC 1211 - Java I *Credits: 3*
- **OR** CSC 1205 - Visual Basic *Credits: 3*
- **OR** CSC 1203 - Python Fundamentals *Credits: 3*
- CSC 2235 - Introduction to Database Design *Credits: 3*

Pick 3 courses of directed electives from the list below (9 credits):

- CSC 2274 - Client-Side Web Development *Credits: 3*
- CSC 2251 - Mobile Device Programming *Credits: 3*
- CSC 2252 - Programming Mobile Devices I *Credits: 3*
- CSC 1203 - Python Fundamentals *Credits: 3*
- CSC 1205 - Visual Basic *Credits: 3*
- CSC 1211 - Java I *Credits: 3*
- CSC 2212 - Java II *Credits: 3*
- CSC 2214 - C++ Programming *Credits: 4*
- **OR** CIS 2144 - Systems Analysis and Design *Credits: 3*

Total Credits: 18

Computer Information Systems: Generalist (CISG-AS)

The Computer Information Systems (CIS) degree program offers students a diverse technical curriculum that provides an understanding of many areas of information technology (IT). The program features a core of technical courses that cover topics such as database design, operating systems, and project management, and differentiated options that allow students to concentrate their learning in a particular area.

Students also have an opportunity to experience the workplace in an internship course, or via a simulated workplace capstone that allows them to work directly with employers or in a case study environment. They can leverage the skills acquired in this diverse program to prepare for employment, industry-recognized certification credentials or to pursue baccalaureate degrees. The CIS program allows students to tailor their degree to their interests by offering a wide range of electives. Certificates are also provided as a guide to assist students in the selection of electives.

Learning Outcomes:

- Develop the ability to analyze and design solutions through knowledge and comprehension of information systems concepts and skills.
- Develop strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs.
- Develop the ability to identify and solve unstructured problems in unfamiliar settings and exercise judgment based on facts.
- Develop mastery in communication by gaining proficiency in oral/written/electronic communication skills and the ability to explain systems development concepts and related technical issues to various stakeholders.
- Develop leadership skills by learning to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
- Develop the skills to apply current technology, analyze business problems, and design software and solve technical issues; apply word processing, spreadsheet, database, presentation, email, and collaborative software skills in a professional context.
- Develop the skills to communicate using network technologies, access information via the internet, and understand information integrity and security issues.
- Understand and respect the employer-employee relationship and appreciate the need to produce high quality work.
- Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

Generalist Option

The Generalist option allows a student to explore many areas of CIS, IT, MIS, or Networking. Students may customize a computer technology program that will suit their needs. The curriculum leaves space for elective courses in fields other than computers to accommodate students who wish to apply computer technology to other fields.

Learning outcomes:

- Describe current and emerging technologies.
- Demonstrate basic knowledge of computer information systems which includes computer programming skills, network essentials, and systems analysis and design, operating systems, or other courses related to student interest.
- Demonstrate desirable attitudes and work habits- creative thinking, the ability to solve problems, cooperation, good judgment, responsibility, and self-reliance.
- Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

Program Requirements*

*CSC 1201 *Introduction to Programming* and CSC 2213 *Object Oriented Programming* are not allowed in this program. Students are encouraged to take CSC 1211 - Java I or other programming language.

Computer Information System General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1010 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Computer Information System Program Core (24-26 credits)

- CIS 1001 - Introduction to Computers *Credits: 3*
- CIS 1211 - Database Design I *Credits: 3*
- **OR** CSC 1231 - Database Development I *Credits: 4*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*
- CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- CIS 2994 - Coop Ed/Work Experience *Credits: 3*
- **OR** CIS 2990 - Capstone Research *Credits: 3*
- Open Elective *Credits: 3*
- Directed Elective - Any CIS, CSA, CST, CYS, or DTS course; CSC courses excluding CSC 1201 and CSC 2213 *Credits: 3-4*

Specialization Courses (15-18 credits)

- Elective CPL - Computer Programming Language Course *Credits: 3-4*
- CST 1121 - Networking I *Credits: 3*
- CIS 2144 - Systems Analysis and Design *Credits: 3*
- Directed Elective - Any CIS, CST, CYS, DTS or CSC course excluding CSC 1201 and 2213 *Credits: 3-4*
- Directed Elective - Any CIS, CSA, CST, CYS, DTS or CSC course excluding CSC 1201 and 2213 *Credits: 3-4*

Total Credits: 60-69

Computer Information Systems: IT Support (CISI-AS)

The Computer Information Systems (CIS) degree program offers students a diverse technical curriculum that provides an understanding of many areas of information technology (IT). The program features a core of technical courses that cover topics such as database design, operating systems, and project management, and differentiated options that allow students to concentrate their learning in a particular area.

Students also have an opportunity to experience the workplace in an internship course, or via a simulated workplace capstone that allows them to work directly with employers or in a case study environment. They can leverage the skills acquired in this diverse program to prepare for employment, industry-recognized certification credentials or to pursue baccalaureate degrees. The CIS program allows students to tailor their degree to their interests by offering a wide range of electives. Certificates are also provided as a guide to assist students in the selection of electives.

Learning Outcomes:

- Develop the ability to analyze and design solutions through knowledge and comprehension of information systems concepts and skills.
- Develop strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs.
- Develop the ability to identify and solve unstructured problems in unfamiliar settings and exercise judgment based on facts.
- Develop mastery in communication by gaining proficiency in oral/written/electronic communication skills and the ability to explain systems development concepts and related technical issues to various stakeholders.
- Develop leadership skills by learning to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
- Develop the skills to apply current technology, analyze business problems, and design software and solve technical issues; apply word processing, spreadsheet, database, presentation, email, and collaborative software skills in a professional context.
- Develop the skills to communicate using network technologies, access information via the internet, and understand information integrity and security issues.
- Understand and respect the employer-employee relationship and appreciate the need to produce high quality work.
- Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

IT Support Option

The IT Support option prepares students to troubleshoot technical problems, work within a business environment using oral and written communication skills effectively and apply software and hardware service and technical skills.

Learning outcomes:

- To design and use problem solving techniques
- Use oral and written communication to communicate with clients in a business environment
- Implement customer service skills in the context of the IT department
- Apply proper troubleshooting skills within a networking environment
- Utilize technical skills in implementing software and hardware installations

Program Requirements*

*CSC 1201 *Introduction to Programming* and CSC 2213 *Object Oriented Programming* are not allowed in this program. Students are encouraged to take CSC 1211 - Java I or other programming language.

Computer Information System General Education Core (21-24 credits)

- ENG 1010 - *Composition Credits: 3*

- MATH 1000 or higher *Credits: 3-4* (MATH 1010 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Computer Information System Program Core (24-26 credits)

- CIS 1001 - Introduction to Computers *Credits: 3*
- CIS 1211 - Database Design I *Credits: 3*
- **OR** CSC 1231 - Database Development I *Credits: 4*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*
- CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- CIS 2994 - Coop Ed/Work Experience *Credits: 3*
- **OR** CIS 2990 - Capstone Research *Credits: 3*
- Open Elective *Credits: 3*
- Directed Elective - Any CIS, CSA, CST, CYS, or DTS course; CSC courses excluding CSC 1201 and CSC 2213 *Credits: 3-4*

Specialization Courses (17 credits)

- CST 1111 - Computer Hardware *Credits: 4*
- CST 1121 - Networking I *Credits: 3*
- CYS 2111 - Network Security *Credits: 3*
- CST 2142 - Windows Server Administration *Credits: 4*
- CIS 2131 - Fundamentals of Cloud Computing *Credits: 3*

Total Credits: 62-68

Computer Information Systems: IT Support Certificate (CISI-CC)

The Information Technology (IT) Support Certificate prepares students to troubleshoot technical problems, work within a business environment using oral and written communication skills effectively, and apply software and hardware service and technical skills. All courses required by this certificate may be applied to the Computer Information Systems Associate degree program.

Learning Outcomes:

- To design and use problem solving techniques
- Use oral and written communication to communicate with clients in a business environment
- Implement customer service skills in the context of the IT department
- Apply proper troubleshooting skills within a networking environment
- Utilize technical skills in implementing software and hardware installations

This degree will begin to prepare students for common industry certification exams such as:

- CCNA (CISCO Certified Network Associate) exam.
- CompTia Network+
- CompTIA Security+

Required Courses*

CSC 1201 Introduction to Programming and *CSC 2213 Object Oriented Programming* are not allowed in this program. Students are encouraged to take *CSC 1211 - Java I* or other programming language.

- CIS 1001 - Introduction to Computers *Credits: 3*
- CST 1111 - Computer Hardware *Credits: 4*
- CST 1121 - Networking I *Credits: 3*
- CYS 2111 - Network Security *Credits: 3*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*
- CST 2142 - Windows Server Administration *Credits: 4*
- CIS 2131 - Fundamentals of Cloud Computing *Credits: 3*
- CIS 2990 - Capstone Research *Credits: 3*
- **OR** CIS 2994 - Coop Ed/Work Experience *Credits: 3*

Total Credits: 26

Computer Information Systems: Networking, AS (CISN-AS)

The Computer Information Systems (CIS) degree program offers students a diverse technical curriculum that provides an understanding of many areas of information technology (IT). The program features a core of technical courses that cover topics such as database design, operating systems, and project management, and differentiated options that allow students to concentrate their learning in a particular area.

Students also have an opportunity to experience the workplace in an internship course, or via a simulated workplace capstone that allows them to work directly with employers or in a case study environment. They can leverage the skills acquired in this diverse program to prepare for employment, industry-recognized certification credentials or to pursue baccalaureate degrees. The CIS program allows students to tailor their degree to their interests by offering a wide range of electives. Certificates are also provided as a guide to assist students in the selection of electives.

Learning Outcomes:

- Develop the ability to analyze and design solutions through knowledge and comprehension of information systems concepts and skills.
- Develop strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs.
- Develop the ability to identify and solve unstructured problems in unfamiliar settings and exercise judgment based on facts.
- Develop mastery in communication by gaining proficiency in oral/written/electronic communication skills and the ability to explain systems development concepts and related technical issues to various stakeholders.
- Develop leadership skills by learning to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
- Develop the skills to apply current technology, analyze business problems, and design software and solve technical issues; apply word processing, spreadsheet, database, presentation, email, and collaborative software skills in a professional context.
- Develop the skills to communicate using network technologies, access information via the internet, and understand information integrity and security issues.
- Understand and respect the employer-employee relationship and appreciate the need to produce high quality work.
- Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

Networking Option

The Networking option of the CIS degree offers training in the fundamentals in data networking and server administration. Students also learn the important skills needed to maintain secure networks. Students are offered the additional advantage of hands-on training or simulation with state-of-the-art equipment or software that leads to industry-recognized certification.

Learning outcomes:

- Provide the student with the personal computer skills necessary to effectively function in today's workplace.
- Offer a "hands-on" learning experience in the personal computer networking software most commonly used in business and industry.
- Provide the opportunity for a more advanced technical understanding of personal computer local area networks, their design, installation and management.
- Upgrade the personal computer knowledge and skills of individuals currently employed.

Program Requirements*

*CSC 1201 *Introduction to Programming* and CSC 2213 *Object Oriented Programming* are not allowed in this program. Students are encouraged to take CSC 1211 - Java I or other programming language.

Computer Information System General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1010 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Computer Information System Program Core (24-26 credits)

- CIS 1001 - Introduction to Computers *Credits: 3*
- CIS 1211 - Database Design I *Credits: 3*
- **OR** CSC 1231 - Database Development I *Credits: 4*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*
- CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- CIS 2994 - Coop Ed/Work Experience *Credits: 3*
- **OR** CIS 2990 - Capstone Research *Credits: 3*
- Open Elective *Credits: 3*
- Directed Elective - Any CIS, CSA, CST, CYS, or DTS course; CSC courses excluding CSC 1201 and CSC 2213 *Credits: 3-4*

Specialization Courses (16-18 credits)

- CST 1121 - Networking I *Credits: 3*
- CST 2142 - Windows Server Administration *Credits: 4*
- CST 2124 - Voice over IP Networking *Credits: 3*
- **OR** CST 1111 - Computer Hardware *Credits: 4*
- CYS 2111 - Network Security *Credits: 3*
- Directed Elective - Any CIS, CST, CYS or CSC course excluding CSC 1201 and CSC 2213 *Credits: 3-4*

Total Credits: 61-69

Computer Information Systems: Programming (CISP-AS)

The Computer Information Systems (CIS) degree program offers students a diverse technical curriculum that provides an understanding of many areas of information technology (IT). The program features a core of technical courses that cover topics such as database design, operating systems, and project management, and differentiated options that allow students to concentrate their learning in a particular area.

Students also have an opportunity to experience the workplace in an internship course, or via a simulated workplace capstone that allows them to work directly with employers or in a case study environment. They can leverage the skills acquired in this diverse program to prepare for employment, industry-recognized certification credentials or to pursue baccalaureate degrees. The CIS program allows students to tailor their degree to their interests by offering a wide range of electives. Certificates are also provided as a guide to assist students in the selection of electives.

Learning Outcomes:

- Develop the ability to analyze and design solutions through knowledge and comprehension of information systems concepts and skills.
- Develop strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs.
- Develop the ability to identify and solve unstructured problems in unfamiliar settings and exercise judgment based on facts.
- Develop mastery in communication by gaining proficiency in oral/written/electronic communication skills and the ability to explain systems development concepts and related technical issues to various stakeholders.
- Develop leadership skills by learning to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
- Develop the skills to apply current technology, analyze business problems, and design software and solve technical issues; apply word processing, spreadsheet, database, presentation, email, and collaborative software skills in a professional context.
- Develop the skills to communicate using network technologies, access information via the internet, and understand information integrity and security issues.
- Understand and respect the employer-employee relationship and appreciate the need to produce high quality work.
- Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

Programming Option

The Programming option recognizes the need to educate students in the area of programming and systems design. Students will take courses in a variety of current programming languages, thus offering preparedness to obtain employment, career advancement, or proceed to more advanced study in MIS, CIS, or related fields.

Learning outcomes:

- Demonstrate the use of objects in application programs.
- Define and implement efficient programming solutions using various programming languages
- Write, compile, and execute programs
- Create applications using object-oriented features.
- Use inheritance and interfaces to create robust, reusable, programming code.
- Demonstrate a basic understanding of relational database concepts.
- Preparedness to obtain employment, advance one's career, or move on to more advanced study in MIS, CIS, or related fields.

Program Requirements*

*CSC 1201 *Introduction to Programming* and CSC 2213 *Object Oriented Programming* are not allowed in this program. Students are encouraged to take CSC 1211 - Java I or other programming language.

Computer Information System General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1010 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Computer Information System Program Core (24-26 credits)

- CIS 1001 - Introduction to Computers *Credits: 3*
- CIS 1211 - Database Design I *Credits: 3*
- **OR** CSC 1231 - Database Development I *Credits: 4*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*
- CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- CIS 2994 - Coop Ed/Work Experience *Credits: 3*
- **OR** CIS 2990 - Capstone Research *Credits: 3*
- Open Elective *Credits: 3*
- Directed Elective - Any CIS, CSA, CST, CYS, or DTS course; CSC courses excluding CSC 1201 and CSC 2213 *Credits: 3-4*

Specialization Courses (15-18 credits)

- CSC 1211 - Java I *Credits: 3*
- **OR** CSC 1203 - Python Fundamentals *Credits: 3*
- **OR** CSC 1205 - Visual Basic *Credits: 3*
- CSC 2212 - Java II *Credits: 3*
- **OR** Other Elective CPL - Computer Programming Language Course not yet taken. *Credits: 3-4*
- CSC 1273 - Intro to Programming w/JavaScript *Credits: 3*
- **OR** CSC 2274 - Client-Side Web Development *Credits: 3*
- Elective CPL - Computer Programming Language Course *Credits: 3-4*
- Directed Elective - Any CIS, CST, CYS, DTS, or CSC course excluding CSC 1201 and CSC 2213 *Credits: 3-4*

Total Credits: 60-69

Computer Networking Certificate (CPNT-CC)

The Computer Networking Certificate is designed to take a student with little or no information technology experience and prepares them for entry-level work in network and systems administration. It covers the fundamentals of computer network theory as well as practical network connectivity device configuration, administration of networked client-server Linux and Windows computer operating systems.

Students will be able to build virtualized and real-world computer networks. Students will have hands-on access to computer networking equipment.

Learning Outcomes:

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

- Design and build local area networks (LAN).
- Use packet tracing software to analyze network traffic.
- Install and configure Linux and Windows operating systems.
- Install and configure network services in Linux and Windows operating systems.

This certificate will begin to prepare students for common security certification exams such as:

- CompTIA Network+
- CompTIA Linux+
- CCNA

Required Courses

- CST 1121 - Networking I *Credits: 3*
- CST 2122 - Networking II *Credits: 3*
- CST 2123 - Networking III *Credits: 3*
- CST 2124 - Voice over IP Networking *Credits: 3*
- CST 1141 - Linux System Administration *Credits: 4*
- CST 2142 - Windows Server Administration *Credits: 4*

Total Credits: 20

Computer Networking, AS (CPNT-AS)

The Computer Networking associate degree program provides students with both a broad and in-depth background in computer networking concepts and technologies. It covers the fundamentals of computer network theory as well as practical network connectivity device configuration, administration of networked client-server computer operating systems, computer hardware design and maintenance and computer programming.

Students will be able to build virtualized and real-world computer networks. Students will have hands-on access to computer networking equipment.

This degree prepares students for entry-level positions in the computer networking and system administration professions. Students may also choose to transfer to a bachelor's degree program at a four-year university.

Students who are interested in programming should consider the CSCU Pathway Transfer Degree: Computer Science Studies A.A degree.

Learning Outcomes:

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

- Design and build local area networks (LAN).
- Use packet tracing software to analyze network traffic.
- Install and configure Linux and Windows operating systems.
- Install and configure network services in Linux and Windows operating systems.
- Design, build and test a Python program.
- Implement virtualization technologies.

This degree will begin to prepare students for common security certification exams such as:

- CompTIA Network+
- CompTIA Linux+
- CompTIA Security+
- CompTIA A+

General Education Courses (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher (MATH 1200 recommended) *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4* (PHYS 1100 recommended)
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39-40 credits)

- CSC 1203 - Python Fundamentals *Credits: 3*
- CST 1111 - Computer Hardware *Credits: 4*
- CST 1121 - Networking I *Credits: 3*
- CST 2122 - Networking II *Credits: 3*
- CST 2123 - Networking III *Credits: 3*

- CST 2124 - Voice over IP Networking *Credits: 3*
- CST 2125 - Protocol Analysis *Credits: 3*
- CST 2161 - Virtualization & Cloud Computing *Credits: 3*
- CST 1141 - Linux System Administration *Credits: 4*
- CST 2142 - Windows Server Administration *Credits: 4*
- CYS 2111 - Network Security *Credits: 3*
- Elective - Any EGR, CIS, CSC, CSA, CST, or CYS course *Credits: 3-4*

Total Credits: 60-64

Computer Science: Computer Science Studies - CSCU Transfer Degree, AA (CMSC-AA-TAP)

CSCU Pathway Transfer A.A. degree programs are for Connecticut Community College students who wish to transfer to one of the four Connecticut State Universities or Charter Oak College. Upon transfer, students are guaranteed full junior status and can complete a bachelor's degree in their major without losing any credits or being required to take any extra credits.

The Computer Science Pathway A.A. degree is a rigorous calculus-based program which provides students with a broad background in the underlying disciplines of computer science including: the fundamentals of computer programming; database theory and design; digital systems including digital logic, computer organization & architecture and assembly language; and client-side web development.

Students will also acquire a comprehensive educational background in mathematics, science and general education, designed to develop and enhance their critical thinking, problem analysis and resolution skills.

Students who are interested in Networking and System Administration should consider the Computer Network Technology A.S. degree or certificate.

Learning Outcomes:

Upon successful completion of all requirements of this degree program, graduates will:

- Demonstrate the ability to understand a problem and develop logically structured solutions through the use of a modern programming language such as Java.
- Apply the use of data modeling and relational database design for the design and implementation of a database application.
- Understand the fundamental operating principles of a computer on an architectural level.
- Acquire an understanding of modern abstract mathematics as it relates to computer science
- Apply the use of HTML, CSS, JavaScript, Bootstrap and jQuery to the design and creation of a website.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

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

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

Framework Courses (33 - 34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- **OR** BIO 1210 - General Biology I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- PHYS 2202 - Calculus-Based Physics II *Credits: 4*
- **OR** CHEM 1220 - General Chemistry II *Credits: 4*
- **OR** BIO 1220 - General Biology II *Credits: 4*

- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (28 credits)

- MATH 2600 - Calculus I *Credits: 4 **
- MATH 2610 - Calculus II *Credits: 4 ***
- MATH 2611 - Discrete Mathematics for Computer Science *Credits: 4 **
- CSC 2274 - Client-Side Web Development *Credits: 3 **
- CSC 2217 - Digital Design *Credits: 4 ***
- CSC 2235 - Introduction to Database Design *Credits: 3 **
- CSC 1211 - Java I *Credits: 3 **
- CSC 2212 - Java II *Credits: 3 **
- a grade of C or higher required for transfer to a CSU
- ** a grade of C- or higher required for transfer to a CSU

Total Credits: 61-62

Computer Science: Mobile Programming, AAS (CSMP-AAS)

This program prepares students for technical positions within the Computer Science field. It provides students with the skills needed to be successful in the emerging field of mobile device programming technologies. The program teaches students fundamental concepts as well as fosters preparation for tomorrow's programming needs. Course work is focused on programming in heterogeneous platform environments through multiple programming languages, and development of both written and verbal communication skills needed in all areas of the business community.

Learning Outcomes:

Upon successful completion of this degree, graduates will be able to:

- Demonstrate an understanding of connections between various platforms and programming languages;
- Work with and study the underlying technologies that support the internet;
- Demonstrate the ability to use an IDE (integrated development environment);
- Demonstrate the use of OOP (object oriented programming) techniques in program design and development;
- Demonstrate writing, compiling and executing code in Object Oriented programming languages;
- Test programs and troubleshoot simple problems;
- Understand relational database design methodology and be able to use database software to build, modify, and query relational databases; and
- Produce logical software solutions to problems.

This program is currently only offered to PTECH and Early College Studies students. This program will operate at the Norwalk Campus.

General Education Courses (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 or higher *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1210 - General Biology I *Credits: 4*
- HIST 1015 - US History to 1877 *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40-42 credits)

- CSC 1201 - Introduction to Programming *Credits: 4*
- CSC 2213 - Object Oriented Programming *Credits: 4*
- CSC 1231 - Database Development I *Credits: 4*
- CSC 2232 - Database Development II *Credits: 4*
- CSC 2252 - Programming Mobile Devices I *Credits: 3*
- CSC 2253 - Programming Mobile Devices II *Credits: 3*
- CSC 1271 - Web Development and Design I *Credits: 4*
- CSC 2272 - Web Development and Design II *Credits: 4*
- CSC 2276 - XML for the Worldwide Web *Credits: 4*
- Directed Electives (Any CSC or CST or MATH 2000-level or higher) *Credits: 6-8*

Total Credits: 63-66

Computer Science: Relational Database Development Certificate (CSRD-CC)

This certificate program is designed for students who are preparing to enter the job market and want to earn a certificate on their way to earning an associate or bachelor's degree. It also benefits students who already have college degrees and are seeking retraining in the technology. The program provides an understanding of client/server environment, relational database design and development, and Database Administration.

Learning Outcomes:

Upon successful completion of this certificate, the student will:

- Understand the art of data modeling, database design, and database implementation.
- Identify the components of a database.
- Utilize the normalization process and implement designs.
- Understand the role of the data and database administrators.
- Use Structured Query Language using elements of a popular and widely used relational database package like MS SQL.
- Identify and use appropriate programming constructs to fulfill application logic needs
- Manipulate database tables using SQL programming
- Build error trapping facilities within SQL programs
- Create SQL program units including: procedures, functions, triggers
- Use supplied packages in SQL program units
- Load data into tables from external files using the SQL utilities
- Identify uses of dynamic SQL and object technology
- Establish an in-depth understanding of Database Administration using the DBMS Interfaces.
- Apply the Relational Database Model to understand the Logical and Physical aspects of the DBMS architecture.
- Understand the functions of the Oracle Database Server and Oracle Database Client.
- Create, maintain and manipulate an Oracle Database.
- Understand and apply the Data Dictionary.
- Understand and apply database statistics in relation to performance and integrity of the database.
- Create and understand the application of user roles, privileges, and the security of the database.
- Discuss and understand the concepts of Backup and Recovery Procedures.

Required Courses

- CSC 1231 - Database Development I *Credits: 4*
- CSC 2232 - Database Development II *Credits: 4*
- CSC 2233 - Database Development III *Credits: 4*

Total Credits: 12

Computer Science: Smartphone Application Development (CSAD-CC)

This certificate prepares students to enter the fastest growing segment of the information technology application development marketplace. It includes basic programming skills, object-oriented programming techniques, an overview of current mobile platforms and device-specific advanced topics. Students completing the program will be able to create simple applications on a variety of devices and specialized programs on the device of their choice. Platforms currently offered include Apple iPhone and Google Android OS.

Learning Outcomes:

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

Required Courses

- CSC 1201 - Introduction to Programming *Credits: 4*
- CSC 2213 - Object Oriented Programming *Credits: 4*
- CSC 2252 - Programming Mobile Devices I *Credits: 3*
- CSC 2253 - Programming Mobile Devices II *Credits: 3*

Total Credits: 14

Computer Science: Software Development (CSSD-AS)

The curriculum includes a foundation of core courses in database development and programming languages, and permits students to select major electives that are best suited to their career goals and interests. This flexibility will enable the College better to prepare students for employment in a fast-moving field.

The Associate of Science in Software Development provides a solid general education as well as a thorough coverage of the topics and skills supporting the dynamic information technology field. Programmatic goals relate to the mission in the following manner:

- provide students with skills needed to gain entry level or higher employment;
- provide students with appropriate educational experiences that give them the written, verbal, and interpersonal skills necessary to function as a team member in the IT environment as well as transfer to higher level institutions;
- provide students with course work and experience that improves on existing skills or develops new ones; and
- work in partnership with business and industry in responding to the employment and training needs in the field of information technology.

The program serves both traditional first-time students as well as professionals currently working in the field. The curriculum is flexible enough to meet the needs of students who wish to transfer to a baccalaureate institution and students preparing for immediate entry into the workplace.

Learning Outcomes:

- Upon successful completion of this degree graduates will be able to:
- Demonstrate an understanding of connections between various platforms and programming languages;
- Work with and study the underlying technologies that support the internet;
- Demonstrate the ability to use an IDE (integrated development environment);
- Demonstrate the use of OOP (object-oriented programming) techniques in program design and development;
- Demonstrate writing, compiling and executing code in Object Oriented programming languages;
- Test programs and troubleshoot simple problems;
- Understand relational database design methodology and be able to use database software to build, modify, and query relational databases; and
- Produce logical software solutions to problems.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1600 or higher *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40-45 credits)

- CSC 2276 - XML for the Worldwide Web *Credits: 4*
- CSC 2232 - Database Development II *Credits: 4*
- CSC 1201 - Introduction to Programming *Credits: 4*
- CSC 1231 - Database Development I *Credits: 4*
- Technical Directed Electives - Any CSC, CST courses, or MATH 2000-level or higher *Credits: 9-12*
- Unrestricted Electives - Any course 1000 or higher *Credits: 9*

2-Semester Programming Sequence (6-8 credits)

Choose one programming sequence

- CSC 2213 - Object Oriented Programming *Credits: 4*
- **AND** CSC 2216 - Data Structures and Algorithms *Credits: 4*

- **OR**
- CSC 2252 - Programming Mobile Devices I *Credits: 3*
- **AND** CSC 2253 - Programming Mobile Devices II *Credits: 3*

- **OR**
- CSC 2272 - Web Development and Design II *Credits: 4*
- **AND** CSC 1271 - Web Development and Design I *Credits: 4*

Total Credits: 61-68

Computer Science: Software Engineering, AAS (CSSE-AAS)

The program emphasizes the complete lifecycle of the software development process. Students learn how to design, develop, test, deploy, and maintain software using rigorous software engineering practices. They are taught how to leverage technology to create flexible and scalable applications and to address the challenges that arise during the development process. Also, the program exposes students to a range of other disciplines, such as the physical sciences, social sciences, and humanities so they gain an understanding of the real world scenarios that make up the software engineering environment.

Learning Outcomes:

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

- Demonstrate an understanding of connections between various platforms and programming languages;
- Work with and study the underlying technologies that support the internet;
- Demonstrate the ability to use an IDE (integrated development environment);
- Demonstrate the use of OOP (object-oriented programming) techniques in program design and development;
- Demonstrate writing, compiling and executing code in Object Oriented programming languages;
- Test programs and troubleshoot simple problems;
- Understand relational database design methodology and be able to use database software to build, modify, and query relational databases; and
- Produce logical software solutions to problems.

General Education Courses (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1210 - General Biology I *Credits: 4*
- HIST 1015 - US History to 1877 *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (37-38 credits)

- CSC 1201 - Introduction to Programming *Credits: 4*
- CSC 2219 - Introduction to Bioinformatics *Credits: 3*
- CSC 2213 - Object Oriented Programming *Credits: 4*
- CSC 1231 - Database Development I *Credits: 4*
- CSC 2218 - Software Engineering Methods *Credits: 4*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*
- CSC 1271 - Web Development and Design I *Credits: 4*
- CSC 2272 - Web Development and Design II *Credits: 4*
- CSC 2276 - XML for the Worldwide Web *Credits: 4*
- Directed Elective (Any CSC or CST or MATH 2000-level or higher) *Credits: 3-4*

Total Credits: 60-62

Computer Science: Web Developer Certificate (CSWD-CC)

This certificate provides students with an in-depth study of Web Development. It is designed for students who are preparing to enter the job market as well as college graduates seeking retraining in the emerging technologies of the Internet. Students obtaining this certificate may continue their studies to obtain an A.S. in Software Development or an AAS in Web Development.

Learning Outcomes:

Upon successful completion of all program requirements, graduates will possess the following skills and knowledge:

- Ability to build a commercial or generic web site from the design phase through implementation;
- Ability to develop web pages using low level code as well as web page development software packages; and
- Ability to support web pages with server-side java programming and other dynamic products.

Required Courses

- CSC 1271 - Web Development and Design I *Credits: 4*
- CSC 2272 - Web Development and Design II *Credits: 4*
- CSC 2213 - Object Oriented Programming *Credits: 4*
- CSC 2275 - Web Development With PHP *Credits: 4*

Total Credits: 16

Computer Science: Web Development, AAS (CSWD-AAS)

This program prepares students for technical positions within the Computer Science field. It provides students with the skills needed to be successful in the field of Web Development. The program teaches students fundamental concepts as well as fosters preparation for tomorrow's web development needs. Course work is focused on programming in heterogeneous platform environments through multiple programming languages, essential design skills and tools, and development of both written and verbal communication skills needed in all areas of the business community.

Learning Outcomes:

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

- Create web sites and programs that function in heterogeneous environments;
- Use an integrated development environment (IDE) to create web sites and other programs;
- Use OOP (object-oriented programming) techniques to design and develop software;
- Create effective User Interfaces and User Experiences;
- Write and execute code in Object Oriented programming languages;
- Test web pages and web sites and troubleshoot any problems;
- Design and implement relational database entities;
- Use database software to build, modify, and query relational databases;
- Produce websites using modern techniques.

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1600 or Higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- ART 1210 - Two-Dimensional Design *Credits: 3*
- GRA 1501 - Graphic Design I *Credits: 3*
- GRA 2301 - Digital Imaging II *Credits: 3*
- CSC 1201 - Introduction to Programming *Credits: 4*
- CSC 1231 - Database Development I *Credits: 4*
- CSC 1271 - Web Development and Design I *Credits: 4*
- CSC 2213 - Object Oriented Programming *Credits: 4*
- CSC 2252 - Programming Mobile Devices I *Credits: 3*
- CSC 2272 - Web Development and Design II *Credits: 4*
- CSC 2275 - Web Development With PHP *Credits: 4*
- CSC 2253 - Programming Mobile Devices II *Credits: 3*

Total Credits: 60-62

Computer Servicing Certificate (CSVC-CC)

The Computer Servicing Certificate Program is designed for students seeking entry-level technical skills for the information technology (IT) industry. The Program consists of four 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 steppingstone to more advanced studies in the Computer Engineering Technology program at the Gateway Campus.

Learning 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

Required Courses

- CENT 1016 - Computer Applications for Technology *Credits: 3*
- CENT 1026 - Computer Servicing *Credits: 4*
- CENT 2010 - Computer Systems Software *Credits: 4*
- CST 1121 - Networking I *Credits: 3*
- Technical Elective - (*Consult Technical Advisor*) *Credits: 4*

Total Credits: 18

Construction Management Certificate (CNMG-CC)

This certificate will prepare students for immediate employment in entry level jobs in the construction industry. Graduates of the program will acquire basic knowledge and skills in administrative procedures, resource management and construction processes for building systems and heavy/highway systems. Further, graduates will have the ability to utilize construction documents for quantity take-offs, participate in construction job-site office meetings and provide related documentation and correspondence. All credits in this certificate are directly transferable into the Construction Management A.S. degree program at Capital.

Learning Outcomes:

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

- Interpret and effectively utilize construction and construction-related documents including reference materials, contracts, and specifications.
- Prepare quantity take-offs using manual mathematical models/techniques and takeoff software.
- Estimate construction costs for bidding and assess the appropriateness of various construction methods, materials and equipment in specific situations.
- Identify construction equipment and tools and their use in Building Systems and Heavy/Highway Systems.

Additional Information:

- No to low cost for students. No textbooks for CM courses- utilize construction industry specific project Drawings and Specifications
- Students earn "ProCore Certificates", Industry Certifications achievable within the Construction Management Program, *embedded within the software at no cost for the credential.*
- Prepares student for the Construction Management in Training, (CMiT) Level 1 Nationally recognized Certification Exam with the Construction Management Association of America (CMAA)
- ALL classes transfer into the AS - Construction Management Program at Capital
- ALL classes transfer into the BS - Construction Management Program at CCSU
- WIOA eligible
- This Certificate will fulfill the Apprenticeship Educational requirements for two CT-Department of Labor Apprenticeship Programs as follows (I-i-T) Inspector-in-Training and (CM-i-T) Construction Manager-in-Training (to be finalized by June 2022)

Required Courses

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- CMGT 1110 - Construction Graphics/Quantity Take-Off *Credits: 3*
- CMGT 1120 - Construction Project Administration *Credits: 3*
- CMGT 1150 - Construction Building Systems *Credits: 3*
- CMGT 1160 - Heavy/Highway Systems *Credits: 3*
- CMGT 2150 - Construction Building Estimating *Credits: 3*
- CMGT 2160 - Heavy/Highway Estimating *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- MATH 1010 or higher *Credits: 3-4*

Total Credits: 30

Construction Management, AS (CNMG-AS)

Graduates of the program will acquire basic knowledge and skills in sustainable construction, administrative procedures, resource management and construction processes for building. Further, graduates will have the ability to utilize construction documents for quantity take-offs, to participate in construction job-site office meetings and to provide related documentation and correspondence. A graduate will have technical and analysis skills from hands-on consideration of complex projects that will position them for success in many areas within the construction industry. This certificate will prepare students for immediate employment in entry level jobs in the industry. This degree will also prepare students for transfer to baccalaureate degree programs in the field.

Learning Outcomes:

In addition to acquiring the general education competencies, upon completion of the program, the graduate will be able to:

- Interpret and effectively utilize construction and construction-related documents including reference materials, contracts, and specifications.
- Prepare quantity take-offs using manual mathematical models/techniques and takeoff software.
- Estimate construction costs for bidding and assess the appropriateness of various construction methods, materials, and equipment in specific situations.
- Identify construction equipment and tools and their use in Building Systems and Heavy/Highway Systems.
- Display the knowledge and skills required in the planning and management of a construction project including use of project software.
- Identify and resolve problems related to aspects of construction management.
- Identify Safety and Health Hazards and develop construction Safety Plans.
- Create a Construction Management Proposal and identify the roles and responsibilities of the Project Team Stakeholders.

Students earn "ProCore Certificates", Industry Certifications achievable within the Construction Management Program, *embedded within the software at no cost for the credential*. All courses transfer into the B.S. - Construction Management Program at CCSU

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 or higher *Credits: 3-4*
- COMM 1501 - Visual Communication *Credits: 3*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** PHYS 1201 - General Physics I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*
- CMGT 1110 - Construction Graphics/Quantity Take-Off *Credits: 3*
- CMGT 1120 - Construction Project Administration *Credits: 3*
- CMGT 2285 - Construction Project Management *Credits: 3*
- CMGT 1150 - Construction Building Systems *Credits: 3*
- CMGT 1160 - Heavy/Highway Systems *Credits: 3*

- CMGT 2150 - Construction Building Estimating *Credits: 3*
- CMGT 2160 - Heavy/Highway Estimating *Credits: 3*
- CMGT 2275 - Construction Planning *Credits: 3*
- CMGT 2500 - Construction Business Principles *Credits: 3*
- CMGT 2230 - Construction Safety *Credits: 3*
- ECON 1002 - Principles of Microeconomics *Credits: 3*

Total Credits: 61-62

Construction Technology Career Program, AS (CTEC-AS)

This program is locally specialized as it provides technical knowledge for individuals interested in active participation in building our communities. Graduates are prepared for careers in the construction industry as construction managers, project superintendents, and building officials.

Learning Outcomes:

- Identify commonly used building materials.
- Develop basic business and accounting skills.
- Understand the different methods of construction, structural and mechanical systems, and surveying equipment.
- Understand and analyze construction contract documents and calculate construction estimates.
- Read and interpret blueprints.
- Develop technical communication skills for effective collaboration and cooperation with other students, instructors, clients, and other stakeholders.

The Construction Technology degree program will be lecture and studio based. The program will also provide hands-on building opportunities. For example, how to build formwork, tie rebars for footing, and calculating the number of cubic yards of concrete required. Furthermore, the class will teach about construction methods while maintaining building code requirements. Other opportunities will include creating sustainable building forms using advanced framing methods and using superior wall construction as the method to eliminate construction waste.

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- PHYS 1201 - General Physics I *Credits: 4*
- ARCH 1002 - Architecture of the World *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Requirements (39 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ARCH 1008 - Construction Materials & Methods *Credits: 3*
- ARCH 1129 - Fundamentals of Construction Management *Credits: 3*
- ARCH 2010 - Site Design *Credits: 3*
- ARCH 2015 - Construction Documents *Credits: 3*
- ARCH 2029 - Structures *Credits: 3*
- ARCH 2229 - Construction Estimating *Credits: 3*
- BUSN 1100 - Introduction to Business *Credits: 3*
- BUSN 1150 - Business Software Applications *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CAD 1140 - Architectural CAD *Credits: 3*
- Elective - Choose any General Education Elective (3 credits)
- Elective - Choose a Construction course or Internship (3 credits)

Total Credits: 61

Cyber and Homeland Security Certificate (CYHM-CC)

The Cyber and Homeland Security certificate will introduce students to the field of cybersecurity, homeland security and computer crime deterrence. Courses are designed to offer exposure to computing and criminal justice allowing students to begin exploring positions in industry or advancement of career. This certificate will also provide a foundation for continuation in two-year associate degree in Cyber and Homeland Security Certificate or Computer Information Systems.

Learning Outcomes:

- Explain the landscape, key terms, challenges, and concepts related to the many layers of Homeland and cybersecurity.
- Explain fundamental architectures of networks and demonstrate an understanding of network security.
- Demonstrate an understanding of the legal and ethical issues and concepts associated with cybersecurity responsibilities.
- Apply counter measures that would secure network systems against threats.
- Identify and discuss career opportunities and the necessary skills that will increase the likelihood of success in the field of cyber and homeland security.
- Preparedness to advance one's career, or move on to more advanced study in the same or related fields such as MIS or CIS.

Required Courses

- CIS 1001 - Introduction to Computers *Credits: 3*
- **OR** CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CST 1121 - Networking I *Credits: 3*
- CYS 2111 - Network Security *Credits: 3*
- CJS 2240 - Computer Crimes *Credits: 3*
- **OR** CJS 2350 - Information Warfare and Security *Credits: 3*
- **OR** CJS 2340 - Computer Security and Data Protection *Credits: 3*

Directed Elective - Choose 1 course

- CJS 2240 - Computer Crimes *Credits: 3*
- CJS 2350 - Information Warfare and Security *Credits: 3*
- CJS 2340 - Computer Security and Data Protection *Credits: 3*
- CYS 1101 - Practices in Security Management *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*

Total Credits: 18

Cyber and Homeland Security, AS (CYHM-AS)

The program provides preparation for students to obtain entry-level positions in the field of cybersecurity, homeland security and computer crime deterrence. The program provides essential skills required to gain and to maintain employment at entry level positions as computer crime investigators, computer security specialists, and federal law enforcement officers. This program combines elements of both Computer Information Systems and Criminal Justice course work to offer students an understanding the investigative nature of cybersecurity in the criminal justice realm as well as gaining technical skills in computer science, networking, and programming.

Learning Outcomes:

- Explain the landscape, key terms, challenges, and concepts related to the many layers of cybersecurity.
- Explain fundamental architectures of networks (networks build on each other) and demonstrate an understanding of network security.
- Demonstrate an understanding of the legal and ethical issues and concepts associated with cybersecurity responsibilities.
- Effectively communicate technical information and approaches for incident analysis and response verbally, in writing, and in presentations.
- Determine if and when criminal charges will be initiated for different security breaches. Analyze a range of security breaches and identify if/when criminal charges are appropriate.
- Apply counter measures that would secure network systems against threats.
- Identify and discuss career opportunities and the necessary skills that will increase the likelihood of success in the field of cybersecurity, e.g., technical skills, network certifications, interpersonal communications, critical thinking, and leadership skills.

Students pursuing this degree will take computer-related, as well as criminal justice courses. Topics may include:

- cyber-crime law and investigations
- cybersecurity
- introduction to criminal justice
- threat of terrorism and crime
- computer and network security
- computer science
- networking
- cyber law and ethics
- information systems design
- applied statistics
- additional information technology topics

This degree will begin to prepare students for common certification exams such as:

- CompTIA Security+
- CompTIA Network+
- CompTIA Project+
- CompTIA A+

General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*

- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- CIS 1001 - Introduction to Computers *Credits: 3*
- **OR** CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CST 1121 - Networking I *Credits: 3*
- CYS 2111 - Network Security *Credits: 3*
- CJS 2240 - Computer Crimes *Credits: 3*
- **OR** CJS 2350 - Information Warfare and Security *Credits: 3*
- **OR** CJS 2340 - Computer Security and Data Protection *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*

Designated Electives

Pick 18 credits from list:

- CIS 2144 - Systems Analysis and Design *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2220 - Computer Investigation Techniques *Credits: 3*
- CJS 2240 - Computer Crimes *Credits: 3*
- CJS 2340 - Computer Security and Data Protection *Credits: 3*
- CJS 2350 - Information Warfare and Security *Credits: 3*
- CST 1141 - Linux System Administration *Credits: 4*
- CST 2122 - Networking II *Credits: 3*
- CST 2123 - Networking III *Credits: 3*
- CST 2161 - Virtualization & Cloud Computing *Credits: 3*
- CYS 1101 - Practices in Security Management *Credits: 3*
- CYS 2131 - Computer Forensics & Network Intrusions *Credits: 3*
- CYS 2151 - Ethical Hacking & Pen Testing I *Credits: 3*
- CYS 2152 - Ethical Hacking & Pen Testing II *Credits: 3*
- CST 2124 - Voice over IP Networking *Credits: 3*
- Elective CPL - Computer Programming Language Course *Credits: 3-4*
- CIS 1211 - Database Design I *Credits: 3*
- **OR** CSC 2235 - Introduction to Database Design *Credits: 3*

Total Credits: 60-63

Cybersecurity Certificate (CYSC-CC-ESN)

The Cybersecurity Certificate is designed to take a student with little or no information technology experience and prepare them for entry-level work in Cybersecurity. Curriculum in this program is based on topic areas, learning objectives, and goals for educating the workforce prescribed by the cybersecurity community, including the National Institute for Standards and Technology (NIST) and the National Initiative for Cybersecurity Education (NICE).

Learning Outcomes:

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

- Design, build and test a Python program.
- Identify the security controls required by organization to protect the Confidentiality, Integrity, and Availability (CIA) of data and systems.
- Evaluate computer forensic methods.
- Implement major network authentication schemes.
- Use hacking software tools to identify known vulnerabilities associated with a computer system, and computer network.
- Install network security appliances and software such as firewall and network intrusion systems.

This certificate will begin to prepare students for common security certification exams such as:

- CompTIA Network+
- CompTIA Linux+
- CompTIA Security+
- Computer Hacking Forensic Investigator (CHFI)
- Penetration Testing and Ethical Hacking (CEH)
- ISC2's Systems Security Certified Practitioner (SSCP)

Required Courses

- CSC 1203 - Python Fundamentals *Credits: 3*
- CST 1121 - Networking I *Credits: 3*
- CST 2122 - Networking II *Credits: 3*
- CST 1141 - Linux System Administration *Credits: 4*
- CYS 2111 - Network Security *Credits: 3*
- CYS 2131 - Computer Forensics & Network Intrusions *Credits: 3*
- CYS 2151 - Ethical Hacking & Pen Testing I *Credits: 3*

Total Credits: 22

Cybersecurity: Computer Science, AS (CYCM-AS)

The Cybersecurity Associate Degree is designed to take a student with little or no information technology experience and prepare them for entry-level work in Cybersecurity. Curriculum in this program is based on topic areas, learning objectives, and goals for educating the workforce prescribed by the cybersecurity community, including the National Institute for Standards and Technology (NIST) and the National Initiative for Cybersecurity Education (NICE).

Students can choose between a focus in Computer Science or Cybersecurity: Networking, AS (CYNT-AS)

This degree is designed for immediate workforce placement. Students may also choose to transfer to a bachelor's degree program at a four-year university.

Learning Outcomes:

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

- Design, build and test a Python program.
- Design and build local area networks (LAN).
- Identify the security controls required by the organization to protect the Confidentiality, Integrity, and Availability (CIA) of data and systems.
- Evaluate computer crimes and forensic methods.
- Implement major network authentication schemes.
- Use hacking software tools to identify known vulnerabilities associated with a computer system, and computer network.
- Develop risk mitigation strategies, security policies, and procedures.
- Install network security appliances and software such as firewall and network intrusion systems.

This degree will begin to prepare students for common security certification exams such as:

- CompTIA Linux+
- CompTIA Security+
- Computer Hacking Forensic Investigator (CHFI)
- Penetration Testing and Ethical Hacking (CEH)
- ISC2's Systems Security Certified Practitioner (SSCP)

Cybersecurity General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher (MATH 1200 recommended) *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Recommended: PHYS 1100 Introductory Physics
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Cybersecurity Program Core (28 credits)

- CSC 1203 - Python Fundamentals *Credits: 3*
- CST 1121 - Networking I *Credits: 3*
- CST 2122 - Networking II *Credits: 3*

- CST 1141 - Linux System Administration *Credits: 4*
- CST 2161 - Virtualization & Cloud Computing *Credits: 3*
- CYS 2111 - Network Security *Credits: 3*
- CYS 2121 - Information Assurance & Risk Management *Credits: 3*
- CYS 2131 - Computer Forensics & Network Intrusions *Credits: 3*
- CYS 2151 - Ethical Hacking & Pen Testing I *Credits: 3*

Specialization Courses (12-13 credits)

- CSC 1211 - Java I *Credits: 3*
- CSC 2212 - Java II *Credits: 3*
- CSC 2217 - Digital Design *Credits: 4*
- Elective - Any EGR, CSC, or CST course *Credits: 3-4*

Total Credits: 61-64

Cybersecurity: Networking, AS (CYNT-AS)

The Cybersecurity Associate Degree is designed to take a student with little or no information technology experience and prepare them for entry-level work in Cybersecurity. Curriculum in this program is based on topic areas, learning objectives, and goals for educating the workforce prescribed by the cybersecurity community, including the National Institute for Standards and Technology (NIST) and the National Initiative for Cybersecurity Education (NICE).

Students will choose between 2 options:

- Cybersecurity: Computer Science, AS (CYCM-AS)
- Cybersecurity: Networking (CYNT-AS)

This degree is designed for immediate workforce placement. Students may also choose to transfer to a bachelor's degree program at a four-year university.

Learning Outcomes:

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

- Design, build and test a Python program.
- Design and build local area networks (LAN).
- Identify the security controls required by the organization to protect the Confidentiality, Integrity, and Availability (CIA) of data and systems.
- Evaluate computer crimes and forensic methods.
- Implement major network authentication schemes.
- Use hacking software tools to identify known vulnerabilities associated with a computer system, and computer network.
- Develop risk mitigation strategies, security policies, and procedures.
- Install network security appliances and software such as firewall and network intrusion systems.

This degree will begin to prepare students for common security certification exams such as:

- CompTIA Linux+
- CompTIA Security+
- Computer Hacking Forensic Investigator (CHFI)
- Penetration Testing and Ethical Hacking (CEH)
- ISC2's Systems Security Certified Practitioner (SSCP)

Cybersecurity General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher (MATH 1200 recommended) *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Recommended: PHYS 1100 Introductory Physics
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Cybersecurity Program Core (28 credits)

- CSC 1203 - Python Fundamentals *Credits: 3*
- CST 1121 - Networking I *Credits: 3*
- CST 2122 - Networking II *Credits: 3*
- CST 1141 - Linux System Administration *Credits: 4*
- CST 2161 - Virtualization & Cloud Computing *Credits: 3*
- CYS 2111 - Network Security *Credits: 3*
- CYS 2121 - Information Assurance & Risk Management *Credits: 3*
- CYS 2131 - Computer Forensics & Network Intrusions *Credits: 3*
- CYS 2151 - Ethical Hacking & Pen Testing I *Credits: 3*

Specialization Courses (11 credits)

- CST 1111 - Computer Hardware *Credits: 4*
- CST 2123 - Networking III *Credits: 3*
- CST 2142 - Windows Server Administration *Credits: 4*

Total Credits: 60-62

Electronic Engineering Technology, AS (ELET-AS)

CT State Community College's Electronic Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>. ABET accreditation provides assurance that the curriculum meets the quality standards that the industry employers of our graduates require and that the academic rigor allows for transferability to four-year electronic technology and electrical engineering programs.

Students will gain the credentials and skills required to enter the workforce in one of the many diverse industrial sectors seeking qualified electronic technicians. Our graduates gain careers in fields such as the electric power utilities, aviation, manufacturing, controls and automation. Typical job titles are electronic technician, junior designer, field service technician, repair technician, test technician, airway transportation system specialist, scada technician, substation designer, and junior controls/automation engineer. The Electronic Engineering Technology graduate is an important and much sought after contributor to the engineering team in Connecticut's ever-changing high technology industries.

The program emphasizes the fundamentals of DC and AC circuit theory, solid-state electronics and digital electronics, but also stresses the role of computers, computer software, CAD systems, programming, microcontrollers, programmable logic controllers (PLC's), data acquisition, instrumentation, robotics, and control systems. The classroom taught theory is fundamental to the learning process and practical "hands-on" experience is an extensive and integral component of the curriculum. The Electronic Engineering Technology graduate will be adept at building, testing, and troubleshooting many types of electrical circuits and systems using state-of-the-art electronic instrumentation and software. A required senior capstone project course will allow the student to demonstrate mastery of the concepts and tools learned as they use electronic CAD software to design a printed circuit board (PCB), use proper fabrication techniques to assemble the PCB, test, and troubleshoot until a functioning project is realized.

The broad based curriculum provides a solid foundation for graduates to confidently enter the work force or transfer to a four-year university.

Program Educational Objectives

The electronic engineering technology graduate will be prepared to make achievements in the following areas within a few years after graduation:

1. Obtain employment in an electronic engineering technology related position.
2. Undertake baccalaureate studies in electronic engineering technology or any related engineering program.
3. Uphold professional expectations by conducting work in a safe and ethical manner.
4. Function effectively individually and serve as a team leader on collaborative projects.
5. Continually improve skills by undertaking professional development opportunities.

Student Outcomes

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

1. apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the electronic engineering technology discipline;
2. design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline;
3. apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
4. conduct standard tests, measurements, and experiments and to analyze and interpret the results using appropriate electronic instrumentation and computer software for both analog and digital circuits;
5. function effectively as a member of a technical team; and
6. work in a safe and ethical manner and demonstrate the ability recognize ethical issues and utilize the IEEE code of ethics as a guide to determine appropriate course of action in response to these issues.

The Electronic Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, www.ABET.org. The program courses are available at the Naugatuck Valley campus. Graduates of the program transfer to Central Connecticut State University's B.S. Electronics Technology program, University of New Haven's B.S. Electrical & Computer Engineering program, and Fairfield University's Electrical Engineering program. Graduates have the credentials to

start careers in the in-demand electronic engineering technology profession at job classification levels that only the A.S. degree allows.

General Education Courses (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- PHYS 1100 - Introductory Physics *Credits: 4*
- **OR** PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (44 credits)

- EETA 1004 - Electronics Assembly and CAD *Credits: 1*
- EETA 1010 - DC Circuit Analysis *Credits: 4*
- EETA 1026 - Programming Using LabVIEW *Credits: 2*
- EETA 1014 - AC Circuit Analysis *Credits: 4*
- EETA 1036 - Electronic Devices *Credits: 4*
- EETA 2032 - Advanced Electronic Devices *Credits: 4*
- EETA 2052 - Digital Electronics *Credits: 4*
- EETA 2051 - Electronic Instrumentation *Credits: 3*
- EETA 2008 - Applied Calculus for Circuits *Credits: 4*
- **OR** MATH 2600 - Calculus I *Credits: 4*
- EETA 2056 - Microcontrollers *Credits: 4*
- EETA 2053 - Advanced Digital Electronics *Credits: 4*
- EETA 2090 - Capstone Project *Credits: 2*
- EETA 2068 - Control Systems *Credits: 4*
- **OR** EETA 2072 - Electronic Communications *Credits: 4*
- **OR** EETA 2062 - Electrical Machinery & Controls *Credits: 4*

Total Credits: 67

Electronics Technician Certificate (ELTC-CC)

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.

Learning Outcomes:

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

- Evaluate and operate 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 required 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

All courses in this certificate can be applied to the Associate of Science in Computer Engineering Technology.

Required Courses

- CAD 1026 - Electronics Graphics CAD *Credits: 3*
- CENT 1016 - Computer Applications for Technology *Credits: 3*
- CENT 1026 - Computer Servicing *Credits: 4*
- CENT 1010 - Electric Circuits for Technology *Credits: 4*
- CENT 2052 - Digital Electronics for Technology *Credits: 4*
- Technical Elective *Credits: 4**
**Choose any 4+ credit course with an EETA or CENT prefix or any course approved by the Program Coordinator (PC).*

Total Credits: 22

Engineering Science, AS (ENSC-AS-COT)

As part of the Connecticut College of Technology (COT), the Engineering Science A.S. degree program prepares students primarily for transfer to complete a B.S. degree in chemical, civil, computer science, electrical, mechanical, industrial or materials engineering. Graduates will receive a background in engineering, mathematics, science, and general education courses for seamless transfer with junior status in a B.S. degree at COT partner universities.

Program Learning 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.

Program Descriptors:

Through COT's articulation agreement with partner universities, students who get an Associate degree in Engineering Science (with certain GPA's) can transfer seamlessly at junior level to the following institutions: University of Connecticut, Central Connecticut State University, Southern Connecticut State University, Eastern Connecticut State University, Fairfield University, University of Hartford, University of New Haven, University of Bridgeport, Sacred Heart University, and Charter Oak State College.

General Education Core Courses (23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- PHIL 1101 - Ethics *Credits: 3*
- CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- **OR** ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (45-47 credits)

- Elective BHEL - Behavioral Science Elective *Credits: 3* ANTH, PSY, SOC - ANTH recommended for transfer
- Elective SSCI - Social Science Elective *Credits: 3* (Economics Recommended)
- PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- PHYS 2202 - Calculus-Based Physics II *Credits: 4*
- MATH 2610 - Calculus II *Credits: 4*
- MATH 2620 - Calculus III: Multivariable *Credits: 4*
- MATH 2622 - Differential Equations *Credits: 4*
- EGR 1110 - Introduction to Engineering *Credits: 3*
- EGR 2215 - Thermodynamics I *Credits: 4*
- EGR 2211 - Engineering Statics *Credits: 3*
- **Choose an introductory programming course** *Credits: 3*
- CSC 1201, CSC 1203, CSC 1211, CSC 2212, CSC 2214, EGR 1115, EGR 2230, EGR 2201, or EGR 2250
- **Specialization Electives (6-8 credits)**
- Students may take any EGR course, any CAD course, BIO 1210, BIO 1220, CHEM 1220, CHEM 1210, EETA 2052, MATH 2621 or MFG 1010 to fulfill this requirement.

For transferability in a specialty, the following sequences are recommended:

- **BioMedical / BioMechanics:**
BIO 1210 - General Biology I Credits: 4
AND CHEM 1220 - General Chemistry II Credits: 4
- **Mechanical / Robotics/ Aerospace / Manufacturing / AE&M:**
EGR 2212 - Engineering Dynamics Credits: 3
AND EGR 2221 - Introduction to Electrical Circuit Analysis Credits: 4
- **Electrical:**
EGR 2221 - Introduction to Electrical Circuit Analysis Credits: 4
AND EETA 2052 - Digital Electronics Credits: 4
- **Civil:**
CAD 1010 - Introduction to CAD Credits: 3
AND BIO 1220 - General Biology II Credits: 4
- **Chemical:**
CHEM 1220 - General Chemistry II Credits: 4
AND CHEM 2310 - Organic Chemistry I Credits: 4
- **Environmental:**
BIO 1220 - General Biology II Credits: 4
AND CHEM 1220 - General Chemistry II Credits: 4

Total Credits: 68-70

Environmental Engineering Technology, AS (EVET-AS)

The Environmental Engineering Technology program is designed for students interested in becoming environmental technicians or beginning their pathway in environmental engineering. Common duties of environmental technicians include inspecting and maintaining monitoring equipment, controlling and managing hazardous waste, collecting samples (water, air, and/or soil), managing waste operations, assisting with regulatory compliance and other duties as needed. Environmental Engineering Technicians are involved with sustainability projects, research to develop solutions to control climate change which effects ocean acidification, stormwater management, erosion and sedimentation control, and understanding and controlling flooding events, food security and agriculture sustainability, and other important environmental issues.

The degree focuses on practical education with courses covering basic quantitative and conceptual skills required of environmental engineering technicians, including the comprehensive and technical aspects of environmental issues and common environmental methods. Environmental Engineering Technicians work with Environmental Engineers and Scientists to identify, evaluate, prevent and control contamination of the environment associated with air, water, and land. Environmental technicians often work both in lab environments and in the field. The broad-based curriculum meets the demands of a range of environmental positions. Graduates work for manufacturing firms, regulatory agencies, and as consultants. Many have continued their education at baccalaureate institutions. Targeted populations for this program include recent high school graduates to returning students to post-associate degree students looking for career change.

Learning Outcomes:

- Demonstrate the ability to use appropriate mathematical, computational and graphic-thinking skills needed for environmental engineering technology applications.
- Combine oral, graphical and written communication skills to present and exchange information effectively and communicate design solutions.
- Know of a professional code of ethics describe concepts relating to environmental monitoring, policy, processes and continuous improvement.
- Describe how the concepts of environmental measurements and the design, management and operation of environmental facilities affect evaluation of analysis, policies and decision making.
- Illustrate an ability to think critically and identify, evaluate and solve complex environmental problems; demonstrate technical and provide practical applications in environmental control problem and solutions; and communicate solutions technically and effectively.
- Practice the skills needed to work effectively in teams and as an individual.
- Recognize actions and acts of professionalism that allow them to become informed and participating citizens cognizant of ethics, civic duty and social responsibility.
- Demonstrate lifelong learning and continuous improvement of professional, ethical, and social responsibility.

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4 or higher**
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ENVE 1010 - Introduction to Environmental Science *Credits: 3*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

**this requirement was corrected on 10/25/2024*

Program Courses (43-46 credits)

- ENVE 1100 - Environmental Regulations *Credits: 3*
- CHEM 1210 - General Chemistry I *Credits: 4*

- ENVE 1500 - Geomatics Spatial Analysis *Credits: 3*
- BIO 1210 - General Biology I *Credits: 4*
- **OR** EARTH 1030 - Earth Sciences with Lab *Credits: 4*
- BIO 1220 - General Biology II *Credits: 4*
- ENVE 2400 - Hydrology *Credits: 3*
- ENVE 2500 - Geomatics *Credits: 4*
- ENVE 2600 - Fundamental Measurements and Applications *Credits: 3*
- ENVE 2410 - Water Resources Engineering with Lab *Credits: 4*
- ENVE 2300 - Long Island Sound Conservation *Credits: 3*
- ENVE 2210 - HAZWOPER (Hazardous Waste Operations Emergency Response) *Credits: 3*
- ENVE 1700 - Environmental Research Project I *Credits: 1*
- ENVE 2700 - Environmental Research Project II *Credits: 1*
- ENVE 2701 - Environmental Research Project III *Credits: 1*
- ENVE 2702 - Environmental Research Project IV *Credits: 1*
- ENVE 2694 - Environmental Engineering Technology Co-op *Credits: 1*

Total Credits: 65-68

Environmental Engineering Technology: Environmental Health & Safety Management Certificate (EHSF-CC)

This certificate enables students to apply their Environmental Health and Safety (EH&S) Management skills in any workplace setting. Environmental occupational health and safety, an important factor in all workplaces and schools, is a set of laws requiring various environmental management and occupational, health, and safety standards to be met. Having an EH&S management certificate affords students the opportunity to obtain work, gain promotions, or continue their education. Many credits in this certificate can be applied towards an Associate of Science degree in Environmental Engineering Technology.

Learning Outcomes:

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

- Apply environmental, safety and health management skills in workplace settings.
- Implement written workplace procedures in the environmental, health and safety fields.
- Describe concepts of workplace safety and environmental management and be able to understand the roles and responsibilities of the EHS professionals and the decision-making process involved in everyday situations.
- Provide guidance in planning and implementing practices that promote safety and prevent workplace accidents.
- Utilize communication and interpersonal skills to establish the respect and authority an EHS professional needs to surmount institutional barriers for employee well-being and environmental protection.
- Recognize the limitations of human capabilities in the workplace.
- Identify workplace hazards, find the means to reform unsafe procedures and behaviors, and establish engineering and management controls to reduce hazards.
- Explain product safety requirements of the marketplace and describe engineering and management techniques to meet them.

Program Requirements

Required Courses

- ENV 1010 - Introduction to Environmental Science *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- ENG 1010 - Composition *Credits: 3* 3 English Composition
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- ENV 1100 - Environmental Regulations *Credits: 3*
- ENVE 1200 - Occupational Safety & Health *Credits: 3*
- ENVE 2210 - HAZWOPER (Hazardous Waste Operations Emergency Response) *Credits: 3*
- ENVE 2990 - Environmental Issues Seminar *Credits: 3*

Total Credits: 24

Environmental Engineering Technology: Land Surveying & Geographical Information Systems (GIS) Technician Certificate (LSGS-CC)

The Land Surveying & Geographic Information Systems (GIS) Technician Certificate is designed to meet the educational requirements of a prospective Land Surveying and GIS technician. Technicians in this field generate, analyze, interpret, and communicate data derived by using Land Surveying and GIS/GPS equipment, hardware, and software applications as well as the use of drones for mapping. They may also set up and maintain GIS databases or websites, create maps and models for application of data, and provide technical support to users or clients. Surveying and GIS is applicable to many industries and occupations, including, but not limited to, engineering firms, agriculture, public safety (fire, rescue, and police), public health, transportation, facilities, land and utilities planning, and management. Land Surveying and GIS technicians possess outstanding decision-making skills, listening skills, and problem-solving skills.

Learning Outcomes

Students will:

- apply their knowledge within environmental settings to solve specific engineering, ecological, and social problems.
- demonstrate skills using land surveying equipment and be familiar with the concept of the use of drones for GIS mapping.
- demonstrate familiarity with key terms, concepts, principles, methods, and techniques of geographical and geospatial information and data analysis.
- demonstrate excellent written and oral communication skills.

Required Courses

- ENVE 1100 - Environmental Regulations *Credits: 3 **
- **OR** ENV 1100 - Environmental Regulations *Credits: 3 **
- ENVE 1500 - Geomatics Spatial Analysis *Credits: 3*
- ENVE 2500 - Geomatics *Credits: 4*
- ENVE 2990 - Environmental Issues Seminar *Credits: 3 ***
- ARCH 1012 - Introduction to Geographic Information Systems *Credits: 3*
- EARTH 1030 - Earth Sciences with Lab *Credits: 4*
- *this course has a pre-requisite of ENV 1010
- **this course has a pre-requisite of ENG 1010

Total Credits: 20

Fire Technology and Administration, AS (FTAD-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.

Learning Outcomes:

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

- Understand fire protection and emergency services; and career opportunities in fire protection and related fields.
- Explain theories and fundamentals of how and why fires start, spread, and are controlled including how building construction and pre-planning relates to firefighter and life safety..
- Describe the basic principles and history related to the national firefighter life safety initiatives.
- Describe inspection practices and procedures and identify and describe the professional qualifications for fire marshal, plan examiner, fire inspector, fire and life safety educator, and fire investigator
- Discuss the basic concepts of occupational health and safety as it relates to emergency service organizations.
- Explain the benefits of fire protection systems in various types of structures

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1002 or MATH 1010 or higher *Credits: 3-4*
- PHIL 1101 - Ethics *Credits: 3*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- FTAD 1012 - Introduction to Fire Technology *Credits: 3*
- FTAD 1016 - Building Construction *Credits: 3*
- FTAD 1018 - Fire Prevention & Inspection *Credits: 3*
- FTAD 1022 - Fire Behavior & Combustion *Credits: 3*
- FTAD 1026 - Safety & Survival *Credits: 3*
- FTAD 2010 - Water Supply & Hydraulics *Credits: 3*
- FTAD 2012 - Legal Aspects of Emergency Services *Credits: 3*
- FTAD 2016 - Municipal Fire Administration *Credits: 3*
- FTAD 2017 - Occupational Safety & Health Administration *Credits: 3*
- FTAD 2109 - Fire Investigation I *Credits: 3*
- FTAD 2207 - Fire Protection Systems *Credits: 3*
- FTAD 2209 - Fire Investigation II *Credits: 3*
- FTAD 2300 - Strategy & Tactics *Credits: 3*

Total Credits: 61

Firefighter 1 & 2 Certificate (F12C-CC)

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 an outside of New Haven County. This 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.

CT State CC students are prepared as first responders in a fire, traffic accident or medical emergency. Training includes CPAT (Candidate Physical Ability Test), FFI (Firefighter I), FFII (Firefighter II), and EMT, (Emergency Medical Technician), 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. Many situations that firefighters respond to are medical-rather than fire-emergencies, and the aging population will lead to an increased demand for emergency responders.

Learning Outcomes:

Upon successful completion of all program requirements, graduates will:

- Understand the essentials of firefighting including fire department operations, firefighting equipment and safety, chemistry of fire, techniques of firefighting, and utilization of equipment in fire suppression.
- Understand the Candidate Physical Ability test (CPAT) used in the selection of firefighters in participating fire agencies throughout the State of Connecticut.
- Demonstrate the physical ability to perform job tasks related to firefighting.
- Prepare for the national certifying exam for EMT and the State Practical Examination for EMT
- Explain fire department safety standards and principles of fire science.
- Prepare for civil service exams given to prospective firefighters.
- Understand fire apparatus and pumps, fire streams, fire service pressure calculations, and fixed fire extinguishing systems such as sprinkler and standpipe operations.

There are prerequisites, medical, PPE (Personal Protective Equipment), and physical requirements required for program enrollment, as well as mandatory attendance at an information session. 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.

Required Courses

- EMT 1000 - Emergency Medical Technician *Credits: 6*
- FTAD 1000 - Fitness & Health for Firefighters *Credits: 3*
- FTAD 1001 - Fundamentals of Firefighting I *Credits: 9*
- FTAD 1101 - Fundamentals of Firefighting II *Credits: 3*
- FTAD 1002 - Civil Service Test Preparation *Credits: 1*
- FTAD 1010 - Fire Ground Hydraulics *Credits: 3*

Total Credits: 25

Management Information Systems Certificate (MINF-CC)

The MIS certificate will introduce students to an overview of programming, database and various MIS classes that can be applied to various business environments. Courses are designed to offer students positions in industry, advancement of career and will also provide a solid foundation for continuation of a two-year associate degree in Computer Information Systems Technology.

Certificate Learning Outcomes:

- Acquire a familiarization with terminology and structure of a programming language.
- Demonstrate the ability to use software tools for program development.
- Demonstrate a basic understanding of relational database concepts.
- Preparedness to advance one's career, or move on to more advanced study in MIS, CIS, or related fields.

Required Courses

- CIS 1001 - Introduction to Computers *Credits: 3*
- **OR** CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CSC 1211 - Java I *Credits: 3*
- **OR** CSC 1205 - Visual Basic *Credits: 3*
- **OR** CSC 1203 - Python Fundamentals *Credits: 3*
- CIS 1211 - Database Design I *Credits: 3*
- **OR** CSC 2235 - Introduction to Database Design *Credits: 3*
- **OR** CSA 2112 - Database Applications *Credits: 3*

Directed Electives - Choose 3 courses (9 credits)

- CIS 1103 - Computer Ethics *Credits: 3*
- CIS 1142 - Information Systems in Organizations *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- CIS 2144 - Systems Analysis and Design *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- CST 1111 - Computer Hardware *Credits: 4*
- CST 1121 - Networking I *Credits: 3*
- CYS 2111 - Network Security *Credits: 3*
- ACCT Elective - Any ACCT course *Credits: 3*

Total Credits: 18

Management Information Systems, AS (MINF-AS)

The Management Information Systems program combines Business Management and Information Systems curricula. This merging of business and technical coursework gives students the necessary technical and communications skills as they are applied within the business environment, which offers a stronger background and degree of preparation for the workforce. This curriculum combines general education, business and computer courses that are normally taken as a part of a bachelor's degree program at a four-year school. Courses in this program will transfer to four-year schools in the Management Information Systems and/or computer-related degree programs.

After completing this degree, graduates may then choose to continue their education through a bachelor's degree program in Management Information Systems at Central Connecticut State University or other state universities through articulation agreements.

Learning Outcomes:

Upon successful completion of all Management Information Systems degree program requirements, graduates will

- Demonstrate relevant content knowledge of core business disciplines, accounting, business law, management, and business communications.
- Define information systems and describe their importance to organizations.
- Describe the basic methodologies used to develop and implement information systems.
- Utilize business application software including spreadsheet, database, presentation, and word processing for business decision-making and analysis.
- Recognize the importance of working in teams to achieve common goals and collaborate effectively in group assignments.
- Apply current technology, analyze business problems, and design and develop software.
- Communicate using network technologies, access information via the Internet, and understand information integrity and security issues.
- Gain awareness of legal, regulatory, and ethical issues facing the profession, awareness of information technology and network security, and understanding the methods for creating and managing change in organizations

General Education Courses (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39-40 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- ACCT 1170 - Principles of Managerial Accounting *Credits: 3*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- BMGT 2040 - Managerial Communications *Credits: 3*
- **OR** BUSN 2100 - Business Communications *Credits: 3*
- Programming Elective - Any computer programming course *Credits: 3-4*

- BUSN 2310 - Business Law I *Credits: 3*
- **OR** BUSN 2340 - Legal Environment of Business *Credits: 3*
- Designated Electives - Choose 12 credits
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- CIS 1143 - Project Management *Credits:3*
- BMKT 2010 - Principles of Marketing *Credits: 3*
- BMGT 2100 - Organizational Behavior *Credits: 3*
- BUSN 2195 - Business Co-op Internship *Credits: 3*
- **OR** CIS 2994 - Coop Ed/Work Experience *Credits: 3*
- BFIN 2100 - Principles of Finance *Credits: 3*
- Technical Elective: CSA, CSC,CST, MATH *Credits:3*

Total Credits: 60-63

Mechanical Engineering Technology, AS (MCET-AS)

CT State Community College's Mechanical Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.

Mechanical engineering deals with POWER, and with the machinery used to convert power to useful work. The mechanical engineering technician is a practically-oriented member of the engineering team which applies existing technology to the solution of engineering problems. The mechanical engineering technician designs machines and processes used to generate and apply power to useful purposes. For example, a mechanical engineering technician may assist in the design of a power plant, testing of a space shuttle, manufacturing of a nuclear submarine, or building of an aircraft carrier.

The CT State Community College Mechanical Engineering Technology (MET) program combines theory with laboratory experience. Subjects such as mathematics, physics, engineering mechanics, fluid mechanics, materials of engineering, thermodynamics, and mechanical design are included within the curriculum. After the theory is taught, it is applied to practical situations in the laboratories, which are supervised by professional engineers. Students learn how to set up and conduct an experiment, to extract and analyze engineering data, and to solve problems which require the application of engineering principles.

Learning Outcomes

I. Program Educational Objectives (PEOs)

Graduates will:

1. possess the educational background to do one or both of the following:
 - employment in Mechanical Engineering Technology or another related field.
 - continue studies toward a bachelor's degree in Mechanical Engineering Technology or other related field.
2. perform effectively individually or as a member of a team working on Mechanical Engineering projects in industry or academia.
3. act with the high professional, moral and ethical standards expected of a Mechanical Engineering Technician.

II. Student Outcomes

After successful completion of the program, students will demonstrate:

1. an ability to apply principles of mathematics, science, and technology to solve well-defined engineering problems.
2. an ability to formulate design solutions to well-defined technical problems.
3. an ability to apply written, oral and graphical communication techniques.
4. an ability to conduct experiments, test theories, and analyze and interpret results.
5. An ability to function effectively in teams.

As a result of the training and preparation provided, the Mechanical Engineering Technology student is ready to be employed by industry or to continue their education towards a bachelor's degree upon graduation. Many students do both - they work in industry while they continue their education.

The blend of 'hands-on' experience with theoretical background, the applications to current technology, and the individual initiative that the student develops, make our graduates very marketable in the workforce, and successful in their pursuit of their bachelor's degree. Graduates of the Mechanical Engineering Technology Program are successfully employed in many different industries in such positions as laboratory technicians, field service technicians, design engineering technicians, application engineering technicians, and plant engineering technicians. Our alumni have graduated with a bachelor's degree from Central Connecticut State University, University of New Haven, Fairfield University and other local engineering and engineering technology programs.

General Education Courses (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- PHYS 1201 - General Physics I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- **OR** ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (38-39 credits)

- TECH 1010 - Introduction to Engineering Technology *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- CAD 1330 - 2D CAD (AutoCAD) *Credits: 3*
- CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- EETA 1002 - Electrical Applications *Credits: 3*
- MFG 1004 - Manufacturing Processes *Credits: 4*
- MECH 1014 - Statics *Credits: 3*
- MECH 2071 - Fluid Mechanics *Credits: 4*
- **OR** MECH 2040 - Fundamentals of Heat and Thermodynamics *Credits: 4*
- MECH 2051 - Materials Strength *Credits: 4*
- MECH 2038 - Dynamics *Credits: 4*
- Technology Elective *Credits: 3-4*
Any 2000-Level or higher in MECH, MFG, MATH, CAD, PHYS, EGR, EET or EETA. *Courses already used for program requirements don't count.*

Total Credits: 61-63

Nuclear Engineering Technology, AS (NENT-AS)

This degree program was initially developed in the early 1980's with Millstone Station (then Northeast Utilities, since 2000 Dominion Nuclear Connecticut) in Waterford, CT as a direct result of the Three Mile Island Nuclear Plant accident and the new federal requirement by the Nuclear Regulatory Commission (NRC) for an educational component to compliment training for federal licensure for ALL operational positions in a commercial nuclear power plant. Millstone station continues to offer full scholarships for 16 new full-time freshmen enrolling the Nuclear Engineering Technology (NET) Degree program each academic year. These scholarships also include 12 weeks of summer internship employment at the Millstone Station site between the first and second academic year. Non-scholarship students have similar summer internship opportunities with other business members of the Nuclear Advisory Committee (such as Electric Boat, Mirion Corporation, Westinghouse, etc). The nuclear program is open to all qualified students, with or without scholarship support. Using classroom, laboratory, and simulator instruction, students are educated in the theories underlying the safe operation of nuclear power plan generating stations and the demonstration of this knowledge on a state-of-the-art, one- of-a-kind reactor simulator as the capstone event.

Potential job areas upon graduation include health physics, nuclear chemistry, nuclear plant mechanical and electrical maintenance, reactor operation, reactor systems engineering, instrument & control technician, and event planning. This degree program meets the Code of Federal Regulations (CFR) requirement for federal licensure for reactor operational positions. This career path involves further utility training with mandatory written and simulator NRC testing as the employee moves up the operational job structure. For many students, the NET degree is just an initial step in their academic career as they move to pursue higher academic degrees, typically in the Nuclear Engineering and/or Health Physics disciplines.

As this NET degree program is the only two-year program in the Northeast US, graduates are in high demand for entry level technician positions in the nuclear and health physics fields.

Learning Outcomes:

- Apply an understanding of nuclear systems and operations.
- Apply an understanding or radiological safety and radiation protection procedures.
- Know the applicable rules and regulations and describe the roles of maintenance, control, performance, and the human interface in nuclear operation and quality assurance.
- Understand, demonstrate, and value the safe operation of nuclear systems.
- Conduct, analyze, and interpret laboratory experimental data.
- Interpret laboratory analyses that measure nuclear and radiation processes.
- Demonstrate effective oral and written communication skills.
- Demonstrate the use of library and on-line information sources in problem solving.
- Serve as productive team members.
- Recognize the need to be life-long learners.

Dominion Scholarship Program: Dominion Nuclear Connecticut supports promising candidates for this Nuclear Engineering Technology program through its Dominion Nuclear Connecticut Millstone Power Station Engineering Technology Scholarships.

Up to sixteen two-year scholarships are awarded annually and cover the full cost of the program including tuition and fees, books and a monthly stipend. To be accepted into the Nuclear Engineering Technology degree program, students must meet the specific admission requirements along with other factors. **Learn more and complete the online Technology Energy Scholarship Application here.**

Prerequisites to the Program (11 Credits)

- MATH 1610 - Precalculus *Credits: 4*
- PHYS 1104 - Mechanics *Credits: 4*
- COMM 1301 - Public Speaking *Credits: 3*

General Education Courses (23-24 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- PHYS 1105 - Heat Sound Light *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (47-48 Credits)

- CHEM 1210 - General Chemistry I *Credits: 4*
- Computer Science Elective (CSA 1110 or CSC 1201 recommended) *Credits: 3-4*
- EET 1044 - Fundamentals of Electric Circuits & Machines *Credits: 3*
- EET 1045 - Fundamentals of Electric Circuits & Machines Lab *Credits: 1*
- MATH 2610 - Calculus II *Credits: 4*
- MECH 2072 - Fluid Mechanics & Thermodynamics *Credits: 4*
- MECH 2074 - Heat Transfer *Credits: 2*
- MECH 2075 - Thermal Sciences Lab *Credits: 1*
- NTEC 1000 - Introduction to Nuclear Systems *Credits: 3*
- NTEC 1100 - Radiation Health Safety *Credits: 2*
- NTEC 1110 - Radiation Health Safety Lab *Credits: 1*
- NTEC 1170 - Atomic & Reactor Physics *Credits: 4*
- NTEC 1180 - Nuclear Chemistry *Credits: 1*
- NTEC 2100 - Nuclear Instruments & Controls *Credits: 2*
- NTEC 2110 - Nuclear Instruments & Controls Lab *Credits: 1*
- NTEC 2200 - Nuclear Simulator *Credits: 1*
- NTEC 2210 - Nuclear Simulator Lab *Credits: 1*
- NTEC 2300 - Nuclear Topics *Credits: 2*
- NTEC 2500 - Reactor Theory *Credits: 4*
- NTEC 2600 - Nuclear Material Science *Credits: 2*
- NTEC 2610 - Nuclear Material Science Lab *Credits: 1*

Total Credits: 70-72 (pre-program 11 credits)

Plastic Injection Molding Technology Certificate (PMTCC)

The Plastic Injection Molding Technology certificate introduces various molding techniques and types of mold injection components. Throughout this hands-on program, students become familiar with the injection molding process, covering both the underlying design principles and laboratory applications. This certificate features lectures and assigned reading designed to introduce students to the concepts and specifications of injection molding. Students are exposed to the procedures associated with practical analyses of injection molding. This skill set can be applied to careers in injection molding. Classroom lectures and assigned readings apply knowledge in a laboratory setting. Each lab introduces students to practical setup procedures, start-up, operation, and shutdown of injection molding machinery. The operation of actual machinery and use of practical molding techniques optimize students' experience within this certificate. OSHA 10 Certification and Lean Certification are embedded within this certificate; students obtain certification in those areas.

Required Courses

- MFG 1414 - Quality & Lean Principles *Credits: 3*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1453 - Benchwork *Credits: 2*
- MFG 1467 - Conventional Process Machining Lab *Credits: 4*
- **OR** MFG 1477 - Machine Technology Fundamentals *Credits: 4*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- EGR 1120 - Engineering Drawing Specs *Credits: 3*
- CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- MFG 1501 - Introduction to Injection Molding Technology *Credits: 3*
- MFG 1502 - Injection Molding Design Lab *Credits: 4*
- MFG 1503 - Injection Plastic Materials Lab *Credits: 4*
- MFG 1504 - Injection Molding Machine Setters *Credits: 3*

Total Credits: 35

Plastic Injection Molding Technology, AS (PMTC-AS)

*Disclaimer

The Plastic Injection Molding Technology A.S. degree program introduces various molding techniques and types of mold injection components. Throughout this hands-on program, students become familiar with the injection molding process, covering both the underlying design principles and laboratory applications. The degree program features lectures and assigned reading designed to introduce students to the concepts and specifications of injection molding. Students are exposed to the procedures associated with practical analyses of injection molding. This skill set can be applied to careers in injection molding.

Classroom lectures and assigned readings apply knowledge in a laboratory setting. Each lab introduces students to practical setup procedures, start-up, operation, and shutdown of injection molding machinery. The operation of actual machinery and use of practical molding techniques optimize students' experience within this degree program.

OSHA 10 Certification and Lean Certification are embedded within the program; students obtain certification in those areas.

General Education Courses (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1002 - Math for Science and Technology *Credits: 3 or higher*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- MFG 1479 - Career Awareness for Manufacturing *Credits: 1*
- MFG 1414 - Quality & Lean Principles *Credits: 3*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1453 - Benchwork *Credits: 2*
- MFG 1467 - Conventional Process Machining Lab *Credits: 4*
- **OR** MFG 1477 - Machine Technology Fundamentals *Credits: 4*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- MFG 2444 - CNC I *Credits: 3*
- EGR 1120 - Engineering Drawing Specs *Credits: 3*
- CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- MFG 1501 - Introduction to Injection Molding Technology *Credits: 3*
- MFG 1502 - Injection Molding Design Lab *Credits: 4*
- MFG 1503 - Injection Plastic Materials Lab *Credits: 4*
- MFG 1504 - Injection Molding Machine Setters *Credits: 3*

Total Credits: 60-63

Quality Control Certificate (QUAL-CC)

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.

Learning Outcomes:

- Identify, analyze, and solve technical problems in quality control, statistical processes, data analysis, metrology, and calibration systems
- Configure and apply measurement systems hardware and software
- Implement quality assessments and analyze data from test results

Graduates of this program possess the skills to identify, repair, analyze, modify, and improve basic manufacturing production systems. The experience and training gained in the Quality Control certificate program will also prepare students for implementing manufacturing cost methodologies and quality audit concepts.

This program is currently pending approval for Federal Financial Aid

Required Courses

- EGR 1120 - Engineering Drawing Specs *Credits: 3*
- **OR** MFG 1424 - Blueprint Reading 1 *Credits: 3*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- MFG 1411 - Manufacturing Materials & Processes I *Credits: 3*
- MFG 1413 - Principles of Quality Control *Credits: 3*
- MFG 2216 - Tool Design *Credits: 4*
- MFG 2230 - Statistical Process Control *Credits: 3*

Total Credits: 19

Railroad Engineering Technology, AS (RREN-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.

Learning 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
- 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

Railroad Engineering Practicum Information: Practicum experiences may be assigned during daytime, evening or weekend hours; assignments 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. This program is offered at the Gateway Campus.

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. Those who cannot participate in a practicum at an assigned facility, may not be able to complete the objectives of the course and of the program. Specific situations are reviewed by college personnel.

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1002 - Math for Science and Technology *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- PHYS 1009 or higher *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (43 Credits)

- CENT 1016 - Computer Applications for Technology *Credits: 3*
- CENT 1026 - Computer Servicing *Credits: 4*
- **OR** CENT 2010 - Computer Systems Software *Credits: 4*
- RRET 1003 Fundamentals of Electricity *Credits: 4**
- CENT 1010 - Electric Circuits for Technology *Credits: 4*
- MECH 2034 Electromechanical Controls *Credits: 4**
- RRET 1001 - History of Railroading *Credits: 3*

- (RRET 1010 will be eliminated with pending curriculum changes)
- RRET 1020 - Railroad Rules, Regulations, Standards & Practices *Credits: 3*
- RRET 2020 - Safety in the Railroad Workplace *Credits: 3*
- RRET 2030 - Reading & Interpreting Railroad Diagrams *Credits: 2*
- RRET 2040 - Railroad Pneumatics & Hydraulic Controls *Credits: 4*
- RRET 2042 - Railroad HVAC Systems *Credits: 4*
- RRET 2044 - Railroad Electromechanical Troubleshooting *Credits: 4*
- RRET 2095 - Practicum in Passenger Railroad Technology *Credits: 1*
- **Approval of these legacy courses as permanent CT State courses is in process - MECH 2034 is a pre-requisite to RRET 2040, 2042, and 2044.*

Total Credits: 65-66

Railroad Engineering Technology: Signaling and Communications, AS (RREN-AS-SIG)

The Railroad Engineering Technology 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. This program is offered at the Gateway Campus.

Learning 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
- Demonstrate a basic understanding of the operation of 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

Railroad Engineering Practicum Information: Practicum experiences may be assigned during daytime, evening or weekend hours; assignments 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.

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. Those who cannot participate in a practicum at an assigned facility, may not be able to complete the objectives of the course and of the program. Specific situations are reviewed by college personnel.

General Education Courses (22-23 Credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1002 - Math for Science and Technology *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- PHYS 1009 or higher *Credits: 3-4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (38 credits)

- CENT 1016 - Computer Applications for Technology *Credits: 3*
- CENT 1026 - Computer Servicing *Credits: 4*
- **OR** CENT 2010 - Computer Systems Software *Credits: 4*
- RRET 1003 Fundamentals of Electricity *Credits: 4**

- CENT 1010 - Electric Circuits for Technology *Credits: 4*
- RRET 1001 - History of Railroading *Credits: 3*
- (RRET 1010 will be eliminated with pending curriculum changes)
- RRET 1020 - Railroad Rules, Regulations, Standards & Practices *Credits: 3*
- RRET 2020 - Safety in the Railroad Workplace *Credits: 3*
- RRET 2050 - Railroad Signaling & Switching *Credits: 4*
- RRET 2052 - Railroad Communications *Credits: 4*
- RRET 2054 - Railroad Maintenance, Troubleshooting and Repair *Credits: 4*
- RRET 2095 - Practicum in Passenger Railroad Technology *Credits: 1*
- RRET 2195 - Practicum in Freight Railroad Technology *Credits: 1*
- **Approval of this legacy course as a permanent CT State course is in process*

Total Credits: 60-61

Technology Studies, AS (TCHS-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Learning 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.

In addition to this degree, the Technology Studies program offers the following options:

- Technology Studies: Advanced Manufacturing Machine Technology Option 1 (AMT1-AS-COT)
- Technology Studies: Advanced Manufacturing Machine Technology Option 2 (AMT2-AS-COT)
- Technology Studies: Artificial Intelligence, AS (ARIN-AS-COT)
- Technology Studies: Biomolecular Sciences, AS (BIMO-AS-COT)
- Technology Studies: Computer Engineering Technology, AS (CETC-AS-COT)
- Technology Studies: Data Science, AS (DTAS-AS-COT)
- Technology Studies: Energy Management, AS (ENMG-AS-COT)
- Technology Studies: Engineering Technology, AS (ENTE-AS-COT)
- Technology Studies: Environmental Science, AS (ENVS-AS-COT)
- Technology Studies: Industrial Technology, AS (INTC-AS-COT)
- Technology Studies: Manufacturing Engineering Technology, AS (MENT-AS-COT)
- Technology Studies: Mechatronics Automation Technician (MTCH-AS-COT)
- Technology Studies: Precision Manufacturing, AS (PRMN-AS-COT)
- Technology Studies: Robotics and Mechatronics Technician, AS (RMTH-AS-COT)
- Technology Studies: Technology and Engineering Education, AS (TEED-AS-COT)
- Technology Studies: Welding & Fabrication (WFBT-AS-COT)

The Technology Studies A.S. Degree transfers to Central Connecticut State University and the University of Hartford.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Specialization Courses (27-36 credits)

Students will choose courses based on the specialization they choose.

Total Credits: 60-70

Technology Studies: Advanced Manufacturing Machine Technology Certificate Option 1 (AMC1-CC-COT)

The Advanced Manufacturing Machine Technology certificate provides students with the opportunity to train in a hands-on manufacturing environment. Throughout the duration of their training, students will develop an advanced level of skillsets that will lead directly into a career in the vast world of manufacturing, such as an entry level machinist or a quality inspector. The programs were developed in response to Connecticut manufacturers' needs for a highly skilled workforce to match the needs of the regional industry sector partnerships around the state of Connecticut that graduates of the program are placed with. The student who completes the Advanced Manufacturing Machine Technology certificate program has a choice to pursue employment or to matriculate in an associate degree program. To earn this certificate, you will choose nine directed electives based on regional industry needs for specific courses.

Quinebaug Valley Community College's Advanced Manufacturing Technology Center is accredited by the National Institute for Metalworking Skills (NIMS). Housatonic, Manchester, Middlesex, and Naugatuck Valley are in the process of applying for NIMS accreditation.

Learning Outcomes:

- Apply mathematical and technological principles to solve triangles and other geometrical problems
- Understand and follow basic shop safety guidelines and protocol
- Demonstrate the use of all hand tools used in basic layout procedures
- Accurately read and interpret views and information on engineered drawings and blueprints
- Demonstrate the use and understanding of all basic semi-precision and precision measuring tools to determine acceptability of manufactured parts to blueprint specifications
- Demonstrate operations of manual lathe to turn, face, part, groove, drill, bore, tap and single point thread
- Demonstrate operations in a knee mill to square parts, bore holes, drill, tap, countersink and counterbore
- Demonstrate operation of machine tools such as drill press, bench grinders, surface grinders, sawing machines
- Program and operate CNC mills and lathes with conversational, G&M code to fabricate parts to blueprint specifications
- Exhibit competency in two- and three-dimensional CAD as it is applied to parts and geometries to create solid models and assemblies
- Understand basic principles in quality management and lean continuous improvement practices

Required Courses

- MFG 1405 - Manufacturing Math *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1424 - Blueprint Reading 1 *Credits: 3*
- **OR** EGR 1120 - Engineering Drawing Specs *Credits: 3*
- MFG 1453 - Benchwork *Credits: 2*
- MFG 1477 - Machine Technology Fundamentals *Credits: 4*
- MFG 1478 - CNC Fundamentals *Credits: 3*
- MFG 1479 - Career Awareness for Manufacturing *Credits: 1*
- MFG 2456 - Advanced CNC *Credits: 3*
- MFG 2477 - Advanced Machine Technology *Credits: 4*

Choose 3 Directed Electives (9 credits)

- MFG 1010 - Parametric Design (SolidWorks) *Credits: 3*
- MFG 1414 - Quality & Lean Principles *Credits: 3*
- **OR** MFG 1413 - Principles of Quality Control *Credits: 3*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1425 - Blueprint Reading 2 with GD & T *Credits: 3*

- MFG 2405 - Principles of CNC with Mastercam *Credits: 3*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- MFG 1400 - Advanced Metrology with CMM (Computerized Measurement Machine) *Credits: 3*
- MFG 1409 - Introduction to MasterCAM *Credits: 3*

Total Credits: 33

Technology Studies: Advanced Manufacturing Machine Technology Certificate Option 2 (AMC2-CC-COT)

The Advanced Manufacturing Machine Technology certificate provides students with the opportunity to train in a hands-on manufacturing environment. Throughout the duration of their training, students will develop an advanced level of skillsets that will lead directly into a career in the vast world of manufacturing, such as an entry level machinist or a quality inspector. The programs were developed in response to Connecticut manufacturers' needs for a highly skilled workforce to match the needs of the regional industry sector partnerships around the state of Connecticut that graduates of the program are placed with. The student who completes the Advanced Manufacturing Machine Technology certificate program has a choice to pursue employment or to matriculate in an associate degree program. To earn this certificate, you will choose nine directed electives based on regional industry needs for specific courses.

Asnuntuck Community College's Advanced Manufacturing Technology Center is accredited by the National Institute for Metalworking Skills (NIMS). Housatonic, Manchester, Middlesex, and Naugatuck Valley are in the process of applying for NIMS accreditation.

Learning Outcomes:

- Read and interpret engineering drawings/blueprints (mechanical)
- Understand the types of fits and mating parts
- Be able to interpret geometric dimensioning and tolerancing requirements applied to engineering drawings
- Exhibit competency in machining on a manual lathe
- Exhibit competency in machining on manual milling machine
- Exhibit competency in two-dimensional and three-dimensional CAD as applied to mechanical parts and geometries
- Exhibit competency in creating blueprints from solid models generated through CAD
- Read and write G&M codes for CNC programming
- Setup 3 axis CNC Machining and 2 axis Turning Centers
- Be able to load and execute post processed CNC programs onto FANUC controlled CNC Machining and Turning Centers
- Understand metrology and its applications in quality control and production
- Understand basic principles of quality control and lean manufacturing

Required Courses

- MFG 1405 - Manufacturing Math *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1424 - Blueprint Reading 1 *Credits: 3*
- **OR** EGR 1120 - Engineering Drawing Specs *Credits: 3*
- MFG 1453 - Benchwork *Credits: 2*
- MFG 1477 - Machine Technology Fundamentals *Credits: 4*
- MFG 1478 - CNC Fundamentals *Credits: 3*
- MFG 2456 - Advanced CNC *Credits: 3*
- MFG 2477 - Advanced Machine Technology *Credits: 4*

Choose 4 Directed Electives (12 credits)

- MFG 1010 - Parametric Design (SolidWorks) *Credits: 3*
- **OR** CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- MFG 1414 - Quality & Lean Principles *Credits: 3*
- **OR** MFG 1413 - Principles of Quality Control *Credits: 3*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1425 - Blueprint Reading 2 with GD & T *Credits: 3*

- MFG 2405 - Principles of CNC with Mastercam *Credits: 3*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- MFG 1400 - Advanced Metrology with CMM (Computerized Measurement Machine) *Credits: 3*
- MFG 1409 - Introduction to MasterCAM *Credits: 3*

Total Credits: 35

Technology Studies: Advanced Manufacturing Machine Technology Option 1 (AMT1-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

This program has an embedded Advanced Manufacturing Machine Technology Certificate.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Machine Technology Option #1 Courses (32 credits)

- MFG 1405 - Manufacturing Math *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1424 - Blueprint Reading 1 *Credits: 3*
- **OR** EGR 1120 - Engineering Drawing Specs *Credits: 3*
- MFG 1453 - Benchwork *Credits: 2*
- MFG 1477 - Machine Technology Fundamentals *Credits: 4*
- MFG 1478 - CNC Fundamentals *Credits: 3*
- MFG 2456 - Advanced CNC *Credits: 3*
- MFG 2477 - Advanced Machine Technology *Credits: 4*

Choose 3 Directed Electives (9 Credits)

- MFG 1010 - Parametric Design (SolidWorks) *Credits: 3*
- MFG 1414 - Quality & Lean Principles *Credits: 3*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1425 - Blueprint Reading 2 with GD & T *Credits: 3*
- MFG 2405 - Principles of CNC with Mastercam *Credits: 3*

- MFG 1400 - Advanced Metrology with CMM (Computerized Measurement Machine) *Credits: 3*
- MFG 1409 - Introduction to MasterCAM *Credits: 3*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*

Total Credits: 65-66

Technology Studies: Advanced Manufacturing Machine Technology Option 2 (AMT2-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

This program has an embedded Advanced Manufacturing Machine Technology Certificate.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Manufacturing Technology Option #2 (36 Credits)

- MFG 1405 - Manufacturing Math *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1424 - Blueprint Reading 1 *Credits: 3*
- **OR** EGR 1120 - Engineering Drawing Specs *Credits: 3*
- MFG 1453 - Benchwork *Credits: 2*
- MFG 2477 - Advanced Machine Technology *Credits: 4*
- MFG 1478 - CNC Fundamentals *Credits: 3*
- MFG 2456 - Advanced CNC *Credits: 3*
- MFG 1477 - Machine Technology Fundamentals *Credits: 4*

Choose 4 Directed Electives (12 Credits)

- MFG 1010 - Parametric Design (SolidWorks) *Credits: 3*
- **OR** CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- MFG 1414 - Quality & Lean Principles *Credits: 3*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1425 - Blueprint Reading 2 with GD & T *Credits: 3*

- MFG 2405 - Principles of CNC with Mastercam *Credits: 3*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- MFG 1400 - Advanced Metrology with CMM (Computerized Measurement Machine) *Credits: 3*
- MFG 1409 - Introduction to MasterCAM *Credits: 3*

Total Credits: 69-70

Technology Studies: Architectural CAD Certificate (CADA-CC-COT)

The Architectural Computer-Aided Design (CAD) certificate program provides students with career-based training in architectural design using computer-aided drafting/design technology. To provide the necessary technical base, the program also includes architectural blueprint reading. Basic training in computer technology is included to prepare students for the two-dimensional, three-dimensional, and solid-modeling computer-aided design technology in the program. CAD technology in the core of the certificate program is comprised of 2D AutoCAD®, REVIT® solid modeling, and rendering technology.

Learning Outcomes:

- Read and analyze building blueprints including floor, mechanical, and electrical plans
- Annotate construction documents according to currently acceptable standards
- Exhibit competency in turning the engineering concept drawings into CAD models.
- Exhibit competency in two-dimensional, three-dimensional, and solid-modeling skills as applied to complex computer-aided design technology.
- Render three-dimensional models for aesthetic representation
- Cite and identify technical drafting practices, procedures, and processes according to current ANSI/ISO standards
- Use currently available object-based CAD technology for design and documentation of architectural models
- Create mass models from architectural sketches

Required Courses

- CTC 1006 - Blueprint Reading for Construction *Credits: 3*
- CAD 1330 - 2D CAD (AutoCAD) *Credits: 3*
- CAD 2204 - CAD 3D Architectural *Credits: 3*
- CAD 2520 - Architectural Design & Modeling *Credits: 3*

Total Credits: 12

Technology Studies: Artificial Intelligence, AS (ARIN-AS-COT)

The Technology Studies Artificial Intelligence Option associate degree program prepares students to develop and apply artificial intelligence (AI) solutions to problems in the fields of predictive analytics, natural language processing, and computer vision. The program develops students' knowledge and skills in computer programming, machine learning, mathematics and statistics, and enables students to use AI to enhance human capabilities in the fields of business. The program prepares students to transfer to a baccalaureate program in computer science or data science, or to acquire an entry level position in fields that utilize artificial intelligence, such as business, technology, healthcare, industrial and manufacturing industries.

Tech Studies Learning 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.

In addition to meeting the Technical Studies outcomes students successfully completing this option will:

- Transition seamlessly into a Bachelor of Science Degree Program in Computer Science, Artificial Intelligence, or Technology Management.
- Apply appropriate mathematical and scientific principles to Artificial Intelligence applications.
- Demonstrate proficiency in developing and applying machine learning principles and algorithms to solve problems in business applications.
- Apply knowledge and skills to develop, interpret, and apply natural language processing and computer vision algorithms.
- Demonstrate the ability to assist in research, development, design, production, testing and various other functions associated with Artificial Intelligence.
- Demonstrate a good understanding of Artificial Intelligence principles/concepts.
- Demonstrate a good understanding of mathematical and computer programming concepts.
- Demonstrate the ability to think through a problem in a logical manner.
- Organize and carry through to conclusion the solution to a problem.
- Demonstrate good communication skills.
- Demonstrate teamwork skills.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course

- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Artificial Intelligence Courses (27-28 credits)

- CSC 1203 - Python Fundamentals *Credits: 3*
- DTS 2205 - Introduction to Artificial Intelligence *Credits: 3*
- DTS 2220 - Introduction to Machine Learning *Credits: 3*
- MATH 2500 - Calculus for Business and Social Science *Credits: 3*
- **OR** MATH 2600 - Calculus I *Credits: 4*
- DTS 2230 - Natural Language Processing *Credits: 3*
- DTS 2240 - Artificial Intelligence for Computer Vision *Credits: 3*
- DTS 2290 - Capstone Research *Credits: 3*
- CIS, CSC, CST, or CYS Elective *Credits: 3*
- Specialization Elective *Credits: 3*

Total Credits: 60-62

Technology Studies: Biomolecular Sciences, AS (BIMO-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Learning 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 objective of the Technology Studies: Biomolecular Sciences pathway is to prepare students for transfer to a baccalaureate degree in Biomolecular Sciences at a Central Connecticut State University as well as for entry-level laboratory technician positions. Students who earn an associate's degree will be able to:

- Transfer into a bachelor's degree program in biomolecular science.
- Transfer into pre-professional programs such as pre-vet or pre-med.
- Pursue careers as laboratory technicians in academic or industrial settings.

In addition to meeting the Technology Studies outcomes, graduates should be able to:

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

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Biomolecular Sciences Courses (30-31 credits)

- BIO 1210 - General Biology I *Credits: 4*
- BIO 1220 - General Biology II *Credits: 4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- BIO 2600 - Principles of Genetics *Credits: 3*
- **OR** BIO 2630 - Molecular Genetics *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- PHYS 1202 - General Physics II *Credits: 4*
- **OR** PHYS 2202 - Calculus-Based Physics II *Credits: 4*
- Specialization Elective *Credits: 3* Choose from BIO, CAD, CHEM, CSC, CST, DTS, EETA, EGR, GEOG, MATH, MECH, MFG, OCEN, PHYS, TECH

Total Credits: 63-65

Technology Studies: CAD User Certificate (CADU-CC-COT)

The Computer-Aided Drafting (CAD) User certificate program provides students with the basic training in creating engineering drawing and 3D models of parts. The program uses AutoCAD® and Solidworks® software to provide the students with the basic training they need in the field of computer aided drafting. The program is a steppingstone to seek lower-level mechanical drafting jobs or to continue to obtain Mechanical CAD certificate.

Learning Outcomes:

- Create basic engineering drawings
- Create basic 3D models of parts and assemblies

Required Courses

- CAD 1330 - 2D CAD (AutoCAD) *Credits: 3*
- CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*

Total Credits: 6

Technology Studies: Computer Engineering Technology, AS (CETC-AS-COT)

The Computer Information Technology (CIT) degree program is designed to provide students with a well-rounded technical foundation and offer options in which they can concentrate their skills in either software development or networking. For students who enter the program without a firm grasp on a career direction, the program's core gives a broad range of subject areas that the students can experience before formalizing their concentration.

In addition to meeting the Technology Studies outcomes students in this option will:

- Develop the ability to analyze, develop, and design code through knowledge and comprehension of information systems concepts and skills.
- Develop the strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs and hardware design.
- Develop the ability to identify and solve unstructured problems in unfamiliar setting and exercise judgment based on facts.
- Develop communication through development of proficiency in oral/written/electronic communication skills and the development of the ability to explain programming concepts and code and related technical issues to others.
- Develop leadership skill through the development of the ability to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
- Develop the skills to apply current technology, analyze business problems, and design and develop software and solve technical issues; apply word processing, spreadsheet, database, presentation, email, and collaborative software skills in a professional context.
- Develop the skills to communicate using network technologies, access information via internet, and understand information integrity and security issues

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Computer Engineering Technology Courses (31 credits)

- MATH 2600 - Calculus I *Credits: 4*
- EGR 1110 - Introduction to Engineering *Credits: 3*
- MATH 2610 - Calculus II *Credits: 4*

- **OR** EGR 2221 - Introduction to Electrical Circuit Analysis *Credits: 4*
- CIS 1001 - Introduction to Computers *Credits: 3*
- CSC 1211 - Java I *Credits: 3*
- CSC 2212 - Java II *Credits: 3*
- PHYS 1202 - General Physics II *Credits: 4*
- **OR** PHYS 2202 - Calculus-Based Physics II *Credits: 4*
- CST 1111 - Computer Hardware *Credits: 4*
- CST 1121 - Networking I *Credits: 3*

Total Credits: 64-65

Technology Studies: Energy Management Certificate (ENMC-CC-COT)

The Certificate in Energy Management offers students a hands-on curriculum utilizing the college's facilities as a "living laboratory" to provide a career path that aligns with commercial and/or industrial energy management practices. A traditional Engineering job requires a 4-year degree. The certificate folds seamlessly into the 2-year Tech Studies, Energy Management Option Associate Degree and allows students to complete the required coursework needed to fulfill the duties and responsibilities of an "Energy Manager", while still maintaining a level of General Education coursework that they could transfer to a 4-year college should that student desire the opportunity to expand their work to a 4-year Bachelor's Degree. This certificate path is more economical for the students of Connecticut to obtain the needed information to be successful in the field, yet they can continue their education at the university level if desired.

Learning Outcomes:

- Demonstrate a basic understanding of energy, its measurement and varied approaches to conserving/saving.
- Demonstrate a basic understanding of commercial building systems and be able to explain their operation, interactions, and their energy use.
- Perform energy analysis on potential conservation measures in commercial/industrial settings, and incorporate both conceptual and technical understanding in their project reports.
- Demonstrate an increased proficiency with spreadsheets, charts, and graphs in Excel.
- Practice technical writing and oral skills and will create technical documents.

The Energy Management certificate provides students with a choice of "focus" in either Lighting or Commercial HVAC. These areas are identified as two significant areas of energy use in commercial/industrial structures. Students choose based on interest, employment prospects, or employer direction. Through the degree, students will achieve credits in both areas. The choice in the certificate allows for a direct path and employability. This certificate is "stackable" into the more extensive Technology Studies: Energy Management option AS degree with Tunxis. Each course in the certificate is either part of the degree or serves as a pre-requisite to move students forward. Using the NRG*133 pathway option in the certificate could allow for WIOA eligibility as the certificate could then be completed in 2 semesters. This certificate and the degree are funded with a grant from the CT Department of Energy and Environmental Protection. Those funds allowed Tunxis to create a scholarship in which students are direct beneficiaries of the funds we receive. The scholarship allows students to earn all required credits for the certificate and/or degree at no cost (tuition, fees, books, etc.) for those who qualify. The NRG*133 course prepares students to sit for an industry-standard credentialing exam through the Illuminating Engineering Society (IES). Additional industry-standard credentials are frequently considered/reviewed.

Required Courses

- NRG 1101 - Introduction. to Energy & Systems *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3*
- PHYS 1201 - General Physics I *Credits: 4*
- NRG 1123 - Energy Efficiency Methods *Credits: 3*
- NRG 1122 - Commercial HVAC Systems & Analysis *Credits: 3*
- **OR** NRG 1133 - Lighting Fundamentals & Appl. *Credits: 3*

Total Credits: 16

Technology Studies: Energy Management, AS (ENMG-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Learning 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.

Technology Studies: Energy Management offers students a hands-on curriculum utilizing the college's facilities as a "living laboratory" to provide a career path that aligns with commercial and/or industrial energy management practices.

In addition to meeting the Technology Studies outcomes students in this option will:

- Demonstrate a basic understanding of energy, its measurement and varied approaches to conserving/saving.
- Demonstrate a basic understanding of commercial building systems and be able to explain their operation, interactions, and their energy use.
- Perform energy analysis on potential conservation measures in commercial/industrial settings, and incorporate both conceptual and technical understanding in their project reports.
- Demonstrate an increased proficiency with spreadsheets, charts, and graphs in Excel.
- Practice technical writing and oral skills and will create technical documents.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Energy Management Courses (27 credits)

- CAD 1330 - 2D CAD (AutoCAD) *Credits: 3*
- NRG 1101 - Introduction. to Energy & Systems *Credits: 3*
- NRG 1122 - Commercial HVAC Systems & Analysis *Credits: 3*
- NRG 1123 - Energy Efficiency Methods *Credits: 3*
- NRG 1130 - Applied Renewable Energy Systems *Credits: 3*
- NRG 1132 - Industrial Energy Systems *Credits: 3*
- NRG 1133 - Lighting Fundamentals & Appl. *Credits: 3*
- NRG 2241 - Commercial Energy Use Analysis & Simulations *Credits: 3*
- NRG 2242 - Energy Accounting *Credits: 3*

Total Credits: 60-61

Technology Studies: Engineering Technology, AS (ENTE-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Learning 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 Technology Studies - Engineering Technology Option associate degree program prepares students primarily to transfer to complete a B.S. degree in civil, mechanical, manufacturing, composite, or computer engineering technology. Graduates will receive a background in mathematics, science, and general education courses for transfer into a four-year program. Careers in this field include jobs in quality control of industrial products, electrical system testing and diagnostics, computer modeling of essential infrastructure, robotic technology, and remediation of environmental hazards. A grade average of 'B' with no grade less than 'C', and completion of the full program is required for continuation as a junior in CCSU's School of Technology or at Charter Oak.

In addition to meeting the Technical Studies outcomes students successfully completing this option will:

- Transition seamlessly into a Bachelor of Science Degree Program in Engineering Technology with junior level status in the receiving institution as part of the Engineering Technology Pathway Program.
- Apply appropriate mathematical and scientific principles to engineering and technology applications.
- Analyze and resolve technology problems.
- Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
- Assist in research, development, design, production, testing and various other functions associated with engineering.
- Identify and apply engineering principles/ concepts.
- Apply mathematical concepts.
- Demonstrate the ability to think through a problem in a logical manner.
- Organize and carry through to conclusion the solution to a problem.
- Apply good communication skills.
- Work in teams

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Engineering Technology Courses (30 credits)

- Choose a CAD Elective or Technical Drafting *Credits: 3*
- PHYS 1202 - General Physics II *Credits: 4*
- **OR** PHYS 2202 - Calculus-Based Physics II *Credits: 4*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- CHEM 1220 - General Chemistry II *Credits: 4*
- **OR** EGR 2221 - Introduction to Electrical Circuit Analysis *Credits: 4*
- **OR** EGR 2212 - Engineering Dynamics *Credits: 3*
- **OR** EETA 2052 - Digital Electronics *Credits: 4*
- MATH 2600 - Calculus I *Credits: 4*
- MATH 2610 - Calculus II *Credits: 4*
- EGR 2211 - Engineering Statics *Credits: 3*
- Choose 2 specialization electives from these disciplines: BIO, CAD, CHEM, CSC, CST, DAT, EET, EGR, ENVS, GIS, GEOL, MATH, MECH, MFG, OCEN, PHYS, or TECH

Total Credits: 63-64

Technology Studies: Environmental Science, AS (ENVS-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Program Learning 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 Technology Studies: Environmental Science degree prepares individuals for careers in Connecticut's growing environmental science industry. In addition to the outcomes listed for the Technology Studies degree, students who complete the Environmental Science Option will:

- Develop an understanding of the scientific basis for issues affecting the environment and their impact on society.
- Understand and be skilled at collecting, analyzing and presenting scientific data by various means including up-to-date technologies.
- Be able to use the scientific method for problem solving in biology, chemistry, physics and environmental sciences, and be able to use this skill to address issues related to the environment.
- Research and assess the accuracy of appropriate information sources, involving both print literature and electronic sources including online databases and publications.
- Communicate knowledge and understanding of environmental sciences and related societal issues in appropriate written, oral and mathematical means.
- Demonstrate interrelationships and connections with other subject areas associated with a college-level education.
- Use a wide array of knowledge, principles and skills acquired in laboratory, field and lecture setting for use in transferring to baccalaureate degree program or for use in seeking further training toward a technical degree.
- Develop skills in biology, ecology, and environmental chemistry.
- Develop an understanding of an ability to carry out microbiological testing of drinking and waste sewage.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*

- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Environmental Science Courses (29 credits)

- BIO 1220 - General Biology II *Credits: 4*
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- PHIL 1101 - Ethics *Credits: 3*
- ENV 1010 - Introduction to Environmental Science *Credits: 3*
- **AND** ENV 1010L - Introduction to Environmental Science Lab *Credits: 1*
- COMM 1301 - Public Speaking *Credits: 3*

Environmental Science Electives (12 Credits)

Note: Students must choose three (3) of the following courses. Choices to be made with an Advisor based upon the student's desired transfer institution and baccalaureate degree plans

- BIO 1210 - General Biology I *Credits: 4*
- BIO 2700 - Ecology *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- GEOL 1200 - Introduction to Physical Geology *Credits: 4*
- MATH 2600 - Calculus I *Credits: 4*
- PHYS 1202 - General Physics II *Credits: 4*
- **OR** PHYS 2202 - Calculus-Based Physics II *Credits: 4*

Total Credits: 62-63

Technology Studies: Industrial Technology, AS (INTC-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Learning 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 Technology Studies: Industrial Technology associate degree program prepares students primarily to transfer to complete a B.S. degree in automotive, construction management, environmental safety, electrical engineering, manufacturing and energy. Graduates will receive a background in mathematics, science, and general education courses for transfer into a four-year program.

Careers in this field include jobs in industrial design, occupational health and safety, sustainable energy generation/transmission, lean manufacturing analysis, and laser technicians. A grade average of "B" with no grade less than 'C', and completion of the full program is required for continuation as a junior in CCSU's School of Technology or at Charter Oak.

In addition to meeting the Technical Studies outcomes students successfully completing this option will:

- Transition seamlessly into a Bachelor of Science Degree Program in Industrial Technology with junior level status in the receiving institution as part of the Technology Studies Pathway Program.
- Assist in research, development, design, production, testing and various other functions associated with engineering.
- Apply appropriate mathematical and scientific principles to engineering and technology applications.
- Identify and apply engineering principles/ concepts.
- Analyze and resolve technology problems.
- Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
- Demonstrate the ability to think through a problem in a logical manner.
- Organize and carry through to conclusion the solution to a problem.
- Apply good communication skills.
- Work in teams.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Industrial Technology Courses (33-34 credits)

- CAD Elective *Credits:3*
- EGR 2250 - Computation Methods for Engineering *Credits: 3*
- EGR 1110 - Introduction to Engineering *Credits: 3*
- ENV 1800 - Sustainable Energy and the Environment *Credits: 3*
- **OR** Any MFG course *Credits: 3-4*
- Specialization Electives - *Choose with guidance of advisor Credits: 18*

Choose One Course: (3 credits)

- CSC 1201 - Introduction to Programming *Credits: 4*
- CSC 1203 - Python Fundamentals *Credits: 3*
- CSC 2214 - C++ Programming *Credits: 4*
- CSC 1211 - Java I *Credits: 3*
- CSC 2212 - Java II *Credits: 3*
- EGR 1115 - Programming for Engineers *Credits: 3*
- EGR 2201 - MATLAB for Engineers *Credits: 3*
- EGR 2230 - C++ for Engineering *Credits: 3*

Total Credits: 66-68

Technology Studies: Manufacturing Engineering Technology, AS (MENT-AS-COT)

The Manufacturing Engineering Technology A.S. program emphasizes the application of mathematics and principles of engineering science to manufacturing processes and concepts in order to prepare students for transfer to baccalaureate programs in engineering and technology with a manufacturing focus. Upon successful completion of a degree program, MCC graduates may continue on with a full two years of credit towards a baccalaureate degree in engineering technology or industrial technology at Central Connecticut State University.

Also, as a standalone degree, the program gives credentials to those who are already employed in a manufacturing capacity who don't possess a degree as well as prepares students for employment opportunities in entry and second-level positions in manufacturing and industrial technology fields requiring a combination of technical preparation and a strong general education background.

Learning Outcomes:

Upon successful completion of all Manufacturing Engineering Technology degree program requirements, graduates will

- Demonstrate team-oriented skills that permit effective participation in multicultural work and social environments.
- Apply appropriate mathematical and scientific principles to manufacturing applications.
- Demonstrate proficiency in manufacturing engineering fundamentals to analyze manufacturing engineering problems and make appropriate decisions.
- Assist in the design process to meet effective production objectives.
- Possess knowledge of engineering materials and be able to demonstrate competency in their selection and utilization in manufacturing.
- Apply knowledge and skills to develop, interpret and select appropriate manufacturing processes.
- Maintain a practical knowledge of state-of-the-art hardware and software in support of manufacturing systems.
- Be aware of and use available information and data sources in support of the manufacturing systems.
- Apply skills and knowledge to effectively and efficiently plan, organize, implement, measure and control manufacturing processes.
- Demonstrate a thorough knowledge and understanding of engineering graphics as well as engineering drawing interpretation and application of geometric dimensioning and tolerancing basics.
- Demonstrate a high level of proficiency in the use of state-of-the-art computer-aided design (CAD) software and be able to respond positively to continuous software revisions and upgrades.
- Demonstrate a thorough understanding of two-dimensional and isometric CAD concepts, procedures and applications.
- Apply knowledge of computer applications in integrating computer-aided manufacturing, computer numerical control, CAD, spreadsheets, graphs and word processing for manufacturing engineering, and technology documentation and support purposes.
- In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*

- **OR** COMM 1301 - Public Speaking Credits: 3
- CCS 1001 - College & Career Success Credits: 3

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I Credits: 4
- **OR** PHYS 2201 - Calculus-Based Physics I Credits: 4
- Elective BHEL - Behavioral Science Elective Credits: 3 choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I Credits: 3
- **OR** MATH 1201 - Statistics I with Computer Applications Credits: 4

Manufacturing Engineering Tech Courses (30 credits)

- EGR 1120 - Engineering Drawing Specs Credits: 3
- MFG 1477 - Machine Technology Fundamentals Credits: 4
- **OR** MFG 1467 - Conventional Process Machining Lab Credits: 4
- PHYS 1202 - General Physics II Credits: 4
- **OR** PHYS 2202 - Calculus-Based Physics II Credits: 4
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) Credits: 3
- CAD 2200 - Parametric Design (SolidWorks) Credits: 3
- MATH 2600 - Calculus I Credits: 4
- MFG 1411 - Manufacturing Materials & Processes I Credits: 3
- MFG 2444 - CNC I Credits: 3
- MFG 2405 - Principles of CNC with Mastercam Credits: 3

Total Credits: 63-64

Technology Studies: Mechanical CAD Certificate (CADM-CC-COT)

The Mechanical Computer-Aided Design (CAD) certificate program provides students with career-based training in mechanical design using computer-aided drafting/design technology. To provide the necessary technical base, the program also includes engineering drawing, and geometric dimensioning and tolerancing skills. Basic training in computer technology is included to prepare students for the two-dimensional, three-dimensional and solid-modeling computer-aided design technology in the program. CAD technology in the core of the certificate program is comprised of 2D AutoCAD®, Solidworks® parametric solid modeling and rendering technology, as well as an option of Mastercam® CNC software, and NX parametric solid modeling. All manufacturing and engineering design in today's high-technology business and industry use computer-based manufacturing and computer-aided design technologies that integrate the design, engineering and manufacturing processes of complex products, parts, and assemblies, into a single, technically coherent process.

Learning Outcomes:

- Interpret complex engineering drawings.
- Exhibit competency in turning the engineering concept drawings into CAD models.
- Exhibit competency in two-dimensional, three-dimensional and solid-modeling skills as applied to complex computer-aided design technology.
- Demonstrate an understanding of the role and function of parametric CAD modeling in the simplification of the design process.

Required Courses

- EGR 1120 - Engineering Drawing Specs *Credits: 3*
- **OR** MFG 1424 - Blueprint Reading 1 *Credits: 3*
- CAD 1330 - 2D CAD (AutoCAD) *Credits: 3*

Choose any four of the following:

- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- CAD 2210 - Advanced Parametrics Design (Solidworks) *Credits: 3*
- CAD 2300 - Parametric 3D CAD using NX *Credits: 3*
- MFG 2405 - Principles of CNC with Mastercam *Credits: 3*

Total Credits: 18

Technology Studies: Mechatronics Automation Technician (MTCH-AS-COT)

Description Pending

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Mechatronics Automation Technician Courses (30-31 credits)

- MFG 1330 - Mathematics for Electricity and Electronics *Credits: 3*
- MFG 1337 - Circuit Theory *Credits: 3*
- **OR** MFG 1362 - CNC Maintenance & Repair *Credits: 3*
- MFG 1338 - Digital Fundamentals *Credits: 3*
- MFG 1340 - Robotics *Credits: 3*
- MFG 1342 - Electronic Circuits & Devices *Credits: 3*
- MFG 1343 - Industrial Motor Controls *Credits: 3*
- MFG 1344 - Hydraulics and Pneumatics *Credits: 3*
- MFG 1345 - Electronic Variable Speed Drive *Credits: 3*
- MFG 1346 - Programmable Logic Controllers *Credits: 3*
- MFG 1359 - Industrial Maintenance *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*

Total Credits: 63-65

Technology Studies: Mechatronics Automation Technician Certificate (MATC-CC-COT)

The Mechatronics Automation Technician certificate provides students with the opportunity to train in a hands-on manufacturing lab environment. Throughout the duration of their training, students will develop an advanced level of skillsets in electrical, electronic, and mechanical principles as applied to the design and operation of modern, high-speed manufacturing and assemble equipment. Completing this certificate will provide the student requisite skills necessary to troubleshoot any electronic or mechanical problems associated with in the manufacturing environment, health industry, distribution systems, machining industry, wholesale, retail, warehouse, and engineering. These skills will lead directly into a career in the field of automation, CNC/Machine maintenance & repair, and/or robotics in manufacturing companies throughout the state and nation. This program was developed in response to Connecticut manufacturers' needs for a highly skilled workforce to match the needs of the regional industry sector partnerships around the state of Connecticut that graduates of the program are placed with. The student who completes the Mechatronics Automation Technician certificate program has a choice to pursue employment and/or to matriculate in an associate degree program. Many students work in the field while coming through this program through an apprenticeship program or fulltime employment. This allows students to apply what they have learned directly to the needs of their employer.

Learning Outcomes:

- Apply knowledge of theory and principles related to mechanics, electronics, computer science, and process control.
- Apply critical thinking and problem-solving skills to troubleshoot electromechanical, hydraulic, and pneumatic automation systems.
- Apply logical reasoning and mathematics to analysis of automation systems and their components.
- Communicate technical information clearly.
- Apply soft skills effectively to help gain employment and be successful in the workplace.
- Understand and follow basic shop safety guidelines and protocol.

Required Courses

- MFG 1330 - Mathematics for Electricity and Electronics *Credits: 3*
- MFG 1337 - Circuit Theory *Credits: 3*
- **OR** MFG 1362 - CNC Maintenance & Repair *Credits: 3*
- MFG 1338 - Digital Fundamentals *Credits: 3*
- MFG 1340 - Robotics *Credits: 3*
- MFG 1342 - Electronic Circuits & Devices *Credits: 3*
- MFG 1343 - Industrial Motor Controls *Credits: 3*
- MFG 1344 - Hydraulics and Pneumatics *Credits: 3*
- MFG 1345 - Electronic Variable Speed Drive *Credits: 3*
- MFG 1346 - Programmable Logic Controllers *Credits: 3*
- MFG 1359 - Industrial Maintenance *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1479 - Career Awareness for Manufacturing *Credits: 1*

Total Credits: 32

Technology Studies: Precision Manufacturing Certificate (PRMC-CC-COT)

The Precision Manufacturing certificate program equips students with the necessary hands-on experience and foundational knowledge to qualify for entry-level positions as machine operators and quality control inspectors. In this program, students are taught both conventional machining techniques and Computer Numerical Control (CNC) machining techniques. The programs were developed in response to Connecticut manufacturers' needs for a highly skilled workforce to match the needs of the regional industry sector partnerships around the state of Connecticut. The student who completes the Precision Manufacturing certificate program has a choice to pursue employment or to matriculate in an associate degree program.

Manchester is in the process of applying for National Institute for Metalworking Skills (NIMS) accreditation.

Learning Outcomes:

- Read and interpret engineering drawings/blueprints (mechanical)
- Understand the types of fits and mating parts
- Be able to interpret geometric dimensioning and tolerancing requirements applied to the engineering drawings
- Exhibit competency in machining on a lathe;
- Exhibit competency in machining on milling machine;
- Exhibit competency in two-dimensional and three-dimensional CAD as applied to mechanical parts and geometries
- Exhibit competency in creating blueprints from solid models generated through CAD
- Read and write G&M codes for CNC programming
- Be able to load and execute post processed CNC programs onto Haas CNC Machining Centers and Turning Center
- Understand metrology and its applications in quality control and production
- Understand basic principles of lean manufacturing

Required Courses

- MFG 1405 - Manufacturing Math *Credits: 3*
- MFG 1411 - Manufacturing Materials & Processes I *Credits: 3*
- MFG 1414 - Quality & Lean Principles *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1467 - Conventional Process Machining Lab *Credits: 4*
- MFG 2405 - Principles of CNC with Mastercam *Credits: 3*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- MFG 2444 - CNC I *Credits: 3*
- MFG 2445 - CNC II *Credits: 4*
- CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- EGR 1120 - Engineering Drawing Specs *Credits: 3*
- **OR** MFG 1424 - Blueprint Reading 1 *Credits: 3*
- MFG 1479 - Career Awareness for Manufacturing *Credits: 1*

Total Credits: 37

Technology Studies: Precision Manufacturing, AS (PRMN-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Learning 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.

In addition, Precision Manufacturing student will:

- Read and interpret engineering drawings/blueprints (mechanical)
- Understand the types of fits and mating parts
- Be able to interpret geometric dimensioning and tolerancing requirements applied to the in engineering drawings
- Exhibit competency in machining on a lathe;
- Exhibit competency in machining on milling machine;
- Exhibit competency in two-dimensional and three-dimensional CAD as applied to mechanical parts and geometries
- Exhibit competency in creating blueprints from solid models generated through CAD
- Read and write G&M codes for CNC programming
- Be able to load and execute post processed CNC programs onto Haas CNC Machining Centers and Turning Center
- Understand metrology and its applications in quality control and production
- Understand basic principles of lean manufacturing

The Technology Studies A.S. Degree transfers to Central Connecticut State University and the University of Hartford.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Precision Manufacturing Courses (36 credits)

- MFG 1405 - Manufacturing Math *Credits: 3*
- MFG 1411 - Manufacturing Materials & Processes I *Credits: 3*
- MFG 1414 - Quality & Lean Principles *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1420 - Metrology *Credits: 3*
- MFG 1467 - Conventional Process Machining Lab *Credits: 4*
- MFG 2405 - Principles of CNC with Mastercam *Credits: 3*
- MFG 2439 - Geometric Dimension & Tolerancing (GD&T) *Credits: 3*
- MFG 2444 - CNC I *Credits: 3*
- MFG 2445 - CNC II *Credits: 4*
- CAD 2200 - Parametric Design (SolidWorks) *Credits: 3*
- EGR 1120 - Engineering Drawing Specs *Credits: 3*
- **OR** MFG 1424 - Blueprint Reading 1 *Credits: 3*

Total Credits: 69-70

Technology Studies: Robotics and Mechatronics Technician Certificate (RMTC-CC-COT)

This certificate provides training in Mechatronics. Mechatronics is a multidisciplinary field that includes a combination of mechanical systems, robotics, electronics, telecommunications, digital processing, and digital controls. Using both instructional techniques and hands-on practice with state-of-the-art equipment, the student will receive a comprehensive and expansive education in an ever-growing career field. The successful graduate may apply their knowledge and skills in a variety of fields such as engineering, design, manufacturing, machining, troubleshooting and repair of automated equipment. The student who completes the Robotics and Mechatronics Technician certificate program has a choice to pursue employment or to matriculate in an associate degree program.

Learning Outcomes:

- Technical knowledge of the electrical sciences vital to automated electric power systems, control systems, communication systems, and sensing systems.
- Technical knowledge of hydraulic and pneumatic fluid power generation, transmission, control, and maintenance.
- Technical knowledge of mechanical control systems, timing systems, and power transmission systems from a maintenance and repair perspective.
- Technical knowledge of the generation, logic, and application of digital signals as applied in automated mechatronic systems.
- Practical knowledge of robotic systems that would include function, operation, programming, and maintenance of multiple industry leading robot vendors.
- Skill in the maintenance of mechatronic systems, the diagnosis of root causes of points of failure in those systems, and the strategies of troubleshooting solutions.
- Extensive on campus maintenance and repair practicum with state-of-the-art educational systems constructed of components from industry leading vendors including Fanuc, Festo, Siemens, Rockwell Automation, Allen Bradley, ABB, Bridgeport, Microsoft, et al.

Required Courses

- MFG 1330 - Mathematics for Electricity and Electronics *Credits: 3*
- MFG 1220 - Digital Concepts *Credits: 3*
- MFG 1250 - Robotic Automation *Credits: 3*
- MFG 1210 - Circuit Design and Diagnostics *Credits: 4*
- MFG 1240 - Motor Controls for Automation *Credits: 3*
- MFG 1245 - Programmable Logic Controllers Applications *Credits: 3*
- MFG 1230 - Industrial Fluid Power *Credits: 3*
- MFG 1235 - Industrial Maintenance, Service and Repair *Credits: 3*
- MFG 1225 - Digital Controls *Credits: 3*
- MFG 1200 - Automation Fundamentals *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 1479 - Career Awareness for Manufacturing *Credits: 1*

Total Credits: 33

Technology Studies: Robotics and Mechatronics Technician, AS (RMTH-AS-COT)

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Robotics and Mechatronics Tech Courses (32 credits)

- MFG 1330 - Mathematics for Electricity and Electronics *Credits: 3*
- MFG 1220 - Digital Concepts *Credits: 3*
- MFG 1250 - Robotic Automation *Credits: 3*
- MFG 1210 - Circuit Design and Diagnostics *Credits: 4*
- MFG 1240 - Motor Controls for Automation *Credits: 3*
- MFG 1245 - Programmable Logic Controllers Applications *Credits: 3*
- MFG 1230 - Industrial Fluid Power *Credits: 3*
- MFG 1235 - Industrial Maintenance, Service and Repair *Credits: 3*
- MFG 1225 - Digital Controls *Credits: 3*
- MFG 1200 - Automation Fundamentals *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*

Total Credits: 65-66

Technology Studies: Technology and Engineering Education, AS (TEED-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Learning 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 Technology Studies: Technology and Engineering Education program can lead to certification to teach technology education in grades K-12 in the public schools of Connecticut. In addition to careers in public school teaching, technology education graduates may also function as instructors or supervisors in private schools, industry, government, or rehabilitation programs. Coursework prepares students for entry into the Technology Education program at CCSU.

In addition to meeting the Technical Studies outcomes students in this option will:

- Possess and be able to teach and assess basic knowledge and skills in technology and engineering education.
- Understand and be able to foster and assess student acquisition of age-appropriate technology and engineering concepts, as outlined.
- Demonstrate an ability to plan and maintain a safe, flexible, and age-appropriate learning environment which promotes inquiry and problem-based learning; and demonstrate the skills and knowledge to operate equipment and handle materials safely.
- Demonstrate an ability to critically assess technological and educational trends, and when appropriate, promote change in technology and engineering education.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Technology and Engineering Ed Courses (30 credits)

- CAD 1330 - 2D CAD (AutoCAD) *Credits: 3*
- Technology Electives: CAD, CSC, CST, DTS, EET, EGR, EVS, GIS, MAT, MEC, MFG, QUA, or TCN *Credits: 12*
- Specialization Electives: BIO, CAD, CHE, CSC, CST, DTS, EET, EGR, EVS, GIS, GLG, MAT, MEC, MFG, PHY, QUA, or TCN *Credits: 15*

Total Credits: 63-64

Technology Studies: Welding & Fabrication (WFBT-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Asnuntuck Campus is an American Welding Society (AWS) Accredited Test Facility

Learning 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 Technology Studies A.S. Degree transfers to Central Connecticut State University and the University of Hartford.

Welding & Technologies Learning Outcomes:

- Gain detailed knowledge of welding principles as applied to modern manufacturing processes and applications.
- Acquire the requisite advanced skills necessary to welding in today's technological environment.
- Practice and adhere to shop safety rules as they pertain to industry standards.
- Correctly and safely assemble, disassemble, and operate an oxyfuel cutting station.
- Complete satisfactory welds using SMAW in the four standard welding positions (flat, horizontal, vertical, and overhead).
- Read and interpret engineering drawings/blueprints.
- Understand and apply the appropriate steps involved in fabricating a part from design, to layout, to finished product.
- Show manual dexterity/competence in performing acceptable weldments applying basic metallurgical principles.
- Prepare and weld coupons in accordance to various welding codes in preparation for certification.
- Operate the appropriate tools and processes to successfully meet fabrication goals.
- Select and use the appropriate welding specific metrology tools.
- Apply arithmetic, algebraic, geometric, and trigonometric operations applied to the welding trade.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Welding & Fabrication Courses (35 credits)

- MFG 1020 - Introduction to Welding *Credits: 4*
- MFG 1050 - Welding Theory I *Credits: 3*
- MFG 1028 - Blueprint Reading for Welders *Credits: 3*
- MFG 1000 - Math for Welders *Credits: 3*
- MFG 1049 - Introduction to Metal Fabrication *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 2081 - Advanced Welding *Credits: 3*
- MFG 2050 - Welding Theory II *Credits: 3*
- MFG 2073 - Welding Codes, Testing, and Certification *Credits: 3*
- MFG 2080 - Advanced Fabrication *Credits: 3*
- MFG 2070 - Welding Automation & Processes *Credits: 3*
- MFG 2067 - Metallurgy *Credits: 3*

Total Credits: 68-69

Technology Studies: Welding and Fabrication Technologies Certificate (WFBC-CC-COT)

This certificate provides detailed knowledge of welding principles as applied to modern manufacturing processes and applications. It will provide the student with the requisite advanced skills necessary to weld in today's technological environment. The Welding Technologies and Fabrication certificate is a practical and "hands-on" program designed to teach the technical skills required to be successful in the welding trade. This curriculum is a mix of theory and practice focusing on the four major welding processes, automation, and fabrication. The student who completes the Welding and Fabrication Technologies certificate program has a choice to pursue employment or to matriculate in an associate degree program.

Asnuntuck Campus is an American Welding Society (AWS) Accredited Test Facility

Learning Outcomes:

- Gain detailed knowledge of welding principles as applied to modern manufacturing processes and applications.
- Acquire the requisite advanced skills necessary to welding in today's technological environment.
- Practice and adhere to shop safety rules as they pertain to industry standards.
- Correctly and safely assemble, disassemble, and operate an oxyfuel cutting station.
- Complete satisfactory welds using SMAW in the four standard welding positions (flat, horizontal, vertical, and overhead).
- Read and interpret engineering drawings/blueprints.
- Understand and apply the appropriate steps involved in fabricating a part from design, to layout, to finished product.
- Show manual dexterity/competence in performing acceptable weldments applying basic metallurgical principles.
- Prepare and weld coupons in accordance to various welding codes in preparation for certification.
- Operate the appropriate tools and processes to successfully meet fabrication goals.
- Select and use the appropriate welding specific metrology tools.
- Apply arithmetic, algebraic, geometric, and trigonometric operations applied to the welding trade.

Required Courses

- MFG 1000 - Math for Welders *Credits: 3*
- MFG 1479 - Career Awareness for Manufacturing *Credits: 1*
- MFG 1020 - Introduction to Welding *Credits: 4*
- MFG 1050 - Welding Theory I *Credits: 3*
- MFG 1028 - Blueprint Reading for Welders *Credits: 3*
- MFG 1049 - Introduction to Metal Fabrication *Credits: 3*
- MFG 1415 - Safety in the Workplace *Credits: 1*
- MFG 2081 - Advanced Welding *Credits: 3*
- MFG 2050 - Welding Theory II *Credits: 3*
- MFG 2073 - Welding Codes, Testing, and Certification *Credits: 3*
- MFG 2080 - Advanced Fabrication *Credits: 3*
- MFG 2070 - Welding Automation & Processes *Credits: 3*
- MFG 2067 - Metallurgy *Credits: 3*

Total Credits: 36

Water Management Certificate (WAMG-CC)

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.

Learning Outcomes:

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.

Required Courses

- CWM 1006 - Introduction to Utility Management *Credits: 3*
- ENV 1120 - Environmental and Energy Law and Regulations *Credits: 3*
- **OR** ENV 1100 - Environmental Regulations *Credits: 3*
- WMTR 1001 - Water Treatment and Distribution *Credits: 6 **
- WMTR 1002 - Special Topics in Water Treatment *Credits: 3 **
- **OR** WMTR 1003 - Special Topics in Water Distribution *Credits: 3 **
- **if both Connecticut Department of Public Health Water Treatment System and Water Distribution System Operator Certification Examinations are to be taken it is recommended that both WMTR 1001 and WMTR 1002 be taken.*

Total Credits: 15

Nursing & Health Careers

Clinical Coding Certificate (MCOD-CC-MX)

This certificate program prepares students for careers as clinical coders. Clinical coders are skilled in classifying medical data utilizing knowledge of medical terminology, anatomy, physiology, disease processes, and pharmacology. Clinical coding is important to healthcare organizations because coding accuracy influences public health policy, impacts revenues, and drives the assessment of healthcare outcomes.

PROFESSIONAL CERTIFICATION: A coding credential provides proof of competency in the field and is often a requirement for clinical coding-related and healthcare revenue management positions. Graduates of the Clinical Coding Certificate are eligible to sit for AHIMA coding certification exams including:

- Certified Coding Associate (CCA®)
- Certified Coding Specialist (CCS®)
- Certified Coding Specialist-Physician-based (CCS-P®)

Students may also choose to seek additional coding certification through the American Academy of Professional Coders (AAPC).

Certificate Learning Outcomes:

- Apply knowledge of data content structure and standards to apply classification system guidelines including International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10- CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10- PCS), Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System, Level II (HCPCS II), and Systematized Nomenclature of Medicine (SNOMED), and ensure health record documentation is complete and accurate.
- Protect health information by controlling access, ensuring information security, and understanding the legal and ethical issues in the use of health data.
- Utilize healthcare data to manage the revenue cycle of the healthcare organization through understanding of payment methods and systems in all care settings.
- Evaluate organization compliance with regulations and standards to support reimbursement.
- Understand and apply knowledge of pathophysiology, pharmacology, anatomy & physiology, medical terminology, computer concepts and computer applications as they relate to health information management.

PROGRAM APPROVAL STATEMENT

The CT State Middlesex Clinical Coding Certificate coding program is approved by the AHIMA Professional Certificate Approval Program. This designation acknowledges the coding program as having been evaluated by a peer review process against a national minimum set of standards for entry-level coding professionals. This process allows academic institutions to be acknowledged as offering an approved coding certificate program.

Value for Students

The AHIMA Professional Certificate Approval Program designation:

1. Identifies specialized programs that meet established coding educational standards
2. Stimulates improvement of educational standards through faculty development opportunities, and by involving faculty and staff in program evaluation and planning
3. Promotes a better understanding of the goals of professional coding education
4. Provides reasonable assurance that practitioners possess the necessary job skills upon entry into the profession

Program approval effective January of 2021 - January of 2024 with annual interim approval during these years.

Offered by the Middlesex campus of the CT State Community College only; AHIMA PCAP approval is limited to the Middletown location. The courses are offered fully online, allowing students to access the program from anywhere.

Eligible for Workforce Innovation and Opportunity Act (WIOA) funding.

Certificate Program Requirements (41 credits)

- HIMT 1110 - Introduction to Health Information Management *Credits: 3*
- HIMT 1000 - Medical Terminology *Credits: 3*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- BIO 2103 - Pathophysiology *Credits: 3*
- HIMT 2730 - Clinical Classification Systems I *Credits: 3*
- HIMT 2740 - Clinical Classification Systems II *Credits: 3*
- HIMT 1030 - Pharmacology in Health Information *Credits: 1*
- HIMT 2192 - Clinical Coding Professional Practice Experience I *Credits: 3*
- HIMT 2392 - Clinical Coding Professional Practice Experience II *Credits: 3*
- HIMT 2792 - Clinical Coding Professional Practice Experience III *Credits: 3*
- HIMT 2870 - Coding Specialist Certification Exam Preparation *Credits: 1*
- ENG 1010 - Composition *Credits: 3*

Total Credits: 41

Dental Assistant Certificate (DENT-CC-MA)

The CT State Manchester Dental Assistant program is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The Commission's web address is: <http://www.ada.org/en/coda>.

Program design prepares students for a career as a dental assistant through the combination of a science and clinically based curriculum. Dental assistant clinical and laboratory sessions are taught to competency and designed to adhere to the CODA (Commission of Dental Accreditation) Standards and the mandates in the *Connecticut Dental Practice Act*. Dental assistant students acquire the skills and knowledge necessary to become a Certified Dental Assistant (CDA) as integral members of a dental health team. This full-time program can be completed in 10 months.

Learning Outcomes:

Upon successful completion of all Dental Assistant Certificate Program requirements, graduates will:

- Demonstrate acquired knowledge and skills necessary to obtain an entry level position as a dental assistant.
- Exhibit the integrity, ethics, and professionalism that are necessary to ensure the delivery of quality dental care to a diverse population.
- Demonstrate professionalism and effective communication.
- Complete all three components of the Dental Assisting National Board Examination to earn the national distinction of Certified Dental Assistant (CDA).
- Explore current dental assistant employment opportunities.
- Be encouraged to stay current in dental procedures, skills, and technology through active participation in professional associations and continued education.

The program relies on a selective admission process which uses specific admissions criteria. To be eligible for this program, the following prerequisites must be met, eligibility for ENG 1010 and MATH 1000 or higher, and attendance at a dental assistant information session held at the college. Due to extensive academic coverage of patient care and human relations, admission criteria require that the students must meet eligibility or the equivalent for PSY 1011, BIO 1100, and COMM 1301. Interested candidates will be expected to have a history of academic success. Admission to the Dental Assistant program requires a separate application and an interview process. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Students have the option of taking the prerequisite courses at any of the Connecticut State Community College campuses.

Dental Assistant Program applicants are informed that there is an increased risk for the occurrence of occupational bloodborne exposure for healthcare professionals who treat patients in hospitals, clinics, and private practices. Applicants are provided access to the Occupational Safety and Health Administration's (OSHA), *Bloodborne Pathogens Standard* with the requirements to minimize risk of exposure in Title 29 of the Code of Federal Regulations (CFR) 1910.1030. <https://www.osha.gov/SLTC/bloodborne-pathogens/index.html>.

At Connecticut State Community College Manchester campus, students practice clinical procedures in an on-site, state-of-the-art, dental office setting that includes three treatment rooms complete with digital x-ray, electronic patient records and an instrument processing area. Courses include the study of dental anatomy dental, radiography, infection control, chairside assisting, dental materials, oral health promotion, and practice management. In addition, students complete a minimum of 300 hours, at a dental educational clinical site and at private dental practices.

Due to standards set by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit to a criminal background check before beginning their clinical experiences. Connecticut State Community College Manchester campus cannot be responsible for finding an alternate clinical placement for a student who fails to pass the background check. Students are advised to meet with the Dental Assistant Program Director to discuss degree completion requirements. A physical examination and

current immunizations are required of all students prior to beginning clinical rotations. Students are responsible for parking fees; uniforms; clinical supplies and miscellaneous expenses.

The program prepares students for the Dental Assisting National Board (DANB) examinations. Graduates will be eligible to take the Radiation Health and Safety (RHS), Infection Control (ICE), and General Chairside (GC) examinations. Upon successful completion of the three examinations, students will be awarded the credentials of "Certified Dental Assistants." (CDA.).

Required Courses

- PSY 1011 - General Psychology I *Credits: 3*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- COMM 1301 - Public Speaking *Credits: 3*
- DNAS 1023 - Chairside Dental Assisting *Credits: 4*
- DNAS 1031 - Oral Anatomy and Pathophysiology *Credits: 3*
- DNAS 1032 - Dental Materials *Credits: 4*
- DNAS 1033 - Dental Radiography *Credits: 4*
- DNAS 1034 - Oral Health Promotion *Credits: 1*
- DNAS 1035 - Dental Practice Management *Credits: 3*
- DNAS 1036 - Infection Control in Dentistry *Credits: 1*
- DNAS 1043 - Advanced Dental Radiology *Credits: 2*
- DNAS 2095 - Dental Assistant Clinical Practicum I *Credits: 2*
- DNAS 2195 - Dental Assistant Practicum II *Credits: 1*

Total Credits: 35

Dental Assisting Certificate (DENT-CC-TX)

The CT State-Tunxis program in Dental Assisting is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The Commission's web address is: <http://www.ada.org/en/coda>.

Students will learn chairside dental assisting and related office and laboratory procedures allowed by State law under the direction and supervision of the dentist.

Learning Outcomes:

Upon successful completion of all Dental Assisting Certificate Program requirements, graduates will:

- Demonstrate acquired knowledge and skills necessary to obtain an entry level position as a dental assistant.
- Exhibit the integrity, ethics, and professionalism that are necessary to ensure the delivery of quality dental care to a diverse population
- Demonstrate professionalism and effective communication.
- Complete all three components of the Dental Assisting National Board Examination to earn the national distinction of Certified Dental Assistant (CDA).
- Explore current dental assisting employment opportunities.
- Be encouraged to stay current in dental procedures, skills, and technology through active participation in professional associations and continued education.
- Students' complete requirements at The University of Connecticut School of Dental Medicine, community health centers/clinics, or private dental practices, which often lead to employment opportunities. The program prepares the students to be qualified and able to take the Dental Assisting National Board examinations to become Certified Dental Assistants.
- Be prepared for the Radiation Health and Safety and the Infection Control Exam components of the Dental Assisting National Board Examination to be qualified for Dental Assisting employment

Waiver of Licensure Guarantee

Upon successful completion of the certificate program in Dental Assisting, the graduate is eligible to take the General Chairside Dental Assisting National Board exam to become a Certified Dental Assistant. Students must pass all three components (Infection Control Examination; Radiation Health and Safety Examination; and the General Chairside Examination) of the Dental Assisting National Board to become a Certified Dental Assistant.

Dental assistants in Connecticut must successfully complete the Dental Assisting National Board's Infection Control exam or an infection control competency assessment administered by a Commission on Dental Accreditation(CODA) accredited dental education program in Connecticut. Dental assistants in Connecticut must also successfully complete the Dental Assisting National Board's Radiation Health and Safety exam to legally expose patients for radiographic imaging.

Students/Candidates who live/work or plan to live/work outside of Connecticut should verify the licensing/credentialing required for dental assistants in that state to ensure that credentialing will be accepted. We suggest that you research the Dental Assisting National Board's website listings that provide requirements for each state. The Dental Assisting National Board webpage link is provided below for your convenience.

<https://www.danb.org/Home/Meet%20State%20Requirements/State%20Specific%20Information.aspx>

Special Admission Requirements:

Dental Assisting Certificate Program Application deadline is June 1st (prior to the Fall semester for which you wish to be considered for the program). It is the student's responsibility to make sure that his/her file is complete to be considered for

admission into the Program. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

As a Selective Admissions Program, it is strongly suggested that candidates submit their application material early for review and consideration for initial Program admission. At a minimum, candidates should submit their application material at least 3 weeks in advance of the deadline to ensure timely receipt. A maximum of 24 applicants will be offered a position in the class.

All students who have not completed the equivalent of English Composition (ENG 1010) must place into the ENG 1010 course level to have their program applications considered.

A GPA of 2.0 or better is required for entry into the program.

The CT State-Tunxis Dental Assisting Program is approved as an Eligible Training Provider (ETP) through the Connecticut Department of Labor under the Workforce Innovation and Opportunity Act (WIOA).

Dental Assisting Application Process for Admission

Attendance at a Dental Assisting information session is required. For information on upcoming information sessions and to reserve a seat, visit the CT State Selective Admissions Webpage. Information sessions are held throughout the year. However, it is recommended that students attend an information session in the fall prior to the June 1st deadline to learn about the Tunxis Dental Assisting program, application process and requirements, and careers in dental assisting. Students must "sign in" at the session to receive credit for attendance. All applicants must submit the following to the Admissions Office:

- Completed Connecticut State Community College Application
- Dental Assisting program application.
- Proof of immunization: Measles, Mumps, Rubella, Varicella (MMRV), Covid
- Proof of high school completion in the form of General Education Development Test (GED), diploma, or transcript.
- If applicable, have your "official" college or university transcripts sent directly from the schools to Tunxis. Transcripts must be official.

Students must have the following abilities: The following additional essential functions are also expected of all students with or without accommodations. Students must be able to fulfill the essential functions of the job without endangering patients or other health care workers. Students with disabilities may be eligible for accommodation.

- proficiency in their use of the English language and must possess effective oral and written skills in order to accurately transmit appropriate information to patients/clients, faculty, colleagues, and other healthcare workers
- gross and fine motor skills sufficient to lift, position, and operate equipment
- interpersonal skills such that they are capable of interacting with individuals, families, and groups from a variety of social, economic, and ethnic backgrounds
- the physical mobility necessary to move from place to place in small spaces as well as full range of motion, manual and finger dexterity
- physical endurance that enables them to stay on task for a prolonged period while sitting, standing, or moving
- a high degree of hand-eye coordination
- auditory ability and other sensory skills must be sufficient to monitor and assess the health needs and diagnose the oral conditions of patients as well as maintain patient safety
- visual acuity and adequate spatial perception
- intact proprioception (the ability to sense pressure/force)
- present a professional appearance, attitude, and performance level

Criminal Background Checks

Some clinical learning sites require students to undergo a background check for felony convictions. Background checks are initiated in the fall semester to be completed prior to the spring semester clinical externship experiences. Students are informed of this requirement during information sessions, program orientation, and handbook policy. The paperwork is initiated during the DNAS 1042 Research Seminar for the Dental Assistant.

Students who do not pass the background check may be excluded from the clinical site and may not be able to meet the competencies required for the program. The ability to obtain a license/credentials/certification may be affected due to a felony conviction.

This program is accredited by the Commission on Dental Accreditation of the American Dental Association, a specialized accrediting body recognized by the Commission on Recognition of Post-secondary Accreditation and by the United States Department of Education. The Commission on Dental Accreditation may be contacted at 312.440.2719 or at 211 East Chicago Avenue, Chicago, Illinois 60611.

Other Requirements

As a health care professional/student, you are at an increased risk of contracting blood borne infectious diseases. The Program is not responsible for any medical cost associated with you contracting any communicable disease during or prior to your education and/or participation in Tunxis Dental Assisting Program sponsored functions. If you contract a blood borne infectious disease before or during your enrollment, appropriate health experts must be consulted to determine your ability to treat patients.

A GPA of 2.0 or better is required for progression in the program.

Immunizations

In addition to the CT State College Community College immunization requirements, students are required to have additional immunizations (Hepatitis B, Tetanus). Tuberculosis testing is required. Students will receive a packet of the information at the time of acceptance into Tunxis Dental Assisting Program and available in student handbook.

Dental Services

*Evening appointments are only available from September to May.
Services are provided at the UCONN School of Dental Medicine.*

Dental services are determined after a dental exam and based upon patient/client needs. The procedures may include prophylaxis, fluoride treatment, x-rays, sealants, nutritional counseling, oral hygiene instructions, and oral cancer screenings. All clients in need of additional dental care beyond the scope of dental hygiene practice receive a referral.

All students are supervised by faculty who are licensed dental professionals.

The clinic accepts all patients/clients who meet the educational needs of the program. The dental hygiene clinic accepts direct pay, as well as Husky.

To make an appointment in this clinic please email Dental Scheduler or call 860-773-1681 Monday through Thursday, during the academic year which is August 25 to May 1.

Required Courses

- DNAS 1030 - Dental Materials for the Dental Assistant *Credits: 3*
- DNAS 1040 - Essential Chairside Functions for the Dental Assistant *Credits: 4*
- DNAS 1042 - Research Seminar for the Dental Assistant *Credits: 2*
- DNAS 1044 - Preventative Dentistry for the Dental Assistant *Credits: 3*
- DNAS 1046 - Oral Anatomy for the Dental Assistant *Credits: 3*
- DNAS 1047 - Principles of Radiation for the Dental Assistant *Credits: 3*
- DNAS 1048 - Radiography Theory & Practice for the Dental Assistant *Credits: 3*
- DNAS 1049 - Practice Management, Laws, and Ethics for the Dental Assistant *Credits: 2*
- DNAS 1095 - Dental Assisting Clinical Externship Experience *Credits: 7*
- COMM 1302 - Interpersonal Communication *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*

Total Credits: 33

Dental Hygiene, AS (DHYG-AS)

The Tunxis Campus of CT State Community College Dental Hygiene program provides the skills and knowledge necessary to function effectively as an integral member of the dental health team. The program has a 30-year affiliation with University of Connecticut (UConn) School of Dental Medicine. The program utilizes the facilities of the UConn School of Dental Medicine, federal, state and local hospitals, and community health clinics. Graduates of the program are eligible to take the examinations for licensure given by National and Commission on Dental Competency Assessments (CDCA). Graduates who pass both boards are eligible for a Connecticut license. The program is the only state supported dental hygiene program in Connecticut.

The Dental Hygiene program's faculty are highly qualified with a wide range of clinical and community experience.

- Dental classes are held in a state-of-the-art simulated dental clinic and lab facilities.
- Tunxis Campus of CT State Community College is the only publicly supported program in Connecticut to provide a degree in Dental Hygiene.
- Students have many opportunities to participate in community outreach service learning projects on the local, national, and international level.

Learning Outcomes:

The Dental Hygiene Program will utilize the following graduation outcomes in assessing students. CT State Tunxis dental hygiene students strive for achievement of these abilities as well as traditional grades.

- **Health Promotion** - develops, implements, and evaluates health promotion strategies directed toward assisting individuals as well as diverse populations achieve oral wellness as a component of overall health and awareness.
- **Process of Care and Evidence-Based Practice** - provides care to all clients without regard to economic, social, cultural, religious, or health status, based upon an individualized human need, evidence-based practice which includes assessment, diagnosis, planning, implementation, education, evaluations, and documentation.
- **Teamwork** - effectively engages in interpersonal activities and teamwork.
- **Technology** - appropriately and effectively uses technology to accomplish assigned tasks.
- **Oral and Written Communication** - delivers oral presentations or written text using appropriate information and/or analysis for the rhetorical situation.
- **Critical Thinking and Problem Solving** - identifies the problem or deficit, formulates an argument, explains, and analyzes relationships clearly, draws reasonable inferences, and conclusions that are logical.
- **Ethical and Professional Standards** - identifies and reflects critically on ethical issues presented in classroom, simulation, community settings, or clinical patient care. Demonstrates professionalism across the curriculum in all aspects of the program.

Career Fields for Dental Hygiene Grads: Dental hygienists may work in a variety of health care settings such as private dental offices, schools, public health clinics, hospitals, managed care organizations, correctional institutions, nursing homes or in a corporate environment. In addition to the clinical role, dental hygienists may also work in an administrative capacity in any of these locations.

Accreditation and Affiliation: The CT State Tunxis program in Dental Hygiene is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The Commission's web address is: <http://www.ada.org/en/coda>.

Licensure for Graduates: Dental hygiene students at the Tunxis Campus have excellent outcomes on the Dental Hygiene National and Regional Clinical Boards which qualifies them to apply for licensure to practice.

Selective Admissions Criteria:

- Completion of the Admission Test for Dental Hygiene (ATDH). Exam is administered through the American Dental Association. Application and guide may be found at: **Admission Test for Dental Hygiene and Users Guide**. Students should release scores to Tunxis Dental Hygiene Program.
- Applicant must complete CHEM 1110, ENG 1010, MATH 1010 or MATH 1011 or higher, and BIO 2111, with a minimum combined GPA in prerequisite courses of 2.7. A minimum of a "C" must be achieved in each prerequisite course. Pass/Fail is not accepted.
- Applicant must take science courses within 5 years of applying to the program; and all science courses must be 4 credits with on ground laboratory components. Grades will be averaged for any science course repeated within this time frame.
- Applicant must attend a dental hygiene information session.
- Applicant is encouraged to enroll in the Health Careers Pathway.
- Applicant is encouraged to complete general education courses prior to applying to the program.

Application Process for Admission

The applicant must submit ALL of the following by the deadline

- All college transcripts
- Two letters of recommendation: professional or academic in nature
- A personal statement: Please provide a comprehensive biographical sketch of no more than 250 words that includes information to assist the Admissions Committee in "getting to know you better." Examples of information that might be included in your biographical sketch include but are not limited to: details regarding dental hygiene procedures you have observed, a description of community service projects in which you have participated, and information concerning your interests, abilities and attitudes that have motivated you to make the commitment required for a career in dental hygiene."
- Proof of a minimum of 4 hours of shadowing a licensed dental hygienist

Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

In addition to the admission requirements prior to the start of the first semester of the program:

- Applicant must complete a General Psychology, a 200 level Anatomy and Physiology II, Microbiology, and DHYG 2005 - Nutrition for Health Professionals with a grade of C or better. A minimum of a "C" must be achieved in each prerequisite course. Pass/Fail is not accepted. Students must complete First Year Experience or obtain a waiver.
- If these courses are in progress at the time of interview, applicant must provide mid-terms grades for evaluation.
- Final acceptance of the applicant is contingent upon successful completion of these courses.
- Consideration is given to the number of college courses successfully completed.

Non-Course Requirements for Dental Hygiene students

Immunizations

In addition to the State College immunization requirements, students are required to be immunized for tetanus, hepatitis B, Covid-19, and annual influenza. Students will receive a packet of information at the time of acceptance into the CT State Tunxis Dental Hygiene Program.

Criminal Background Checks

Some clinical learning sites require students to undergo a background check for felony convictions. Students who do not pass the background check may be excluded from the clinical site and may not be able to meet the competencies required for the program.

Medical Emergency Response

Students are required to complete First Aid, Emergency Oxygen, and CPR at the professional level or healthcare provider or BLS. American Red Cross and American Heart Association two-year certifications are only accepted. Courses must be completed in August of the year the student begins the dental hygiene program.

Clinical Site

Clinical learning experiences are planned as an integral part of the dental hygiene courses and are held at a variety of health care settings, such as hospitals, extended care facilities, and selected community health centers. Students are responsible for arranging their own transportation to and from assigned clinical sites. Clinical experiences may be assigned during daytime, evening, or weekend hours. Assignment of clinical sites is at the discretion of the dental hygiene faculty.

Waiver of Licensure Guarantee

Upon successful completion of the associate of science degree in Dental Hygiene, the graduate is eligible to take the Dental Hygiene National Boards and apply for a license. The completion of the dental hygiene program does not insure a license to practice dental hygiene. Licensure requirements and procedures are the responsibility of the Connecticut Department of Public Health.

Felony Conviction

"The Connecticut Department of Public Health has the authority to deny licensure to an individual who has committed or been found guilty of committing a felony or an act which does not conform to the accepted standards of the profession. "

Other Requirements

As a health care professional/student, you are at an increased risk for contracting blood borne infectious diseases. The School of Dental Hygiene is not responsible for any medical cost associated with you contracting any communicable disease during or prior to your education and/or participation in the CT State Tunxis Dental Hygiene Program sponsored functions. If you contract a blood borne infectious disease before or during your enrollment appropriate health experts must be consulted to determine your ability to treat patients.

Dental Hygiene Special Admissions for High School Graduates:

The CT State Tunxis Dental Hygiene Program will accept high school graduates to begin the three-year sequence of courses.

The applicant must meet the following admission's criteria:

- High School Diploma
- SAT scores: Math 530 or greater, English reading score of 25+. SATs need to be taken within two years of application.
- High School GPA 3.0 or greater.

All applicants must take prerequisite courses in the sequence provided and maintain a C or better. If a student does not maintain a C in each course, the student will not be guaranteed automatic acceptance into the Dental Hygiene Program but may apply for the regular selective admissions process.

Special Admission Requirements Dental Hygiene Associate Degree Program:

In addition to the academic admission requirements for Dental Hygiene, and for continual progression in the program, the following essential functions are also expected of all students with or without accommodations. Students must be able to fulfill these essential functions of the job without endangering patients or other healthcare workers. Students with Disabilities may be eligible for accommodations.

Students must have the following abilities:

- proficiency in their use of the English language and must possess effective oral and written skills in order to accurately transmit appropriate information to patients/clients, faculty, colleagues, and other healthcare workers
- gross and fine motor skills sufficient to lift, position, and operate equipment
- interpersonal skills such that they are capable of interacting with individuals, families and groups from a variety of social, economic and ethnic backgrounds
- the physical mobility necessary to move from place to place in small spaces as well as full range of motion, manual and finger dexterity
- physical endurance that enables them to stay on task for a prolonged period while sitting, standing or moving
- a high degree of hand-eye coordination

- auditory ability and other sensory skills must be sufficient to monitor and assess the health needs and diagnose the oral conditions of patients as well as maintain patient safety
- visual acuity and adequate spatial perception
- intact proprioception (the ability to sense pressure/force)
- present a professional appearance, attitude, and performance level, maintain personal health and be emotionally stable

Admission Requirements and Prerequisite Courses (these courses are included below)

- BIO 1210 - General Biology I *Credits: 4*
- ENG 1010 - Composition *Credits: 3*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- MATH 1010 - Intermediate Algebra *Credits: 3*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- DHYG 2005 - Nutrition for Health Professionals *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1002 - Math for Science and Technology *Credits: 3*
- **OR** MATH 1010 - Intermediate Algebra *Credits: 3*
- **OR** MATH 1011 - Applied Algebra with Modeling *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1210 - General Biology I *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (74 credits)

- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- SOC 1001 - Principles of Sociology *Credits: 3*
- DHYG 2005 - Nutrition for Health Professionals *Credits: 3*
- DHYG 2008 - Dental Hygiene Professionalism, Ethics, and Jurisprudence *Credits: 2*
- DHYG 2009 - Fundamentals of Dental Hygiene Theory *Credits: 3*
- DHYG 2010C - Fundamentals of Dental Hygiene Clinic *Credits: 2*
- DHYG 2012 - Diagnostic Radiography for the Dental Hygienist *Credits: 4*
- DHYG 2025 - Dental Materials for the Dental Hygienist *Credits: 2*
- DHYG 2028 - Histology & Oral Anatomy for the Dental Hygienist *Credits: 4*
- DHYG 2033 - Oral Medicine and Pathology *Credits: 2*
- DHYG 2139 - Dental Hygiene II Theory *Credits: 3*
- DHYG 2140C - Dental Hygiene II Clinic *Credits: 3*
- DHYG 2259 - Dental Hygiene III Theory *Credits: 3*
- DHYG 2260C - Dental Hygiene III Clinic *Credits: 4*
- DHYG 2362 - Periodontics *Credits: 2*
- DHYG 2364 - Pharmacology *Credits: 3*

- DHYG 2267 - Community Oral Health *Credits: 3*
- DHYG 2375 - Pain Control and Local Anesthesia for the Dental Hygienist *Credits: 3*
- DHYG 2379 - Dental Hygiene IV Theory *Credits: 2*
- DHYG 2380C - Dental Hygiene IV Clinic *Credits: 4*
- DHYG 2268 - Civic Engagement for the Dental Hygienist *Credits: 3*

Total Credits: 96

Community Patients

Better Oral Health Starts at the Tunxis Dental Hygiene Clinic *at the UConn School of Dental Medicine*

The Tunxis Dental Hygiene Clinic provides community members with high-quality oral health education and preventive services delivered by students under the supervision of our professional dental hygiene faculty. In delivering these services to you, our students receive hands-on clinical instruction and become prepared to act as healthcare clinicians and leaders.

Dental Services

Evening appointments are only available from September to May.

Dental services are determined after a dental exam and based upon patient/client needs. The procedures may include prophylaxis, fluoride treatment, x-rays, sealants, nutritional counseling, oral hygiene instructions, and oral cancer screenings. All clients in need of additional dental care beyond the scope of dental hygiene practice receive a referral.

All students are supervised by faculty who are licensed dental professionals.

The clinic accepts all patients/clients who meet the educational needs of the program. The dental hygiene clinic accepts direct pay, as well as Husky.

To make an appointment in this clinic please email Dental Scheduler or call 860-773-1681 Monday through Thursday, during the academic year which is August 25 to May 1.

Diagnostic Medical Sonography, AS (DMSN-AS)

The associate degree program in Diagnostic Medical Sonography (DMS) prepares students for employment as entry-level sonographers in hospitals, outpatient clinics, and medical offices. The program provides individuals with the academic and technical skills necessary to perform abdominal, obstetrical, and gynecological, and vascular sonography procedures. Upon completion of the program, students will be eligible to apply to take the national examination from the American Registry of Diagnostic Medical Sonographers (ARDMS) and/or American Registry of Radiologic Technologists (ARRT). The program requires 24 months of full-time study. Students are assigned to clinical practicum at affiliates throughout the state of Connecticut.

Learning Outcomes:

- Students will apply effective verbal communication skills with classmates, instructors, patients, sonographers, and physicians.
- Students will utilize effective written communication skills with instructors, sonographers, and physicians.
- Students will demonstrate professional and respectful behavior in all interactions.
- Students will evaluate and assess patient requisition in order to perform proper sonographic procedures.
- Students will examine the sonographic and Doppler appearances of iatrogenic, degenerative, inflammatory, traumatic, neoplastic, infectious, obstructive, congenital, metabolic, and immunologic disease practices
- Students will analyze the relationships between various disease processes and hemodynamic states
- Students will explore the various imaging and testing modalities
- Students will examine the effects of pharmacology on disease processes and on sonographic findings
- Students will demonstrate exceptional patient care skills.
- Students will provide a safe environment for patients.
- Students will detect normal anatomy and pathology on sonographic images.
- Students will adhere to the As Low as Reasonably Achievable (ALARA) principle.
- Students will maintain high values congruent with the professional code of ethics and the scope of practice while adhering to national, institutional, and/or departmental standards and procedures regarding imaging and patient care.
- Students will analyze professional publications.
- Students will utilize professional web sites.

The CT State Community College Gateway Campus Diagnostic Medical Sonography Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) by the recommendation of the Joint Review Committee of Education in Diagnostic Medical Sonography (JRC- DMS). Accreditation is in the Abdomen-Extended, OBGYN and Vascular concentration. Commission on Accreditation of Allied Health Education Programs (CAAHEP) 9355 113th St. N, #7709, Seminole, FL 33775, Phone: 727-210-2350, Fax: 727-210-2354, www.caahep.org The Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS) is a nonprofit organization in existence to establish, maintain and promote quality standards for educational programs in Diagnostic Medical Sonography (DMS). JRC-DMS 6021 University Boulevard, Suite 500, Ellicott City, MD 21043, www.jrcdms.org

Students will be charged the Supplemental Course (program) Fee Level 1 every fall and spring semesters while in the program.

Admission Process

The Diagnostic Medical Sonography program (DMS) is a selective admissions program. All students must first apply to the Connecticut State Community college. Unless waived, all applicants must take placement tests in reading, English and mathematics. Students must attend a specific DMS program information session within one year prior to applying to the program and complete the sign in documentation. Students must have a minimum GPA of 2.7 and complete the following courses prior to the application deadline.

- ENG 1010 - Composition (grade of "C" or higher)
- MATH 1610 Precalculus (grade of "C" or higher)
- PHYS 1101 - Physics for Life Sciences (grade of "C" or higher)

- BIO 2111 - Anatomy & Physiology I (grade of "C" or higher taken within the past five years of the program start date)
- BIO 2112 - Anatomy & Physiology II (grade of "C" or higher", and taken within the past five years of the start date)
- *Students may apply to the program while in the process of completing BIO 2112 during the spring semester of application year.*

Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Criminal Background checks and Toxicology screenings.

Clinical sites require criminal background checks and toxicology screening completed on any DMS student who will be attending a clinical rotation at their facility. Some clinical sites require additional FASC III background check checks at an additional cost.

Students must follow instructions for obtaining these tests.

The following guides the response to a positive toxicology screening for any student

- All specimens identified as non-negative/positive on the initial test shall be confirmed, reviewed, and interpreted by the vendor.
- The student is required to provide documentation by a healthcare provider in the event there is a medical explanation for a positive result (i.e., the result of a prescribed medication). In accordance with federal law, a positive toxicology screen for legally prescribed marijuana can prohibit a student from being placed in a clinical setting that accepts federal funding.
- If a student challenges a result, only the original sample can be retested.

Any student that does not pass a background check or toxicology screen may be prevented from participating in a clinical assignment per facility contractual agreements. Results of student background checks and toxicology screenings do not become a part of the student's educational records, as defined by the Family Educational Rights and Privacy Act (FERPA).

Felony Conviction:

The ARDMS and ARRT investigate all potential violations to determine eligibility for certification. For further information please visit the website www.ardms.org and www.arrt.org.

Health Requirements:

All Students are required to have a physical examination performed within 12 months of the DMS program start date, with documentation of ability to perform the technical standards with no restrictions. In addition to the college's healthcare requirements, a DMS health assessment form and immunization records must be completed and submitted electronically by the student into the health form tracking system, by the assigned date, prior to attending clinical rotation. The DMS technical standards can be found on GCC and SDMS Technical Standards - Gateway Community College (gatewayct.edu)

Additional program costs

DMS Students will be responsible for additional costs for the program which may include the following:

- Yearly student membership to the Society of Diagnostic Medical sonography (SDMS)
- Uniforms
- Physical examination, blood work, immunizations, vaccinations CPR training
- Textbooks
- Liability insurance
- Ergonomic scan kit
- Transportation and associated costs for clinical sites
- Electronic management system subscription to Trajecsyst and Castle branch.
- Toxicology screening(s)
- Background check(s)

- Onboarding fees for clinical affiliates
- National certification examination(s) (Sonographic Physics and instrumentation, Abdomen-Extended, OBGYN, and Vascular)
- More information regarding these costs is available online at the DMS webpage, and in the DMS student handbook, financial aid information is available through the Connecticut State Community College Financial Aid office.

Graduation requirements:

In addition to the College's general requirements the program requires a minimum grade of "C "or higher in all mathematics, science, pre-requisite and DMS program specific course. In addition, DMS students are required to pass all clinical practicums and internships with a grade of "P." Students must also successfully complete all the program's clinical competencies. The courses in the DMS program are designed to build upon the knowledge learned in the prior course, therefore all DMS courses must be taken in sequence.

Program Accreditation by CAAHEP, allows for DMS students to be eligible to take their national examinations through the American Registry of Diagnostic Sonography (ARDMS) in Abdomen-extended, OBGYN and vascular up to 60 days prior to graduation, making them eligible for employment upon graduation. Graduates are also eligible to apply for certification through the American Registry of Radiologic Technology.

General Education Courses (23 credits)

- ENG 1010 - Composition *Credits: 3* (pre-admission requirement)
- MATH 1610 - Precalculus *Credits: 4* (pre-admission requirement)
- COMM 1301 - Public Speaking *Credits: 3*
- PHYS 1101 - Physics for Life Sciences *Credits: 4* (pre-admission requirement)
- PSY 1011 - General Psychology I *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (56 credits)

- BIO 2111 - Anatomy & Physiology I *Credits: 4* (pre-admission requirement)
- BIO 2112 - Anatomy & Physiology II *Credits: 4* (pre-admission requirement)
- DMS 1000 - Principles of Sonography *Credits: 3*
- DMS 1000L - Principles of Sonography Lab *Credits: 2*
- DMS 1120 - Abdomen/Small Parts Sonography I *Credits: 3*
- DMS 1120L - Abdomen/Small Parts Sonography I Lab *Credits: 1*
- DMS 1121 - Obstetrics and Gynecology Sonography I *Credits: 3*
- DMS 1121L - Obstetrics and Gynecology Sonography I Lab *Credits: 1*
- DMS 1095 - Clinical Practicum I *Credits: 2*
- DMS 1123 - Vascular Sonography I *Credits: 3*
- DMS 1123L - Vascular Sonography 1 Lab *Credits: 1*
- DMS 1124 - Sonographic Physics and Instrumentation I *Credits: 4*
- DMS 1195 - Clinical Practicum II *Credits: 2*
- DMS 2095 - Clinical Internship I *Credits: 4*
- DMS 2221 - Abdomen/Small Parts Sonography II *Credits: 3*
- DMS 2222 - Vascular Sonography II *Credits: 3*
- DMS 2195 - Clinical Practicum III *Credits: 3*
- DMS 2295 - Clinical Internship II *Credits: 1*
- DMS 2225 - Obstetrics and Gynecology Sonography II *Credits: 3*
- DMS 2226 - Advances in Sonography Seminar *Credits: 3*
- DMS 2395 - Clinical Practicum IV *Credits: 3*

Total Credits: 79 (Pre-Program Credits: 19)

EMT to Paramedic Pathway Certificate (EMTC-CC)

The EMT (Emergency Medical Technician) to Paramedic Pathway certificate prepares students to sit for the national Emergency Medical Technician-Basic certification exam. It also meets the educational requirements for entry into the Paramedic Certificate and Associate Degree Programs. This certificate provides graduates with the skills to enter into the job market in a field with high demand and consistent employment opportunities.

Learning Outcomes:

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

- Demonstrate the knowledge, skills, and behaviors necessary to function as competent entry-level Emergency Medical Technicians (Basic)
- Demonstrate knowledge of the human body and how it functions, as well as how diseases, disorders, and injuries impact that function.
- Demonstrate effective verbal and written communication skills and use of medical terminology.
- Identify the roles and responsibilities of the Emergency Medical Technician.
- Apply ethical, logical, critical, and analytical processes in identifying problems, alternative solutions and making informed decisions related to the prehospital/emergency healthcare environment.
- Sit for the Emergency Medical Technician-Basic certification exam

Required Courses

- EMT 1000 - Emergency Medical Technician *Credits: 6*
- MDAS 1025 - Medical Terminology for Clinical and Administrative Professions *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- MATH 1010 or higher *Credits: 3-4*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*

Total Credits: 19-20

Exercise Science Studies - CSCU Transfer Degree, AA (EXSC-AA-TAP)

The Exercise Science Transfer Ticket Program is designed to provide fundamental and theoretical knowledge to transfer and succeed in a baccalaureate exercise science program. It also provides the practical skills necessary to assume the role of a health fitness professional in commercial and clinical settings. With an emphasis on exercise physiology and health, the program integrates cutting edge research with fundamental theories of learning and basic clinical skills. This program offers the transfer student a transfer level mathematics course and an increased number of general education courses creating a well-rounded base in order to continue with further education.

Learning Outcomes:

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

- Demonstrate an understanding of human anatomy and physiology, exercise physiology and knowledge in a holistic wellness model that promotes health beyond just the physical aspect.
- Demonstrate sound knowledge and clinical skills needed for health screenings, exercise testing and exercise prescription with a variety of populations.
- Demonstrate an understanding of a variety of public health concerns, including physical activity, nutrition, chronic disease and disability, and human performance.
- Develop leadership, interpersonal, and communication skills, which lead to increased collaboration with a variety of health care professionals in a multidisciplinary approach to wellness.
- Practice sound, prudent, and ethical functions necessary in health fitness and allied health professions.
- Develop an understanding of the skills, knowledge, abilities and continued education needed to progress in the Exercise Science and health-related fields.

Career opportunities available in Human Performance Centers, Personal Training, Wellness Centers, Rehabilitation Centers, Community Centers

Framework Courses (32-33 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- **OR** BIO 1210 - General Biology I *Credits: 4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (28 credits)

- EXSC 1001 - Introduction to Exercise Science *Credits: 3*
- EXSC 2010 - Sports Nutrition *Credits: 3*
- **OR** EXSC 2031 - Exercise Programming for Clinical Populations *Credits: 3*
- **OR** HPE 2040 - Introduction to Athletic Training *Credits: 3*
- EXSC 2030 - Exercise Testing and Program Design *Credits: 4*
- EXSC 2032 - Aspects of Strength and Conditioning *Credits: 3*
- EXSC 2040 - Exercise Physiology with Lab *Credits: 4*
- EXSC 2050 - Kinesiology with Lab *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- EXSC 2095 - Field Placement in Exercise Science *Credits: 3*

Total Credits: 60-61

Exercise Science, AS (EXSC-AS)

The Exercise Science Program is designed to provide fundamental and theoretical knowledge as well as practical skills necessary to assume the role of a health fitness professional in commercial and clinical settings. With an emphasis on exercise physiology and health, the program integrates cutting edge research with fundamental theories of learning and basic clinical skills. Graduates of the program will be prepared for a career in health fitness and will demonstrate sound communication skills, lifelong learning, safe and effective care, within their legal scope, and compassion for those they work with.

Learning Outcomes:

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

- Demonstrate an understanding of human anatomy and physiology, exercise physiology and knowledge in a holistic wellness model that promotes health beyond just the physical aspect.
- Demonstrate sound knowledge and clinical skills needed for health screenings, exercise testing and exercise prescription with a variety of populations.
- Demonstrate an understanding of a variety of public health concerns including physical inactivity, nutrition, chronic disease and disability and human performance.
- Develop leadership, interpersonal, and communication skills which lead to increased collaboration with a variety of health care professionals in a multidisciplinary approach to wellness.
- Practice sound, prudent, and ethical functions necessary in health fitness and allied health professions.

Career Opportunities are available in:

- Human performance Centers
- Personal Training
- Wellness Centers
- Rehabilitation Centers
- Corporate Wellness Centers
- Community Centers

General Education Courses (22-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- **OR** BIO 1210 - General Biology I *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (38 credits)

- EXSC 1001 - Introduction to Exercise Science *Credits: 3*
- EXSC 2030 - Exercise Testing and Program Design *Credits: 4*
- EXSC 2031 - Exercise Programming for Clinical Populations *Credits: 3*
- EXSC 2032 - Aspects of Strength and Conditioning *Credits: 3*
- EXSC 2040 - Exercise Physiology with Lab *Credits: 4*
- EXSC 2050 - Kinesiology with Lab *Credits: 4*
- EXSC 2095 - Field Placement in Exercise Science *Credits: 3*
- BIO 1011 - Introduction to Nutrition *Credits: 3*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- ENG 1020 - Composition II and Literature *Credits: 3*

Total Credits: 60-62

Health Career Pathway Certificate (HLCP-CC)

The Health Career Pathway Certificate program is designed to assist students in achieving success in health care programs. Students will be provided with an overview of the various health career professions. Credits from this program may be applied toward health care program requirements within Connecticut State Community College. Completion of the certificate does NOT guarantee acceptance into health care programs. Students are responsible for verifying specific requirements for their program of interest.

Learning Outcomes:

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
- Demonstrate an understanding of the impact of psychological principles and how they relate to the health care field
- Demonstrate critical thinking, logical reasoning, and problem-solving skills
- Demonstrate competence in written and oral communication
- Explain the methods of scientific inquiry that lead to the acquisition of knowledge
- Communicate using appropriate scientific terminology
- Define and apply college success and resilience strategies
- Recognize cultural identity and value of diversity

Credits from this program may be applied toward nursing and allied health program requirements. Students are responsible for verifying specific requirements of their program of interest.

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

Course recommendations vary for students pursuing nursing or other allied health professions. Students should meet with their Guided Pathway Advisor prior to registering for courses.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- MATH 1002 - Math for Science and Technology *Credits: 3*
- OR MATH 1010 - Intermediate Algebra *Credits: 3*
- OR MATH 1011 - Applied Algebra with Modeling *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- OR CHEM 1210 - General Chemistry I *Credits: 4*
- OR PHYS 1100 - Introductory Physics *Credits: 4 or higher*
- BIO 1005 - Introduction to Biology *Credits: 4*
- OR BIO 1210 - General Biology I *Credits: 4*
- OR BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- CCS 1001 - College & Career Success *Credits: 3*

Total Credits: 28

Health Information Technology - Data Management, AS (HITD-AS)

Health information professionals are involved in the design, collection, storage, utilization, and transmission of data required to meet the professional, legal, financial, and administrative record-keeping requirements of healthcare delivery systems. They work with clinical, financial, epidemiological, administrative, and coded healthcare and insurance data.

The Health Information Technology - Data Management program provides an understanding of the many aspects of the emerging field of the healthcare technology field. This associate degree program provides a concentration in data management and will provide students the skills necessary to enter the job market in a health information technician role.

Accreditation Statement

The HEALTH INFORMATION MANAGEMENT accreditor of Connecticut State Community College Middlesex is the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). The College's accreditation for ASSOCIATE degree in HEALTH INFORMATION TECHNOLOGY - Data Management has been reaffirmed through 2029-2030. All inquiries about the program's accreditation status should be directed by mail to CAHIIM, 200 East Randolph Street, Suite 5100, Chicago, IL, 60601; by phone at (312) 235-3255; or by email at info@cahiim.org.

Program Outcomes for Academic Years 2020-2021, 2021-2022, and 2022-2023

Graduation rate definition: The percentage of a school's first-time, first-year undergraduate students who complete their program within 150% of the published time for the program.

- 2021 Graduation Rate for first-time, first-year students: 18%
- 2022 Graduation Rate for first-time, first-year students: 25%
- 2023 Graduation Rate for first-time, first-year students: 0%*

**There were no first-time, first year students in the 2023 graduate cohort; all of the 2023 graduates were transfer students.*

Employment rate definition: The percentage of graduates from a program who are employed within a specified time frame (6 months). Generally, graduates pursuing further education are not included in the total.

- 2021 Graduates Employment Rate: 100%
- 2022 Graduates Employment Rate: 66%
- 2023 Graduates Employment Rate: 83%

4-year undergraduate program entry rate/Academic progression rate definition: The percentage of a school's graduates who progress to a 4-year undergraduate program upon completion.

- 2021 Graduates Academic Progression Rate: 50%
- 2022 Graduates Academic Progression Rate: 25%
- 2023 Graduates Academic Progression Rate: 83%

Program Admission

As a Selective Admissions Program, applicants must meet requirements in addition to the CT State general application.

Application available:

- For a Spring semester start: June 1 to December 1
- For a Fall 2025 start: October 1 to August 1

Admission Requirements:

- Must attend Health Information Technology information session within one year prior to the application deadline.
- Course Requirements:
 - ENG 1010 Composition with a "C" or better.

- BIO 1111 Cell Biology with Organ Systems with a C or greater OR the prerequisite course(s) required for BIO 2111 Anatomy & Physiology I eligibility (i.e., BIO 1210 General Biology with a C or greater). Completion of BIO 2111 Anatomy & Physiology with a C or greater will also fulfill the requirement.
- Eligibility for MATH 2200 Statistics II which can be met by completing MATH 1200 or MATH 1201 with a C- or higher or placement using multiple measures

Prospective students are encouraged to contact the Program Coordinator with questions:

Jill Flanigan, Program Coordinator and Assistant Professor
CT State-Middlesex
jflanigan@mxcc.commnet.edu

Professional Certification

Graduates of the Health Information Technology - Data Management degree program are eligible to sit for American Health Information Management Association (AHIMA) Registered Health Information Technician (RHIT®) certification exam. A credential provides proof of competency in the field and is often a requirement for Health Information Management positions.

Program Learning Outcomes:

1. Apply knowledge of data content structure and standards to evaluate data sources to apply classification system guidelines including current and future revisions of the International Classification of Diseases, Clinical Modification; International Classification of Diseases, Procedure Coding System; Current Procedural Terminology (CPT); Healthcare Common Procedure Coding System, Level II (HCPCS II); Systematized Nomenclature of Medicine (SNOMED) and ensure health record documentation is complete and accurate.
2. Protect health information by controlling access, ensuring information security, and understanding the legal and ethical issues in the use of health data.
3. Participate in the implementation and use of information technology in the healthcare organization including establishing data standards, ensuring data quality, utilizing decision support tools, and performing data analysis.
4. Utilize healthcare data to manage the revenue cycle of the healthcare organization through understanding of payment methods and systems in all care settings.
5. Evaluate organization compliance with regulations and standards to support licensing, accreditation, and reimbursement.
6. Apply information governance principles by collecting, storing, protecting, and using organizational data strategically, especially in performance improvement activities.
7. Understand and apply knowledge of pathophysiology, pharmacology, anatomy & physiology, medical terminology, computer concepts and computer applications as they relate to health information management.
8. Utilize professional skills to enter the healthcare workforce in a health information technician role with the skills and competencies to earn professional certification, communicate in a healthcare business setting, and develop a professional network.

All courses are offered fully online, allowing students to access the program from any location.

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 2200 - Statistics II *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (50 credits)

- CIS 1001 - Introduction to Computers *Credits: 3*
- CSC 1231 - Database Development I *Credits: 4*

- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- BIO 2103 - Pathophysiology *Credits: 3*
- HIMT 1000 - Medical Terminology *Credits: 3*
- HIMT 1110 - Introduction to Health Information Management *Credits: 3*
- HIMT 2460 - Healthcare Reimbursement *Credits: 3*
- HIMT 2730 - Clinical Classification Systems I *Credits: 3*
- HIMT 2740 - Clinical Classification Systems II *Credits: 3*
- HIMT 2350 - Healthcare Informatics *Credits: 3*
- HIMT 2540 - Privacy, Security, and Compliance *Credits: 3*
- HIMT 1030 - Pharmacology in Health Information *Credits: 1*
- HIMT 2650 - Quality Management *Credits: 3*
- HIMT 2380 - Healthcare Statistics *Credits: 3*
- HIMT 2892 - Health Information Professional Practice Experience *Credits: 1*
- HIMT 2750 - Medical Coding Case Studies *Credits: 2*
- HIMT 2880 - Registered Health Information Technician Certification Exam Preparation *Credits: 1*

Total Credits: 72-73

Health Science, AS (HESC-AS)

The Health Science A.S. degree is designed to provide students a solid foundation in the principles of healthcare delivery and prepare them to pursue entry-level professional training. The Health Science A.S. will prepare students for admission to a broad range of health and human services, advanced degrees or professional programs. In addition, the Health Science A.S. program will provide knowledge and skills for non-clinical employment opportunities in healthcare settings. This program will provide an opportunity for health professionals who are already working in healthcare settings, to learn valuable healthcare knowledge, while completing an associate's degree. Importantly, The Health Science program will provide an associate degree pathway for transfer into Health Science baccalaureate programs.

Learning Outcomes:

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

- Demonstrate a strong foundation in behavioral, natural, social, and health sciences appropriate to entry-level positions in the healthcare sector and/or admission to post graduate programs
- Demonstrate clear and effective communication skills to provide information to clients in the healthcare environment
- Demonstrate general knowledge of medical perspectives, health professions, and healthcare systems
- Apply legal concepts and ethical considerations within the framework of the healthcare industry
- Identify and demonstrate skills and knowledge necessary for the health care worker

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- SOC 1001 - Principles of Sociology *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- BIO 1005 - Introduction to Biology *Credits: 4*
- **OR** BIO 1210 - General Biology I *Credits: 4*
- MDAS 1025 - Medical Terminology for Clinical and Administrative Professions *Credits: 3*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- HLTH 1070 - Medical Law and Ethics *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- HSC 1001 - Introduction to Patient Care Management *Credits: 3*
- HIMT 2110 - Health Information Management Principles *Credits: 3*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- HSER 1034 - Introduction to the Mental Health System *Credits: 3*
- PSY 2001 - Lifespan Development *Credits: 3*
- SOC 2013 - Health and Aging *Credits: 3*
- HSC 2090 - Health Science Capstone *Credits: 3*

Total Credits: 61-62

Healthcare Administration, AS (HCAD-AS)

Health Care Administrators develop, plan, and manage health care operations and services. Health Care Administrators apply business and financial management skills in the healthcare environment. The Health Care Administrator needs to understand health care delivery systems, health law, and health information systems.

Graduates of the Health Care Administration program are advised to pursue certification as a physician practice manager by sitting for the American Academy of Professional Coders (AAPC), Certified Physician Practice Manager (CPPM) exam.

A physician practice manager manages the business functions of a medical practice. The physician practice manager is responsible for practice operations that may include revenue management, compliance, human resources, information technology, and marketing.

Learning Outcomes:

- Describe basic business accounting practices and financial reports.
- Explain corporate governance structures and human resource management in healthcare organizations.
- Articulate the levels of care, providers, and places of services in the health care system and understanding of the healthcare business environment.
- Interpret regulations and standards to ensure compliance.
- Apply health care quality management principles and practices.
- Engage in provider recruitment and credentialing.
- Interpret insurance payment models and manage the physician practice revenue cycle.

Program available fully online; certain HIMT courses are only available through the Middlesex campus specially-accredited HIMT program including HIMT 1110, HIMT 2460, and HIMT 2650.

General Education Courses (22-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- HIST 1015 - US History to 1877 *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39-40 credits)

- ACCT 1130 - Principles of Financial Accounting *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- HIMT 1000 - Medical Terminology *Credits: 3*
- HIMT 1110 - Introduction to Health Information Management *Credits: 3*
- HIMT 2460 - Healthcare Reimbursement *Credits: 3*
- HIMT 2650 - Quality Management *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Directed Electives - Choose two courses from ACCT, BFIN, BMGT, BMKT, BUSN, CSA, or HIMT *Credits: 6*

Total Credits: 61-64

Massage Therapy, AS (MASG-AS)

The Massage Therapy major entails 39 credits of specific Course requirements for Massage Therapy. These courses include hand-on practicum classes, Anatomy & Physiology, two pathology classes, Musculoskeletal Anatomy, Kinesiology, Massage Theory class and Business/ Ethics. In addition, students are required to take 21-25 credits of General Education Core requirements to obtain the Associates in Science for Massage Therapy. Students perform 100 hours of hands-on in the student massage clinic. Massage therapists work in a variety of settings including but not limited to: self-employment, day spas, massage clinics, chiropractic offices, and hospital settings. Massage therapy techniques may also vary from relaxation to sports and rehabilitation.

Learning Outcomes:

- Perform a full body massage using and integrating effleurage, petrissage, vibration, friction and tapotement.
- Demonstrate knowledge of Anatomy and Physiology.
- Understand the origin, insertion and actions of the muscles of the upper and lower body.
- Understand Pathologies and how to work safely and effectively with those using massage therapy.
- Demonstrate knowledge of the principles of Massage Therapy.
- Understand the physiological effects of massage therapy on all of the 11 body systems.
- Demonstrate knowledge and understanding of massage ethics and how to handle ethical dilemmas.
- Understand business practices of massage therapy; understand the various types of employment.
- Demonstrate the kinesthetic concepts and how they apply to massage therapy

Massage Therapy is offered at the Asnuntuck campus in the CT State Community College. The Massage Therapy Program prepares students to take the Massage and Bodywork Licensing exam (MBLEx), which is required for CT State Licensure. This exam is not offered on the Asnuntuck campus, it is through an independent testing site. Students will be given all information in the program on how to register. In addition, this program meets and exceeds the State of Connecticut Department of Public Health's educational hour requirements.

Employment Information: Massage Therapists will be employed in Massage Therapy clinics, spas, and other healthcare facilities. Upon passing the national certification exam (MBLEx), students will be able to work in Connecticut and Massachusetts and obtain a license to perform all duties of a Massage Therapist. National starting wage varies from \$21,810 to \$80,630 (U.S. Department of Labor Statistics).

Graduation Information: A cumulative 2.0 GPA is required to graduate from this program. In addition, students must earn at least a C- in all program (MASG) courses.

General Education Courses (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- MASG 1016 - Anatomy and Physiology for Healthcare *Credits: 4*
- MASG 1001 - Massage Theory and Practice *Credits: 3*
- MASG 1004 - Massage Therapy I *Credits: 4*

- MASG 1033 - Pathology I *Credits: 3*
- MASG 1104 - Massage Therapy II *Credits: 4*
- MASG 1022 - Musculoskeletal Anatomy *Credits: 4*
- MASG 2033 - Pathology II *Credits: 3*
- MASG 1070 - Massage and Business Ethics *Credits: 3*
- MASG 2022 - Kinesiology *Credits: 3*
- MASG 2004 - Massage Therapy III *Credits: 4*
- MASG 2095 - Clinical Internship *Credits: 4*
- **OR** MASG 2090 - Massage Therapy Capstone Seminar *Credits: 4*

Total Credits: 60-63

Medical Assisting Certificate (MDAS-CC)

The Medical Assisting Certificate prepares students for entry level positions as multi-skilled practitioners, there are career positions available in medical offices, hospitals, hospice care, laboratories, ambulatory care centers, and more. The program provides the student the opportunity to acquire clinical and administrative knowledge and skills in the classroom, the laboratory, and during practicum/externship.

Learning Outcomes:

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

- Apply for a national medical assisting certification examination.
- Perform all medical assisting skills at entry level competency.
- Become a professional collaborative member of the health care team delivering safe quality care
- Will show respect, empathy, objectivity, and accuracy with written and verbal communication.

This is not a selective admissions program; however, students must meet course prerequisite requirements to progress in the program. To progress in this program, students must obtain a grade of 'C' or higher in all MED courses.

This program may help prepare students for stackable credentials. With additional experience and/or coursework, students may qualify to take a variety of certification exams. Completion of this certificate can place the student into the Associate Degree program with at least 50% of the credits completed.

The Medical Assisting Certificate Program at the CT State Norwalk campus is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs (CAAHEP): 9355 113th St. N, #7709, Seminole, FL 33775, Phone: 727-210-2350, Fax: 727-210-2354, www.caahep.org Medical Assisting Education Review Board (MAERB): 2020 N. California Ave., #213 Suite 7 Chicago, IL 60647, 1-800-228-2262, www.maerb.org

Required Courses

- MDAS 1025 - Medical Terminology for Clinical and Administrative Professions *Credits: 3*
- MDAS 1011 - Administrative Medical Assisting *Credits: 3*
- MDAS 1012 - Medical Insurance and Billing *Credits: 3*
- MDAS 1033 - Clinical Medical Assisting *Credits: 4*
- MDAS 2016 - Electronic Medical Records *Credits: 3*
- MDAS 2042 - Clinical Procedures and Practices *Credits: 4*
- MDAS 2045 - Clinical Laboratory Procedures *Credits: 4*
- MDAS 2050 - Principles of Pharmacology *Credits: 3*
- MDAS 2050L - Principles of Pharmacology Lab *Credits: 1 **
- MDAS 2095 - Medical Assisting Practicum/Externship *Credits: 4*

Total Credits: 32

**approved addition to correct aligned curriculum 9/14/2024*

Medical Assisting, AS (MDAS-AS)

The Medical Assisting Program provides students with a general education core complemented by focused medical assisting career courses in preparation for employment in the health care field. As multi-skilled practitioners, there are career positions available in medical offices, hospitals, hospice care, laboratories, ambulatory care centers, health insurance companies, and more. The program provides the student the opportunity to have a broader perspective and prepare for further educational opportunities in acquired clinical and administrative knowledge, skills, laboratory, and administrative careers during practicum/externship.

Learning Outcomes:

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

- *Apply for a national medical assisting certification examination*
- *Perform all medical assisting skills at entry level competency*
- *Become a professional collaborative member of the health care team delivering safe quality care*
- *Obtain strong oral, written, and interpersonal communication skills*
- *Use Critical thinking skills for handling issues related to effective patient care*
- *Develop social skills, respect, and empathy appropriate for dealing with patients from a variety of backgrounds and cultures*
- *Develop business skills for gathering and updating data accurately across a range of data management systems*

This is not a selective admissions program; however, students must meet course prerequisite requirements to progress in the program. To progress in this program, students must obtain a grade of 'C' or higher in all MED courses.

This program may help prepare students for stackable credentials. With additional experience and/or coursework, students may qualify to take a variety of certification exams.

General Education Courses (22-24 credits)

- ENG 1010 - Composition Credits: 3
- MATH 1000 or higher Credits: 3-4
- BIO 1100 or higher Credits 3-4*
- PSY 1011 - General Psychology I Credits: 3
- **OR** SOC 1001 - Principles of Sociology Credits: 3
- **OR** ANTH 1005 - Introduction to Cultural Anthropology Credits: 3
- COMM 1301 - Public Speaking Credits: 3
- **OR** ENG 1020 - Composition II and Literature Credits: 3
- CCS 1001 - College & Career Success Credits: 3

*this requirement was corrected to reflect a broader selection of courses in approved gen ed 12/27/2024

Program Courses (38 credits)

- MDAS 1025 - Medical Terminology for Clinical and Administrative Professions Credits: 3
- MDAS 1011 - Administrative Medical Assisting Credits: 3
- MDAS 1012 - Medical Insurance and Billing Credits: 3
- MDAS 1033 - Clinical Medical Assisting Credits: 4
- MDAS 2016 - Electronic Medical Records Credits: 3
- MDAS 2042 - Clinical Procedures and Practices Credits: 4
- MDAS 2045 - Clinical Laboratory Procedures Credits: 4
- MDAS 2050 - Principles of Pharmacology Credits: 3
- MDAS 2050L - Principles of Pharmacology Lab Credits: 1
- MDAS 2095 - Medical Assisting Practicum/Externship Credits: 4
- Directed Electives in BIO, BOT, CHEM, COMM, CSA, CSC, HIMT, HLTH, HPE, MATH, MDAS, MLT, or PSYC Credits: 6

Total Credits: 60-62

Medical Billing and Outpatient Coding Specialist (MCOD-CC)

The Medical Billing and Outpatient Coding Specialist Certificate program prepares students for entry level positions in medical billing, outpatient medical coding, and health information in physician's offices, hospitals, ambulatory care centers, telehealth, health insurance companies, and other allied health venues. Process claims submissions for compliant and equitable reimbursement. The healthcare industry is facing significant changes in how providers and insurers generate, maintain, and communicate documentation related to medical records, insurance, coding, and financial reimbursement.

Learning Outcomes:

- Identify and compare reimbursement methodologies.
- Summarize principles related to healthcare privacy, confidentiality, legal and ethical issues.
- Use current Electronic Medical Record (EMR) software to manage provider reimbursement and patient health information.
- Prepare revenue cycle documents by utilizing International Classification of Disease - Clinical Modification (ICD-10-CM), Current Procedural Terminology (CPT), and Healthcare Common Procedure Coding System (HCPCS) II reference material.
- Review and abstract information needed to support accurate outpatient coding and health record documentation for completeness and accuracy.
- Interpret healthcare data to determine claim status, resolve claim denials, submit appeals, post payments and adjustments, and manage collections.
- Apply Health Insurance Portability and Accountability Act of 1996 (HIPAA), Health Information Technology for Economic and Clinical Health Act (HITECH), and Protected Health Information (PHI) regulations as they apply in the outpatient setting.

Eligible for Workforce Innovation and Opportunity Act (WIOA) and Supplemental Nutrition Assistance Program (SNAP) specialized funding that affects program length or structure. It prepares students for a national industry certification. A coding credential provides proof of competency in the field and is often a requirement for clinical coding-related and healthcare revenue management positions.

National Health Care Association (NHA)

- **CBCS** - Certified Billing and Coding Specialist
- **CMAA** - Certified Medical Administrative Assistant

American Association of Professional Coders (AAPC)

- **CPB** - Certified Professional Biller
- **COC** - Certified Outpatient Coder
- **CPC** - Certified Professional Coder

Required Courses

- MDAS 1011 - Administrative Medical Assisting *Credits: 3*
- **OR** HIMT 1410 - Healthcare Access Management *Credits: 3*
- HIMT 1110 - Introduction to Health Information Management *Credits: 3*
- **OR** HIMT 2110 - Health Information Management Principles *Credits: 3*
- BIO 2103 - Pathophysiology *Credits: 3*
- **OR** BIO 1023 - Biology of Disease *Credits: 3*
- BOT 1801 - Medical Coding I *Credits: 3*
- **OR** HIMT 2730 - Clinical Classification Systems I *Credits: 3*
- BOT 1802 - Medical Coding II *Credits: 3*
- **OR** HIMT 2740 - Clinical Classification Systems II *Credits: 3*
- MDAS 1012 - Medical Insurance and Billing *Credits: 3*

- **OR** HIMT 2460 - Healthcare Reimbursement *Credits: 3*
- MDAS 1025 - Medical Terminology for Clinical and Administrative Professions *Credits: 3*
- **OR** BOT 1800 - Medical Terminology and Anatomy *Credits: 3*
- **OR** HIMT 1000 - Medical Terminology *Credits: 3*
- MDAS 2016 - Electronic Medical Records *Credits: 3*
- **OR** HIMT 2350 - Healthcare Informatics *Credits: 3*

Total Credits: 24

Medical Laboratory Technician, AS (MLTC-AS)

The Medical Laboratory Technician (MLT) program at Quinebaug Valley Campus of CT State Community College prepares the student to work in a clinical laboratory setting. As the student progresses through the program they will obtain the required knowledge that will allow them to work in any of the laboratory departments in a clinical lab. The student will complete instructional courses in Clinical Hematology, Clinical Chemistry, Clinical Microbiology, Immunology, Immunohematology, and Urinalysis/Body Fluids, as well as the general education-required courses. After completion of the program, the student will graduate with an Associate's Degree (A.S.) and be eligible to sit for the National Registry examinations. Graduates are well-prepared to enter the workforce immediately upon graduation and to begin their careers as laboratory professionals.

Learning Outcomes:

In addition to General Education Outcomes, learners who complete the Medical Laboratory Technician degree will:

- Apply knowledge of theory and principles related to body fluids, chemistry, hematology, microbiology, immunology, blood bank, and laboratory information systems;
- Apply knowledge of fundamental biological characteristics related to laboratory testing;
- Apply principles of performing basic laboratory procedures;
- Accurately perform venipuncture and capillary puncture procedures;
- Assess results by correlating laboratory data with clinical or other laboratory data;
- Evaluate laboratory data to recognize disease states;
- Prepare and process specimens, equipment, and instruments as well as controls and reagents;
- Perform with ethical and legal guidelines as well as within the profession's scope of practice.

Graduates of the degree program will be eligible to sit for the MLT American Society for Clinical Pathology (ASCP) national certification exam. Please see the Course of Study for specific information on the program's curriculum.

The Medical Laboratory Technician Program at Quinebaug Valley Community College [future Quinebaug Valley Campus of CT State Community College] is programmatically accredited by the Accrediting Bureau of Health Education Schools (ABHES), Accrediting Bureau of Health Education Schools, 6116 Executive Blvd., Suite 730, North Bethesda, MD 20852, Main: (301) 291-7550, Website: www.abhes.org, Email: info@abhes.org

Please note, this is a suggested plan of study for a full-time student. Part-time students may have their schedule adjusted accordingly. Students may need additional courses in remedial math and/or English.

Students must meet with their academic advisor prior to registering for any core MLT courses.

Students must earn a B- or better in all MLT courses prior to be eligible for the Clinical Internships. Students are required to show proof of physical examination; Measles, Mumps, and Rubella (MMR), varicella and Hepatitis B immunity; Tetanus shot within past 5 years; and a negative Tuberculosis (TB) test prior to being accepted for any internship courses. Internship sites may require students to undergo a criminal background check.

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1002 - Math for Science and Technology *Credits: 3*
- **OR** MATH 1003 - Elementary Statistics *Credits: 3*
- **OR** MATH 1010 - Intermediate Algebra *Credits: 3*
- (Pending Spring 2023 Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (41 credits)

- BIO 2350 - Microbiology *Credits: 4*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- HLTH 1070 - Medical Law and Ethics *Credits: 3*
- MLT 1001 - Introduction to Clinical Laboratory/Principles of Lab Analysis *Credits: 3*
- MLT 1002 - Urinalysis and Body Fluids *Credits: 2*
- PHLB 1041 - Phlebotomy for MLTs *Credits: 1*
- MLT 2000 - Clinical Hematology and Coagulation *Credits: 4*
- MLT 2002 - Clinical Chemistry *Credits: 4*
- MLT 2004 - Clinical Immunology and Immunohematology *Credits: 4*
- MLT 2006 - Clinical Microbiology *Credits: 4*
- MLT 2095 - Clinical Internship I *Credits: 4*
- MLT 2195 - Clinical Internship II *Credits: 4*

Total Credits: 63-64

Nuclear Medicine Technology, AS (NMDT-AS)

The Associate in Science degree program 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 (ARRT(N)) 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.

Program Learning Outcomes:

1. Students will demonstrate skills in effective oral and written communication
 - Students will demonstrate oral communication skills
 - Students will demonstrate written communication skills
2. Students will demonstrate skills in critical thinking and problem solving in the principles and practices of Nuclear Medicine
 - Students will assess patient requisitions in order to perform proper imaging procedures
 - Students will use critical thinking to overcome clinical challenges
3. Students will demonstrate clinical competence in the practice of Nuclear Medicine
 - Students will apply As Low as Reasonably Achievable (ALARA) principles and practices of radiation protection
 - Students will provide appropriate patient care

The mission of the CT State-Gateway Campus Nuclear Medicine Technology program is to offer high-quality instruction to a diverse population of students in an environment conducive to learning. We respond to the changing academic, occupational, technological, and cultural needs of both students and the community by strengthening our graduates through the inclusion of advanced technology, unique clinical internship experience, and quality patient care.

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 2020", SNMMI Technologist Section: <https://www.snmmi.org/AboutSNMMI/CommitteeContent.aspx?ItemNumber=5281>):

Patient Care: Requires the exercise of judgment to assess and respond to the patient's needs before, during, and following diagnostic imaging and treatment procedures and in patient medication reconciliation. This includes record keeping in accordance with the Health Insurance Portability and Accountability Act (HIPAA).

Instrumentation/Quality Control: Involves the operation of nuclear medicine and PET imaging systems: With or without sealed sources of radioactive materials, x-ray tubes, or MR systems for attenuation correction, transmission imaging, or diagnostic CT or MR (when appropriately trained and/or credentialed).

Quality control: The evaluation and maintenance of a quality control program for all instrumentation to ensure optimal performance and stability.

Diagnostic Procedures: Requires the utilization of appropriate techniques, radiopharmaceuticals, imaging medications and adjunctive medications as part of a standard protocol to ensure quality diagnostic images and/or laboratory results. Obtains biological samples to perform testing as required for the optimization of patient care and quality of diagnostic procedures.

Therapeutic Procedures: Requires the utilization of appropriate techniques, radiopharmaceuticals, and adjunctive medications as part of a standard protocol to ensure proper treatment of the disease process. Obtains biological samples to perform testing as required for the optimization of patient care.

Adjunctive Medications: Involves the identification, preparation, calculation, documentation, administration, and monitoring of adjunctive medication(s) used during diagnostic imaging, or therapeutic procedures. **Imaging Medications:** Involves the identification, preparation, calculation, documentation, administration, and monitoring of imaging medication(s) used during diagnostic imaging studies.

Imaging Medications: Involves the identification, preparation, calculation, documentation, administration, and monitoring of imaging medication(s) used during diagnostic imaging studies.

Radiopharmaceuticals: Involves the safe handling and storage of radiopharmaceuticals. This includes, but is not limited to, the procurement, identification, preparation, dose calculation, and administration of radiopharmaceuticals. It involves the safe handling and storage of radiopharmaceuticals. This includes, but is not limited to, the procurement, identification, preparation, dose calculation, and administration of radiopharmaceuticals. It also includes all associated documentation and disposal as appropriate.

Radiation Safety: Involves practicing techniques that will minimize radiation exposure to the patient, health care personnel, and general public. These include using protective devices, shields, dose reduction, and monitors consistent with ALARA principles. Establishing protocols for managing spills and unplanned releases of radiation.

Admissions Procedure:

1. All students must first apply to CT State College.
2. Unless waived, all applicants must take placement tests in reading, English, and mathematics.
3. Attendance at one program specific information session.
4. Students must have a 2.7 GPA
5. Complete the following prerequisite courses
ENG 1010 - Composition (C or higher)
BIO 2111 - Anatomy & Physiology I (C or higher taken within past five years of program start date)
BIO 2112 - Anatomy & Physiology II (C or higher taken within past five years of program start date)
MATH 1600 - Pathway to Calculus: College Algebra (C or higher taken within five years of program start date)
6. Submit official copies of all transcripts.

Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Students in this program are responsible for expenses including but not limited to uniforms, physical examinations and blood work, travel to clinical sites, parking, meals, CPR training, background check and toxicology screening, dosimeters, textbooks, liability insurance, Trajecsyst and CastleBranch. Specific information about these costs is available on the Nuclear Medicine webpage and in the Nuclear Medicine Program Student Handbook. Financial aid information is available through the College Financial Aid office.

Students will be charged the Supplemental Course (program) Fee Level 1 every fall and spring semesters while in the program.

Program Accreditation:

- The Nuclear Medicine Technology Program is accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT). The accreditation is currently under the home of Gateway Community College as we transition to the new structure of CT State Community College Gateway Campus. Additional information regarding accreditation can be found on the JRCNMT website (www.jrcnmt.org).

National Exams:

- Nuclear Medicine Technology Certification Board (NMTCB)
- American Registry of Radiologic Technologists (ARRT)(N)

Graduation Criteria

All program students must complete the following to receive an associate degree from the program. See the student handbook for complete details.

- Complete all didactic curricula with a final grade of C or better.
- Complete all clinical curricula with a final grade of C or better.
- Complete all competency exams with a final grade of 100%.
- Maintain all hospital and program standards as outlined in the program handbook.

Graduates of the program are eligible to take the Nuclear Medicine Technology Certification Board (NMTCB) American Registry of Radiologic Technologists, Nuclear Medicine Examination ARRT(N).

Clinical Experience will take place at:

- Yale-New Haven Hospital (New Haven)
- Yale University PET Center (New Haven)
- 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)
- Bridgeport Hospital (Milford Campus)
- William W. Backus Hospital (Norwich)
- Lawrence & Memorial Hospital (New London)
- Stamford Hospital (Stamford)
- Greenwich Hospital (Greenwich)
- UCONN Medical Center (Farmington)
- Hospital of Central Connecticut (New Britain)
- Waterbury Hospital (Waterbury)
 - Simulated labs are held in the Nuclear Medicine lab at the Gateway campus and are scheduled on lecture days.

Note: Students are responsible for their own transportation to and from class and clinical assignments. Due to standards from The Joint Commission, students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit a criminal background check, required immunization records and other documentation needed to meet the standards. CT State Community College cannot be responsible for finding an alternate clinical placement for a student who fails to meet the required hospital requirements. A student who is unable to complete the required clinical experience will be unable to complete the requirements for the associate degree in Nuclear Medicine but may be able to apply some or all the credits completed to an associate degree in General Studies. Students are advised to meet with a Counselor to discuss degree completion requirements.

Clinical 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 Nuclear Medicine Technology Certification Board (NMTCB) and the American Registry of Radiologic Technologist (ARRT.)

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3* (pre-admission requirement)
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3* (pre-admission requirement)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (47 credits)

- RST 1000 - Introduction to Patient Care for Radiologic Sciences *Credits: 2*
- RST 1000L - Introduction to Patient Care for Radiologic Sciences Lab *Credits: 1*
- NMED 1001 - Introduction to Nuclear Medicine *Credits: 3*

- NMED 1002 - Nuclear Medicine Procedures I *Credits: 3*
- PHYS 1101 - Physics for Life Sciences *Credits: 4*
- NMED 1194 - Clinical Practicum I *Credits: 1*
- NMED 1294 - Clinical Practicum II *Credits: 1*
- NMED 1195 - Clinical Internship I *Credits: 0.5*
- NMED 1221 - Physics in Nuclear Medicine *Credits: 3*
- NMED 1295 - Clinical Internship II *Credits: 3*
- RST 2000 - Cross Sectional Anatomy *Credits: 3*
- NMED 2002 - Nuclear Medicine Procedures II *Credits: 3*
- NMED 2004 - Nuclear Medicine Instrumentation *Credits: 3*
- NMED 2003 - Radiopharmacy *Credits: 3*
- NMED 2394 - Clinical Practicum III *Credits: 2*
- NMED 2494 - Clinical Practicum IV *Credits: 2*
- NMED 2395 - Clinical Internship III *Credits: 0.5*
- NMED 2102 - Nuclear Medicine Procedures III *Credits: 3*
- NMED 2095 - Nuclear Medicine Seminar *Credits: 3*
- NMED 2010 - Introduction to Computers and Nuclear Medicine Applications *Credits: 3*
- BIO 2111 - Anatomy & Physiology I *Credits: 4* (pre-admission requirement)
- BIO 2112 - Anatomy & Physiology II *Credits: 4* (pre-admission requirement)

Total Credits: (incl pre-program) 77-78

Nursing: Connecticut Community College Program, AS (NURS-AS)

The Connecticut Community College Nursing Program (CT-CCNP) is an innovative, six semester associate degree program of study offered at six Connecticut State Community College campuses - Capital, Gateway, Naugatuck Valley, Northwestern CT, Norwalk, and Three Rivers campuses. The CT-CCNP prepares students for entry-level practice as a registered nurse. The CT-CCNP is a Selective Admissions program.

For admission criteria please refer to: Nursing Information Packet 2025-2026.

Mission

The Connecticut Community College Nursing Program (CT-CCNP) is dedicated to developing excellence in nursing by providing affordable, innovative, and academically rigorous nursing education. Our program strives to prepare graduates with knowledge, skills, and attitudes to meet the ever-increasing complexity of the healthcare needs for the diverse communities served.

Vision

The Vision of the CT-CCNP is to prepare safe, competent, and compassionate entry-level nurses who transform the lives of persons and communities. The CT-CCNP endeavors to be a personally and professionally rewarding academic program that fosters diversity, innovation, quality, and excellence.

Philosophy

CT-CCNP is committed to achieving excellence in nursing education and patient care based on our beliefs about the concepts of teaching and learning, nursing, person, society and environment, and health which provide a framework for the curriculum of our nursing program.

Teaching and Learning

We aim to create safe and nurturing academic initiatives supporting lifelong learning. The faculty strives to equip students with critical thinking and clinical judgment skills to provide safe, competent, high-quality care. We believe a robust educational foundation enables nurses to translate the knowledge to practice evidence-based care for people and the community.

Nursing

Nursing is a scholarly discipline focusing primarily on caring human interactions. Establishing meaningful human relationships helps promote healing. It encompasses autonomous and collaborative care that includes protection, promotion, and optimization of health and abilities, preventing illness and injury, and alleviating suffering. Nurses accomplish this by diagnosing and treating the human response to health conditions. We believe it is the moral responsibility of nursing to provide culturally congruent, compassionate, and competent care to all human beings.

Person

We believe in the nature of holism of an individual in the pure sense in which the whole is bigger than the sum of parts. We believe it is imperative to honor and care for the unique needs of individuals. Person is the main focus and priority of self-care in relation to one another, including families, communities, and populations. Every individual deserves to be respected regardless of personal differences.

Society and Environment

We believe a caring environment can accelerate healing by making people feel safe and comfortable. The environment includes internal (physiological, psychological, spiritual) and external (cultural, political, social) factors influencing a person's well-being. We believe it is society's responsibility to eliminate healthcare inequities and create a fair environment in which all human lives can flourish.

Health

Health is not just a state free of symptoms of diseases but a dynamic state of being in which an individual can realize their maximum developmental and behavioral potential. An identified primary goal of nursing is to restore and maintain the health of the person and communities. Health and illness exist on parallel continuums such that even people with chronic or debilitating

illnesses may experience optimal levels of health through adaptation. We believe it is imperative to focus on the totality of a person's health parameters.

Learning Outcomes

While providing nursing care to individuals, families, groups, communities, and populations within the health care system, the nursing graduate:

1. Provide high quality, safe, patient-centered care across the life span to individuals, families, communities, and populations.
2. Use evidence-based practice to drive nursing care related to health promotion, risk reduction, disease prevention, and illness and injury management.
3. Demonstrate professional and collaborative verbal, nonverbal, and electronic communication to foster interprofessional care.
4. Promote health equity when caring for diverse populations within an evolving health care system.
5. Exhibit leadership, professionalism, and integrity congruent with safe, ethical practice as a generalist nurse.

Graduates are eligible to apply for licensure through the Connecticut Department of Public Health and take the National Council Licensing Examination for Registered Nurses (NCLEX-RN). The CT-CCNP offers an advanced placement option for LPNs who are admitted to the RN nursing program. Eligibility for the advanced placement option is based on the admissions ranking process, recommendation by the college LPN Advisor, and space availability at each college campus. If space and resources are available for the LPN to enter the third semester of the nursing program, the following requirements must be met:

- Complete the required general education courses for the first-year curriculum of the CT-CCNP with a grade of C or higher. A&P I & II require a minimum C+ grade.
- Successfully complete NUR 1150 - LPN to AD RN Bridge Course and NUR 1152C - LPN to RN Transition.
- LPN program graduates may enroll in NUR 1150 prior to licensure as an LPN; but are required to have current Connecticut LPN licensure to enroll in NUR 1152C.

The CT-CCNP curriculum has been approved by the Connecticut Board of Regents for Higher Education and the Connecticut State Board of Examiners for Nursing, with the consent of the Commissioner of the Connecticut Department of Public Health.

The CT State Community College Nursing Programs at Capital, Gateway, Naugatuck Valley, Northwestern, Norwalk, and Three Rivers are individually accredited by the:

Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400 Atlanta, GA 30326, (404) 975-5000. The most recent accreditation decision made by the ACEN Board of Commissioners for each nursing program is Continuing Accreditation. View the public information disclosed by the ACEN regarding this program on the ACEN Program Search website.

Licensure Disclosure Statement

The Connecticut Community College Nursing Program (CT-CCNP) at the Capital, Gateway, Naugatuck Valley, Norwalk, Northwestern Connecticut, and Three Rivers campuses meet the state education requirements for a Registered Nurse license in the state of Connecticut.

The CT-CCNP has not determined if the associate degree registered nurse program meets the state education requirements in any other state, any U.S. Territory, or the District of Columbia. Applicants should investigate licensure requirements prior to accepting an offer of admission to any CT CCNP program.

The licensure boards in each state are responsible for establishing the requirements for licensure/certification for their state. Students who intend to seek licensure in any state other than Connecticut need to consult with the state professional licensing board. The state professional licensing boards make the decision on whether an individual is eligible for licensure based on the rules and regulations in place at the time the individual submits their application for licensure.

Websites for each State Regulatory Agency for Nursing can be found on the NCSBN Member Boards webpage.

General Education Courses* (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3 or higher*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 2350 - Microbiology *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

- *all general education courses must be completed with a minimum grade of "C"

Program Courses (49 credits)**

- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- SOC 1001 - Principles of Sociology *Credits: 3*
- PSY 2001 - Lifespan Development *Credits: 3*
- NUR 1120C - Nursing in Health & Illness I *Credits: 9*
- NUR 1125C - Nursing in Health & Illness II *Credits: 8*
- NUR 2220C - Nursing in Health & Illness III *Credits: 9*
- NUR 2225C - Nursing in Health & Illness IV *Credits: 8*
- NUR 2226 - Transition to Professional Nursing Practice *Credits: 1*

- **all program courses must be completed with a minimum grade of "C" excepting BIO 2111 and BIO 2112 , which require a "C+"

Total Credits: 71-72***

***pre-requisite courses for BIO 2111 and BIO 2350 may add an additional 8 credits, therefore total credits could reach 79-80.

Nutrition and Dietetics, AS (NUDT-AS)

There is a growing demand for qualified personnel in the field of dietetics throughout the United States. The Nutrition and Dietetics Technician, Registered (NDTR) works under the supervision of a Registered Dietitian Nutritionist (RDN) in health care, food service management, and community nutrition programs. NDTRs also 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 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 dietetics. A minimum of 450 hours of supervised internship provides opportunities to practice these skills.

MISSION

The mission of the Nutrition and Dietetics program is to prepare graduates to become entry-level nutrition and dietetics technicians, registered with the competence and adaptability to compete successfully in diverse employment markets wherever food, nutrition, and fitness are emphasized.

Program Goal #1

The program will prepare graduates to be competent entry-level nutrition and dietetics technicians, registered.

Objectives:

Graduate Performance

1. At least 50% of program graduates take the CDR credentialing exam for nutrition and dietetics technicians within 12 months of program completion.

Graduate Performance

2. The program's one-year pass rate (graduates who pass the registration exam within one year of first attempt) on the CDR credentialing exam for nutrition and dietetics technicians is at least 70%.

Program Completion

3. At least 80% of students complete program/degree requirements within 3 years (150% of the program length).

Program Specific

4. At least 80% of graduates who completed the graduate survey will agree or strongly agree that the Nutrition and Dietetics program provides adequate teaching and training to become a competent dietetics professional.

Program Goal #2

To prepare graduates to successfully enter the Nutrition and Dietetics workforce.

Objectives:

1. Of graduates who seek employment, at least 70% are employed in nutrition and dietetics or related fields within 12 months of graduation.

Employer Satisfaction

2. At least 70% of employers will rate program graduates in their employ as having a satisfactory knowledge base for entry-level practice on surveys.

Graduate Satisfaction

3. At least 80% of graduates are confident in their ability to communicate in writing, speaking, and presenting Nutrition and Dietetics information to a variety of individuals and groups.

Program Student Learning Outcomes:

Accreditation Council for Education in Nutrition and Dietetics (ACEND) Competency Standards for Core Competencies (CNDT) for Nutrition and Dietetics Technician programs are incorporated into this program.

Domain 1. Scientific and Evidence Base of Practice: Integration of scientific information and translation

- CNDT 1.1 Access data, references, patient education materials, consumer and other information from credible sources.
- CNDT 1.2 Evaluate information to determine if it is consistent with accepted scientific evidence.
- CNDT 1.3 Collect performance improvement, financial, productivity or outcomes data and compare it to established criteria.
- CNDT 1.4 Implement actions based on care plans, protocols, policies and evidence-based practice.

Domain 2. Professional Practice Expectations: Beliefs, values, attitudes, and behaviors for the nutrition and dietetics technician practitioner level of practice.

- CNDT 2.1 Adhere to current federal regulations and state statutes and rules, as applicable and in accordance with accreditation standards and the Scope of Practice for the Nutrition and Dietetics Technician, Registered, Standards of Practice, Standards of Professional Performance, and Code of Ethics for the Profession of Nutrition and Dietetics.
- CNDT 2.2 Use clear and effective oral and written communication.
- CNDT 2.3 Prepare and deliver sound food and nutrition presentations to a target audience.
- CNDT 2.4 Demonstrate active participation, teamwork and contributions in group settings.
- CNDT 2.5 Function as a member of interprofessional teams.
- CNDT 2.6 Refer situations outside the nutrition and dietetics technician scope of practice or area of competence to a registered dietitian nutritionist or other professional.
- CNDT 2.7 Actively contribute to nutrition and dietetics professional and community organizations.
- CNDT 2.8 Demonstrate professional attributes in all areas of practice.
- CNDT 2.9 Show cultural humility in interactions with colleagues, staff, clients, patients and the public.
- CNDT 2.10 Advocate for local, state or national legislative and regulatory issues or policies impacting the nutrition and dietetics profession.

Domain 3. Clinical and Customer Services: Development and delivery of information, products, and services to individuals, groups, and populations.

- CNDT 3.1 Perform nutrition screening and identify clients or patients to be referred to a registered dietitian nutritionist.
- CNDT 3.2 Perform specific activities of the Nutrition Care Process as assigned by registered dietitian nutritionists in accordance with the Scope of Practice for the Nutrition and Dietetics Technician, Registered for individuals, groups and populations in a variety of settings.
- CNDT 3.3 Provide nutrition and lifestyle education to well populations.
- CNDT 3.4 Promote health improvement, food safety, wellness and disease prevention for the general population.
- CNDT 3.5 Develop nutrition education materials for disease prevention and health improvement that are culturally and age appropriate and designed for the literacy level of the audience.
- CNDT 3.6 Present an educational session to a target population.
- CNDT 3.7 Perform supervisory functions for purchasing, production, and service of food that meets nutrition guidelines, cost parameters, and health needs.
- CNDT 3.8 Modify recipes and menus for acceptability and affordability that accommodate the cultural diversity and health status of various populations, groups and individuals.

Domain 4. Practice Management and Use of Resources: Strategic application of principles of management and systems in the provision of services to individuals and organizations.

- CNDT 4.1 Deliver nutrition services through quality improvement and customer satisfaction activities.
- CNDT 4.2 Perform supervisory, education, and training functions.
- CNDT 4.3 Use current information technologies to develop, manage and disseminate nutrition information and data.
- CNDT 4.4 Assist in developing a plan for a new service including budget.
- CNDT 4.5 Implement and adhere to budgets.
- CNDT 4.6 Assist with marketing clinical and customer services.
- CNDT 4.7 Propose and use procedures as appropriate to the practice setting to promote sustainability, reduce waste and protect the environment.

Domain 5. Leadership and Career Management: Skills, strengths, knowledge and experience relevant to leadership potential and professional growth for the nutrition and dietetics practitioner.

- CNDT 5.1 Perform self-assessment that includes awareness in terms of learning and leadership styles and cultural orientation and develop goals for self-improvement.
- CNDT 5.2 Identify and articulate one's skills, strengths, knowledge and experiences relevant to the position desired and career goals.
- CNDT 5.3 Prepare a plan for professional development according to Commission on Dietetic Registration guidelines.
- CNDT 5.4 Advocate for opportunities in the professional settings (such as asking for additional responsibility, practicing negotiating a salary or wage or asking for a promotion).
- CNDT 5.5 Promote team involvement and value the skills of each member.
- CNDT 5.6 Mentor others.
- CNDT 5.7 Identify and articulate the value of precepting.

The Nutrition and Dietetics program is currently granted accreditation by the Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics (AND), 120 South Riverside Plaza, Suite 2190, Chicago, Illinois 60606-6995; (312) 899-0040 ext. 5400 or (800) 877-1600; www.eatright.org/acend.

Graduates of the program are encouraged to take the Commission on Dietetic Registration's registration examination to become a NDTR. Graduates may take the Association of Nutrition & Foodservice Professional exam to become a Certified Dietary Manager, Certified Food Protection Professional (CDM, CFPP.) Graduates are also eligible for membership in the Academy of Nutrition and Dietetics and the Association of Nutrition & Foodservice Professionals.

Students who wish to transfer to an approved four-year program in dietetics should consult the program coordinator regarding the transferability of courses.

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, travel to field sites, parking, meals, CPR training, and drug testing. Specific information about these costs and coverage for accident and liability insurance is available from the Program Coordinator, Elaine Lickteig, and in the Nutrition & Dietetics Student Guide. A complete physical examination is required before supervised internship begins. Financial aid information is available through the College Financial Aid office.

Graduation Requirements: In addition to the College's general requirements, this program requires a minimum grade of "C" (73 percent) 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 any student from the Nutrition and Dietetics program whose health, clinical performance, attendance, or conduct does not meet the program standards. Students are encouraged to complete the program requirements within 5 years. Upon successful completion of the Nutrition and Dietetics program, graduates will receive a verification statement. The signed verification statement documents that an individual has completed the requirements of a nutrition and dietetics education program accredited by the Accreditation Council for Education in Nutrition and Dietetics

(ACEND®). It allows the CT State Community College Nutrition and Dietetics program graduate to establish eligibility to sit for the registration examination for nutrition and dietetics technicians.

Program Requirements

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1002 - Math for Science and Technology *Credits: 3*
- **OR** MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (41 credits)

- HOSP 1109 - Food Safety Certification *Credits: 1*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- NTRN 1001 - Introduction to Dietetics *Credits: 3*
- NTRN 1002 - Nutrition I: Principles of Nutrition *Credits: 3*
- NTRN 1020 - Foods *Credits: 3*
- NTRN 1003 - Nutrition Therapy I *Credits: 3*
- NTRN 1005 - Food Management System *Credits: 3*
- NTRN 2095 - Nutrition Internship I *Credits: 3*
- NTRN 2000 - Nutrition Through the Life Cycle *Credits: 3*
- NTRN 2001 - Community Nutrition Education *Credits: 3*
- NTRN 2195 - Nutrition Internship II *Credits: 3*
- NTRN 2002 - Nutrition Therapy II *Credits: 3*
- NTRN 2005 - Management in Dietetics *Credits: 3*
- NTRN 2295 - Nutrition Internship III *Credits: 3*

Total Credits: 63

Occupational Therapy Assistant, AS (OTAS-AS)

Program Design

The American Occupational Therapy Association in its VISION 2025 statement describes Occupational Therapy as "an inclusive profession that maximizes health, well-being, and quality of life for all people, populations, and communities through effective solutions that facilitate participation in everyday living."

Scholastic Preparation and Admission Process

The Occupational Therapy Assistant Program utilizes a selective admissions process and applicants are required to meet specific admission criteria in preparation for the academic rigor of the OTA Program. The OTA application is available online, after October 1, with a Feb 1 deadline for applications, annually.

To qualify for application to the Occupational Therapy Assistant Program, students must have a grade point average at or above 2.5, and have completed BIO 1111, ENG 1010, and PSY 1011 with a grade of C or better. Applicants must also have attended an OTA Information Session. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Curriculum

The OTA program offers an accelerated, a full-time and part-time plan of study, thereby enabling the student to complete the program in 3 semesters, 4 semesters or 5 semesters respectively.

- **Accelerated track:** Open to students who have completed all general education requirements prior to program application. This allows the student to complete the OTA 2034 course in the first semester (typically offered within third semester), representing two semesters of academic coursework on campus and the completion of the clinical within the third semester.
- **Full-Time track:** Provides three semesters of academic coursework and the completion of the clinical within the fourth semester.
- **Part-Time track:** Provides four semesters of academic coursework, by distributing the spring semester coursework over two spring semesters and the completion of the clinical within the fifth semester.

Courses with the OTA designator are offered exclusively during the day and must be completed at CT State. OTA courses from another institution may not be transferred into the OTA Program. Credit for previous course completion including AP courses must be evaluated by the Admissions office to be accepted for transfer. Credit is not provided for prior work experiences inclusive of experiential learning. All course work must be completed with a grade of C or better and a minimum GPA of 2.5 must be maintained throughout the program. The clinical semester, which is offered both fall and spring semesters, provides two 8-week, full-time, supervised learning experiences with a focus on psychosocial, physical dysfunction and pediatrics areas of practice. Students must complete the clinical semester within 18 months of the completion of academic work. Due to standards set by the Joint Commission, students are advised that the fieldwork sites to which they are assigned for fieldwork rotations, as well as state regulations, may require that they submit to a criminal background check before beginning their fieldwork experiences. CT State Community College cannot be responsible for finding an alternate clinical placement for a student who fails to pass the background check. A student who is unable to complete the required fieldwork experiences will be unable to complete the requirements for the associate degree in Occupational Therapy but may be able to apply some or all of the credits completed to an associate degree in General Studies. In such cases students are advised to meet with a guided pathway advisor to discuss alternate degree completion requirements.

Accreditation

The program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 7501 Wisconsin Avenue, Suite 510E, Bethesda, MD 20814. ACOTE's telephone number c/o AOTA is (301) 652-AOTA and its Web address is www.acoteonline.org. We are pleased to announce that our previously accredited program has undergone a consolidation with the twelve community colleges in Connecticut and now operates under Connecticut State Community College. ACOTE has transferred accreditation of the Manchester Community

College OTA program to the Connecticut State Community College. The data presented herein corresponds to the program under its former name, Manchester Community College.

Learning Outcomes:

- Upon successful completion of all Occupational Therapy Assistant degree program requirements, graduates will
- Sit for the national certification exam.
- Demonstrate the clinical skills required for working as an Occupational Therapy Assistant.
- Demonstrate the interpersonal skills necessary to function as a Certified Occupational Therapy Assistant.
- Comprehend the scope of occupational therapy practice.
- Apply principles in analysis and application of occupational therapy treatment in the spectrum of human occupation.
- Complete the comprehensive learning outcomes identified with the General Education Core.

Certification

Graduates of the program are eligible to sit for the national certification examination for the Occupational Therapy Assistant, administered by the National Board for Certification in Occupational Therapy (NBCOT) - . After successful completion of this exam, the graduate will be a Certified Occupational Therapy Assistant (COTA). Additionally, all states require licensure to practice; However, state licenses are usually based on the results of the NBCOT certification exam. A felony conviction may affect a graduate's ability to sit for the NBCOT certification exam or attain state licensure. Program results from the National Board for Certification in Occupational Therapy (NBCOT) can be found at <https://www.nbcot.org/Educators-Folder/SchoolPerformance>.

Year	Total Number of New Graduates Testing	Total Number of New Graduates Passing (% passing)	Total Number of New Graduates Failing (% failing)
2023	9	8 (89%)	1 (11%)
2022	19	19 (100%)	0 (0%)
2021	14	14 (100%)	0 (0%)
2020	16	16 (100%)	0 (0%)
2019	16	15 (100%)	1 (6%)

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1003 - Elementary Statistics *Credits: 3*
- **OR** MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4 (Recommended)*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- ANTH 1018 - Health, Healing, and Culture *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (41 credits)

- PSY 2001 - Lifespan Development *Credits: 3*
- OTA 1000 - Foundations of Occupational Therapy *Credits: 3*
- OTA 1200 - Neurologic Intervention in Occupational Therapy *Credits: 4*
- OTA 2095 - Level I Advanced Fieldwork *Credits: 1*
- OTA 2008 - Healthcare Management in Occupational Therapy *Credits: 3*
- OTA 2010 - Occupational Therapy Practice in Pediatrics *Credits: 3*
- OTA 2010L - Occupational Therapy Practice in Pediatrics Lab *Credits: 1*
- OTA 2016 - Occupational Therapy Practice in Physical Dysfunction *Credits: 3*
- OTA 2016L - Occupational Therapy Practice in Physical Dysfunction Lab *Credits: 1*
- OTA 2018 - Occupational Therapy Practice in Mental Health *Credits: 3*
- OTA 2018L - Occupational Therapy Practice in Mental Health Lab *Credits: 1*
- OTA 2034 - Documentation in Occupational Therapy *Credits: 3*
- OTA 2195 - Level II Fieldwork *Credits: 11*
- OTA 2090 - Clinical Seminar in Occupational Therapy *Credits: 1*

Total Credits: 63*

* Actual Total Credits is 66 when including PSY 1011, which must be completed prior to admission to the OTA program.

Ophthalmic Design & Dispensing, AS (ODD-AS)

The Ophthalmic Design and Dispensing (OD&D) at Middlesex Campus of Connecticut (CT) State Community College is designed for students that have solid math and problem-solving skills, love to help others and enjoy hands-on work. Students would like to work in a medical-related field, but without the time and financial commitments in getting a PhD. The OD&D program at Middlesex Campus of CT State Community College provides an affordable and flexible Associate Degree to meet student needs. This two-year degree program prepares students for future work as licensed opticians working to help others through the design and dispensing of eyeglasses, contact lenses and low-vision aids.

This program is designed for individuals who are interested in becoming licensed opticians. Successful completion of this program will be accepted in lieu of the four-year, 8000-hour apprenticeship requirement to become a licensed optician in the State of Connecticut. This degree is also accepted in many states in order to be eligible for licensure.

Learning Outcomes:

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

- Communicate effectively through development of proficiency in oral/written/electronic communication skills
- Demonstrate proficiency in critical thinking and problem-solving skills
- Complete the requirements for National Certification by the American Board of Opticianry
- Complete the requirements for National Certification by the National Contact Lens Examiners
- Demonstrate the practical skills required to successfully complete the optical portion of the State of Connecticut - Board of Examiners State Practical Exam
- Demonstrate the practical skills required to successfully complete the contact lens portion of the State of Connecticut - Board of Examiners State Practical Exam
- Demonstrate familiarity with the statutes and regulations in Chapter 381 (Opticians) of the Connecticut General Statutes and Regulations and successfully complete the State Law portion of the State of Connecticut - Board of Examiners State Practical Exam
- Meet the minimum education requirement for licensing as an optician in all of the states requiring licensure for opticians

Selective Admission: Enrollment in the program is restricted because of limited lab facilities, and early application is encouraged.

- Only completed applications with all documents will be considered.
- Students are admitted to the fall term only.
- Students must meet with program coordinator and take a program-specific math worksheet as part of the admissions process.
- Students must be eligible for ENG 1010 and MATH 1010 to begin this program.
- Official transcripts are required for transfer credit.
- Ophthalmic Design and Dispensing students must receive a grade of C or better in Ophthalmic Dispensing courses in order to obtain a degree in this program. With an ODD Degree from Middlesex Campus of CT State Community College, a student can get work in an optical shop, corporate optical business, private Optometrist's office, or a private Ophthalmologist's office.

How long will you have to go to school?

Most students are able to finish the program within 21 months or 2- calendar years. Our program encourages lifelong learning and many of our students continue on to bachelors degrees. A small percent of students choose to continue their education to become Optometrists and Ophthalmologists, both of which require Doctoral level degrees. Job Availability & Growth: Spurred by the demographic of the baby boomers and the elderly, an increasing demand for eyewear and contact lenses should be good for the optician. As the aging population continues to grow, more demand will be created for corrective lenses and a requirement for regular vision care. Fashion will also continue to drive the demand for dispensing opticians. As ophthalmic and contact technology continues to develop the demand for the services of opticians will increase.

The Ophthalmic Design and Dispensing Program is accredited by the Commission on Opticianry Accreditation, PO Box 592, Canton, NY 13617.

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3*
- **OR** MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1118 - Anatomy and Physiology of the Eye *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (46 credits)

- BMGT 2020 - Principles of Management *Credits: 3*
- OPDD 1001 - Introduction to Ophthalmic Dispensing *Credits: 4*
- OPDD 1002 - Ophthalmic Dispensing I *Credits: 4*
- OPDD 1003 - Ophthalmic Dispensing II *Credits: 3*
- OPDD 1009 - Optical Business Management *Credits: 3*
- OPDD 1010 - Ophthalmic Materials I *Credits: 4*
- OPDD 1011 - Ophthalmic Materials II *Credits: 4*
- OPDD 1020 - Contact Lenses I *Credits: 3*
- OPDD 1021 - Contact Lenses II *Credits: 4*
- OPDD 1022 - Contact Lenses III *Credits: 4*
- OPDD 1030 - Low Vision *Credits: 1*
- OPDD 1004 - Ophthalmic Dispensing III *Credits: 3*
- OPDD 1012 - Ophthalmic Materials III *Credits: 4*
- OPDD 2095 - Opticianry Practicum *Credits: 2*

Total Credits: 68-69

Outpatient Medical Coding and Auditing, AS (MCOD-AS)

The Outpatient Medical Coding and Auditing Associate Degree is for students interested in reimbursement and compliance. Students learn to evaluate medical documentation to validate assignment of codes in the outpatient setting using (Electronic Medical Records) EMR and Practice Management (PM) software for auditing and revenue recovery. The program prepares students for entry-level positions in outpatient medical coding and auditing with healthcare providers and payers including private insurance companies and government payers.

Learning Outcomes:

- Describe the distinct types of healthcare delivery systems and Telehealth services regulatory requirements, and compliance.
- Describe legal and ethical responsibilities in the healthcare organization as they relate Health Insurance Portability and Accountability Act of 1996 (HIPAA), Health Information Technology for Economic and Clinical Health Act (HITECH), Protected Health Information (PHI) and to patient/client rights.
- Demonstrate communication, teamwork, leadership skills and competencies.
- Use coding and documentation guidelines to produce clean claims.
- Utilize EMR/Electronic Health Records (EHR) software.
- Compare and contrast reimbursement methodologies.
- Audit outpatient documentation for accuracy to support International Classification of Disease (ICD), Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) coding, quality measures, and clinical requirements.
- Utilize proper terminology including abbreviations related to pathological conditions, diagnostic procedures, surgical interventions, and therapeutic procedures.
- Apply database information technology to electronic medical records and health information exchange.
- Find and communicate documentation deficiencies to providers to improve documentation for correct risk adjustment coding.

Upon completion of the program the student may choose to take an exam for national certification credentials:

American Association of Professional Coders - AAPC

- **CPC** - Certified Professional Coder
- **CPMA** - Certified Professional Medical Auditor
- **CDEO** - Certified Documentation Expert Outpatient

General Education Courses (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- PHIL 1012 - Bioethics *Credits: 3*
- BIO 1100 - Principles of the Human Body *Credits: 3*
- **OR** BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- **OR** BIO 2112 - Anatomy & Physiology II *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- HIMT 2530 - Compliance in the Outpatient Setting *Credits: 3*
- **OR** HIMT 2540 - Privacy, Security, and Compliance *Credits: 3*
- CSA 1110 - Introduction to Software Applications *Credits: 3*

- MDAS 1011 - Administrative Medical Assisting *Credits: 3*
- **OR** HIMT 1410 - Healthcare Access Management *Credits: 3*
- HIMT 1110 - Introduction to Health Information Management *Credits: 3*
- **OR** HIMT 2110 - Health Information Management Principles *Credits: 3*
- HIMT 2010 - Human Diseases and Pathophysiology *Credits: 3*
- **OR** BIO 2103 - Pathophysiology *Credits: 3*
- **OR** BIO 1023 - Biology of Disease *Credits: 3*
- BOT 1801 - Medical Coding I *Credits: 3*
- **OR** HIMT 2730 - Clinical Classification Systems I *Credits: 3*
- BOT 1802 - Medical Coding II *Credits: 3*
- **OR** HIMT 2740 - Clinical Classification Systems II *Credits: 3*
- HIMT 2111 - Advanced Coding & Auditing *Credits: 3*
- MDAS 1012 - Medical Insurance and Billing *Credits: 3*
- **OR** HIMT 2460 - Healthcare Reimbursement *Credits: 3*
- MDAS 1025 - Medical Terminology for Clinical and Administrative Professions *Credits: 3*
- **OR** BOT 1800 - Medical Terminology and Anatomy *Credits: 3*
- **OR** HIMT 1000 - Medical Terminology *Credits: 3*
- MDAS 2016 - Electronic Medical Records *Credits: 3*
- **OR** HIMT 2350 - Healthcare Informatics *Credits: 3*
- MDAS 2050 - Principles of Pharmacology *Credits: 3*
- **OR** HIMT 1030 - Pharmacology in Health Information *Credits: 1*
- Directed Elective from ACCT, BOT, BUSN, CSC, CST, ECON, HIMT, MATH, MDAS *Credits: 3-5*

Total Credits: 60-61

Paramedic Studies Certificate (PARM-CC)

The Paramedic Certificate Program is designed for students to acquire knowledge and skills in order to provide pre-hospital emergency medical care to those individuals needing advanced life support (ALS). Graduates of the program are skilled in advanced life support necessary to meet the needs of those agencies or institutions providing emergency medical services to the community.

Classroom, simulated laboratory and clinical experiences in the paramedic program include content and practice skills related to the emergency medical care of pre-hospital patients.

Included in the curriculum are certifications in Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and Prehospital Trauma Life Support (PHTLS). Upon successful completion of the certificate program, the graduate will be qualified to take the National Registry of Emergency Medical Technicians (NREMT) paramedic exam for national certification as a paramedic. The NREMT certification can then be used to obtain CT licensure as a paramedic. Additional fees are required for exam and state licensure.

Learning Outcomes:

Upon successful completion of the paramedic program, the graduate will be able to demonstrate the ability to comprehend, apply, and evaluate theoretical information relevant to the role of entry-level paramedic. The graduate will:

- Provide advanced emergency medical care for patients who access the emergency medical services (EMS) system
- Integrate the complex knowledge and skills necessary to provide advanced level patient care and transportation
- Function as a member of the comprehensive EMS response system, under medical oversight
- Perform patient care interventions including invasive and pharmacological interventions to reduce the morbidity and mortality associated with acute out-of-hospital medical and traumatic emergencies
- Utilize knowledge of anatomy, physiology, and pathophysiology to develop advanced patient assessment strategies

Admission to the certificate program requires current certification as a Connecticut emergency medical technician (EMT) or advanced emergency medical technician (AEMT), current certification in American Heart Association Basic Life Support (BLS), and proof of at least 50 patient contacts in the prehospital environment. Candidates will also need to pass a drug screening, background check, and entrance exam. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Students will be required to maintain a Field Internship Student Acquisition Project (FISDAP) account and have access to a portable web-enabled device for all PMD classes. PMD 211 requires 220 hours of field experience which will occur at EMS agencies around the state.

The certificate program is designed to prepare students to take the National Registry of Emergency Medical Technician (NREMT) paramedic exam. After passing this exam, the graduate will be able to apply for state licensure as a paramedic.

Capital Community College's Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP). Commission on Accreditation of Allied Health Education Programs: 9355-113th St. N, #7709, Seminole FL 33775. Phone: (727) 210-2350, Fax: (727) 210-2354, Email: mail@caahep.org. Committee on Accreditation of Education Programs for the EMS Professions: 8301 Lakeview Parkway, Suite 111-312, Rowlett, TX 75088, 214-703-8445, 214-703-8992 (fax), www.coaemsp.org

All courses taken in this certificate program can lead to an associate degree in Paramedic Studies program.

Required Courses

- PMED 1011 - Paramedic I *Credits: 8*
- PMED 1012 - Paramedic II *Credits: 8*
- PMED 1013 - Paramedic III *Credits: 7*
- PMED 1020 - Anatomy and Physiology for Emergency Care I *Credits: 2*
- PMED 1021 - Anatomy and Physiology for Emergency Care II *Credits: 2*
- PMED 2014 - Paramedic IV *Credits: 7*

Total Credits: 34

Paramedic Studies, AS (PARM-AS)

The Associate in Science Degree in Paramedic Studies is designed as an extension to the Paramedic Certificate program. Graduates of this program will be prepared to assume management-level careers in pre-hospital health administration. They will have learned the skills necessary to plan, implement and manage pre-hospital care. The Emergency Medical Services (EMS) Instructor Option prepares the student to apply for CT certification as an EMS Instructor.

Career opportunities available for graduates of this program include employment as supervisors or managers of emergency medical services and as educational coordinators.

Learning Outcomes:

Both program options share the following outcomes. Upon successful completion of the paramedic program, the graduate will be able to demonstrate the ability to comprehend, apply, and evaluate theoretical information relevant to the role of entry-level paramedic. The graduate will:

- Provide advanced emergency medical care for patients who access the emergency medical services (EMS) system
- Integrate the complex knowledge and skills necessary to provide advanced level patient care and transportation
- Function as a member of the comprehensive EMS response system, under medical oversight
- Perform patient care interventions including invasive and pharmacological interventions to reduce the morbidity and mortality associated with acute out-of-hospital medical and traumatic emergencies
- Utilize knowledge of anatomy, physiology, and pathophysiology to develop advanced patient assessment strategies
- Demonstrate enhanced written, verbal, and non-verbal communication skills
- Demonstrate enhanced leadership and teamwork abilities

In addition to the above shared outcomes, the Paramedic Studies graduate will:

- Demonstrate an enhanced understanding of the scientific process, research, and evidence-based medicine
- Demonstrate an understanding of social sciences, arts, and humanities

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This is a selective admission program. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

The CT State Paramedic Studies program accreditation with The Committee on Accreditation for the EMS Professions requires the completion of the PMED 1011, PMED 1012, PMED 1013, and PMED 2014 courses at Connecticut State Community College. No external credit shall be awarded to meet these course requirements.

Paramedic Studies General Education Core (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** BIO 2350 - Microbiology *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Paramedic Studies Program Core (37 credits)

- SOC 1001 - Principles of Sociology *Credits: 3*
- PMED 1011 - Paramedic I *Credits: 8*
- PMED 1012 - Paramedic II *Credits: 8*
- PMED 1013 - Paramedic III *Credits: 7*
- PMED 1020 - Anatomy and Physiology for Emergency Care I *Credits: 2*
- PMED 1021 - Anatomy and Physiology for Emergency Care II *Credits: 2*
- PMED 2014 - Paramedic IV *Credits: 7*

Paramedic Studies Courses (9 credits)

- BUSN 2100 - Business Communications *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- BMGT 2200 - Human Resource Management *Credits: 3*

Total Credits: 67-68

Paramedic Studies: Emergency Medical Services Instructor, AS (PARM-AS-EMS)

The Associate in Science Degree in Paramedic Studies is designed as an extension to the Paramedic Certificate program. Graduates of this program will be prepared to assume management-level careers in pre-hospital health administration. They will have learned the skills necessary to plan, implement and manage pre-hospital care. The Emergency Medical Services (EMS) Instructor Option prepares the student to apply for CT certification as an EMS Instructor.

Career opportunities available for graduates of this program include employment as supervisors or managers of emergency medical services and as educational coordinators.

Learning Outcomes:

Both program options share the following outcomes. Upon successful completion of the paramedic program, the graduate will be able to demonstrate the ability to comprehend, apply, and evaluate theoretical information relevant to the role of entry-level paramedic. The graduate will:

- Provide advanced emergency medical care for patients who access the emergency medical services (EMS) system
- Integrate the complex knowledge and skills necessary to provide advanced level patient care and transportation
- Function as a member of the comprehensive EMS response system, under medical oversight
- Perform patient care interventions including invasive and pharmacological interventions to reduce the morbidity and mortality associated with acute out-of-hospital medical and traumatic emergencies
- Utilize knowledge of anatomy, physiology, and pathophysiology to develop advanced patient assessment strategies
- Demonstrate enhanced written, verbal, and non-verbal communication skills
- Demonstrate enhanced leadership and teamwork abilities

In addition to the above shared outcomes, the Paramedic Studies, Emergency Medical Services Instructor Option graduate will:

- Demonstrate an understanding of educational theory as it applies to EMS education
- Demonstrate the ability to teach cognitive, psychomotor, and affective lessons within an EMS curriculum
- Demonstrate the communication and organizational skills requisite of holding an EMS management position
- Demonstrate an understanding of EMS program administration, CT-specific legal considerations, and record-keeping responsibilities
- Demonstrate the ability to assess student performance in all domains of learning

Capital Community College's Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP). Commission on Accreditation of Allied Health Education Programs: 9355-113th St. N, #7709, Seminole FL 33775. Phone: (727) 210-2350, Fax: (727) 210-2354, Email: mail@caahep.org. Committee on Accreditation of Education Programs for the EMS Professions: 8301 Lakeview Parkway, Suite 111-312, Rowlett, TX 75088, 214-703-8445, 214-703-8992 (fax), www.coaemsp.org

The CT State Paramedic Studies program accreditation with The Committee on Accreditation for the EMS Professions requires the completion of the PMED 1011, PMED 1012, PMED 1013, and PMED 2014 courses at Connecticut State Community College. No external credit shall be awarded to meet these course requirements.

Paramedic Studies General Education Core (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** BIO 2350 - Microbiology *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*

- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Paramedic Studies Program Core (37 credits)

- SOC 1001 - Principles of Sociology *Credits: 3*
- PMED 1011 - Paramedic I *Credits: 8*
- PMED 1012 - Paramedic II *Credits: 8*
- PMED 1013 - Paramedic III *Credits: 7*
- PMED 1020 - Anatomy and Physiology for Emergency Care I *Credits: 2*
- PMED 1021 - Anatomy and Physiology for Emergency Care II *Credits: 2*
- PMED 2014 - Paramedic IV *Credits: 7*

EMS Instructor Course (9 credits)

- EMS 1001 - Emergency Medical Service Education *Credits: 9*

Total Credits: 67-68

Phlebotomy: Certified Phlebotomy Technician Certificate (PHLB-CC)

A phlebotomist is an integral member of the medical laboratory team whose primary function is the collection of blood samples from patients and donors. The phlebotomist facilitates the collection and transportation of laboratory specimens, and is often the patient's only contact with the medical laboratory. The need to assure quality and patient safety mandates strict professional behavior and standards of practice for phlebotomists. Safety is key and all safety precautions must be taken to prevent the transmission of infectious diseases. Positions are flexible and can consist of full time, part time, and per diem. This 16 credit certificate consists of 5 courses that will prepare the student to sit for a national Phlebotomy certificate exam allowing them to work in any state and perform all duties required of a Phlebotomy Technician.

Learning Outcomes:

- Recall and articulate medical terminology and healthcare abbreviations.
- Perform blood collection techniques using the evacuated tube system, capillary puncture, and winged infusion methods.
- Demonstrate safe and precise collection, transportation, and handling of human specimens.
- Perform specimen processing procedures, including specimen assessment, proper centrifugation, specimen aliquoting, specimen triage, specimen storage and retrieval, and specimen transport (intra- laboratory).
- Control infection using aseptic techniques in all stages of venipuncture.
- Apply appropriate legal and ethical standards to the practice of healthcare.
- Develop life management skills, work ethics, and critical thinking skills necessary for all health providers.

Required Courses

- MDAS 1025 - Medical Terminology for Clinical and Administrative Professions *Credits: 3*
- HLTH 1070 - Medical Law and Ethics *Credits: 3*
- PHLB 1001 - Techniques of Phlebotomy *Credits: 3*
- PHLB 1072 - Concepts in Specimen Processing for Phlebotomists *Credits: 3*
- PHLB 2095 - Phlebotomy Practicum *Credits: 4*

Total Credits: 16

Physical Therapist Assistant, AS (PTAS-AS)

Mission:

The Physical Therapist Assistant (PTA) Program is committed to high standards as it educates students with the knowledge, clinical skills, professional behaviors, and core values essential to evidence-based and culturally competent contemporary physical therapy care.

Vision:

The program emphasis on innovative and data-driven teaching methods, technology, and communication facilitates learning in the classroom and the clinic as the program endeavors to educate students who:

- Strive for excellence as physical therapist assistants by providing safe and effective interventions.
- Commit to high ethical standards.
- Appreciate and value racial, social, economic, and cultural diversity.
- Utilize critical reflection.
- Invest in community involvement.
- Engage in lifelong learning.
- Provide patient-centered interprofessional collaborative care.

Philosophy:

We believe the Physical Therapist Assistant curriculum:

- Develops appropriate and critical professional behaviors and core values to create ethical practitioners.
- Is based on a liberal arts education and the concentrated study and application of new knowledge in physical therapy.
- Emphasizes the development of written, oral, and technological communication skills.
- Provides a variety of learning experiences to enhance the student's critical thinking abilities, problem solving skills, and values identification.
- Promotes inter-professional education with other disciplines and programs within the college and community.

Program Outcomes:

- 70% or more of admitted students will complete the program within 1 ½ times the length of the program (3 years) as reported using Commission on Accreditation in Physical Therapy Education (CAPTE) standards.
- The two-year overall passing rate of the graduates who choose to take the Physical Therapist Assistant national licensure examination will be at least 85%.
- 90% of the graduates who seek employment as a Physical Therapist Assistant will attain a position within one year of graduation.

Program Goals:

Upon successful completion of all program requirements, the Physical Therapist Assistant Program will prepare graduates who:

- Display skill competence in the cognitive, psychomotor, and affective domains necessary to provide safe, effective, and evidence-based physical therapy services under the direction and supervision of a physical therapist.
- Demonstrate effective communication and education skills through professional interactions with consideration for individual differences, values, preferences, and expressed needs.
- Demonstrate self-assessment and interest in lifelong learning by participating in professional development activities which include volunteerism, advocacy, and leadership.
- Adhere to ethical, professional behavior, legal, regulatory, and licensure standards within their scope of work as a physical therapist assistant.
- Participate in the healthcare environment as an effective member of the healthcare team while providing patient-centered interprofessional collaborative care.

Program Description:

The Physical Therapist Assistant (PTA), two-year Associate of Science degree programs, are designed to develop the competencies and knowledge required for entering the field of Physical Therapy. The Physical Therapist Assistant Programs will provide fundamental and theoretical knowledge as well as practical skills to prepare the student to assume the role of the PTA.

Each program is approved by the Board of Regents for Higher Education and individually accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

Graduates are eligible to take the National Physical Therapist Assistant Examination administered by The Federation of State Boards of Physical Therapy (FSBPT). Graduates who pass this exam are eligible to apply for a license in the State of Connecticut or their respective state of practice.

Each program prepares the student to be a licensed health care professional who works under the direction and supervision of the physical therapist providing physical therapy interventions and associated data collection techniques. Interventions include therapeutic exercise, physical modalities, and other specialized clinical skills needed in a variety of settings such as acute care hospitals, rehabilitation hospitals, subacute and long-term care facilities, outpatient physical therapy clinics, school systems, and home care settings.

PTAs help people from birth to end of life who have medical, or other health-related conditions, that limit their ability to move and perform functional activities in their daily lives. Care provided by a PTA may include teaching patients/clients exercise for mobility, strength and coordination, training for activities such as walking with crutches, canes, or walkers, manual therapy, and the use of physical agents and electrotherapy such as ultrasound and electrical stimulation.

Admissions:

Admission to the program is selective and competitive; a limited number of students are admitted per cohort. Space is limited. Meeting minimum requirements does not guarantee admission into the program.

Please contact the specific program location for their application and requirements. The program at the CT State-Naugatuck Valley campus has a spring semester (January) start to each cohort. The program at the CT State-Norwalk campus has a fall semester (August) start to each cohort.

1. Complete all College admission requirements.
2. Complete PTA Application. Must be submitted by the posted deadline, including supporting for current contact information.
3. Completion of the prerequisite courses:
 - a. BIO 1210 - General Biology I with a C+ or better within 5 years of the application deadline
 - b. MATH 1200 - Statistics I with a C or better within 5 years of the application deadline
 - c. ENG 1010 - Composition with a C or higher
 - d. PSY 1011 - General Psychology I with a C or higher
4. Have a minimum admissions GPA of 2.5. The 4 admission requirements are used in the calculation of this GPA.
5. Complete the Test of Essential Academic Skills (TEAS) exam with a minimum score of 60%. There are no exemptions from this entrance exam based on prior education. For the PTA program, the TEAS test expires after 3 years. Students may take the nursing or allied health version of the test, as the content of both is the same. Students may take either the in-person or online version of the TEAS test. Students may take the TEAS test at any school, in any state; have the TEAS test scores sent to the respective campus. Students may repeat the TEAS to improve their score.
6. Documented volunteer/observational experience totaling at least 20 hours in two different settings. Please contact the individual campus requested for specific requirements.
7. Students must be able to perform common physical therapy functions as defined in the program's Technical Standards.

Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Additional Program Information

In addition to tuition and fees, students in the PTA Program are responsible for additional costs, such as, books, American Physical Therapy Association (APTA) student membership, clinical site requirements, appropriate attire for lab and clinical experiences, licensure review courses, required certifications, and transportation. Students must complete all medical requirements, including but not limited to current immunizations and medical forms. Students will pay an Allied Health Fee each semester.

Students will be required by the program to undergo a background check which may include fingerprinting for felony convictions and undergo a drug/substance screening. Students who do not pass the background check may be excluded from clinical sites, may not be able to meet the competencies required for graduation from the program, may not be eligible to take the licensure exam, and/or may not be eligible for PTA licensure. Students who have a positive toxicology screen will have their case reviewed, which may result in dismissal from the program.

The Physical Therapist Assistant Program at Naugatuck Valley Community College is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 3030 Potomac Ave., Suite 100, Alexandria, Virginia 22305-3085; telephone: 703-706-3245; email: accreditation@apta.org; website: <http://www.capteonline.org>.

The Physical Therapist Assistant Program at Norwalk Community College is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 3030 Potomac Ave., Suite 100, Alexandria, Virginia 22305-3085; telephone: 703-706-3245; email: accreditation@apta.org; website: <http://www.capteonline.org>

Those with program questions should contact the Program Directors directly. See their respective website for current contact information.

With respect to code 668.43 (a)(5)(v), the program has determined that its curriculum meets the state educational requirements for licensure or certification in all states, the District of Colombia, Puerto Rico, and the U.S. Virgin Islands secondary to its accreditation by the Commission on Accreditation in Physical Therapy Education, based on the following:

CAPTE accreditation of a physical therapist or physical therapist assistant program satisfies state educational requirements in all states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. Thus, students graduating from CAPTE-accredited physical therapist and physical therapist assistant education programs are eligible to take the National Physical Therapy Examination and apply for licensure in all states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.

For more information regarding state qualifications and licensure requirements, refer to the Federation of State Boards of Physical Therapy (FSBPT) website at www.fsbpt.org.

Transfer options

Courses from an associate level PTA degree do not typically transfer to a graduate level Doctor of Physical Therapy (DPT) program, however, general education courses, such as math and English will count toward the bachelor's degree required for admission to a PT program. PTA/technical education courses may transfer to a four-year school as electives. Check with the school you plan to attend for details. PTAs who go on to PT school have the advantage of vast background knowledge in physical therapy, as well as the ability to work a flexible schedule for higher pay while attending school.

The PTA program does not accept transfer students or credits toward PTA courses from U.S. or international programs, including PT, Occupational Therapy (OT), PTA, Occupational Therapy Assistant (OTA), or any other similar program. There are strict accreditation requirements, as well as extensive variability between programs across the country and around the world. All students wishing to graduate from a PTA program must complete the entire technical portion of the program at one campus. This does not exclude individuals from completing general education (non-PTA) courses at another institution.

General Education Courses (23-24)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1210 - General Biology I *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*

Program Courses (44 credits)

- CCS 1001 - College & Career Success *Credits: 3*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- PTA 1200 - Introduction to Physical Therapy *Credits: 3*
- PTA 1250 - Foundational Skills in Physical Therapy *Credits: 4*
- PTA 1300 - Clinical Anatomy & Kinesiology *Credits: 3*
- PTA 1450 - Physical Agents in Physical Therapy *Credits: 3*
- PTA 1500 - Physical Therapy Interventions in Orthopedics *Credits: 4*
- PTA 1550 - Pathology for the Physical Therapist Assistant I *Credits: 3*
- PTA 2500 - Physical Therapy Interventions in Special Populations *Credits: 3*
- PTA 2550 - Pathology for the Physical Therapist Assistant II *Credits: 3*
- PTA 2580 - PTA in the Healthcare Arena *Credits: 1*
- PTA 2694/2694P - Physical Therapist Assistant Part-Time Clinical Experience *Credits: 1*
- PTA 2794 - Physical Therapist Assistant Full-Time Clinical Experience I *Credits: 3*
- PTA 2894 - Physical Therapist Assistant Full-Time Clinical Experience II *Credits: 3*
- PTA 2990 - Physical Therapy Seminar *Credits: 3*

Total Credits: 67-68

Pre-Dental Hygiene Transfer Compact, AA (LASC-AA-DHY)

The CT State Community College Pre-Dental Hygiene Transfer Compact is designed to provide academic opportunities for students who are seeking a Bachelor of Science Degree in Dental Hygiene at University of New Haven (UNH). Students may complete pre-requisite and general education courses at CT State Community College and transfer into the University of New Haven's Dental Hygiene Program. Students who complete the Associate in Arts Degree and have followed the Pre-Dental Hygiene track are eligible to apply for admission to the University of New Haven's Dental Hygiene Program.

Learning Outcomes:

Students who complete the Associate in Arts Degree 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 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. The University of New Haven Dental Hygiene articulation agreement states that students must receive a "C" or higher in all pre-dental hygiene transfer compact courses in order to be transferred to UNH.

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- ARTH 1001 - Global Art History Prehistory to 1500 CE *Credits: 3*
- **OR** ARTH 1002 - Global Art History 1500 CE to present *Credits: 3*
- **OR** MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (43 credits)

- BIO 1005 - Introduction to Biology *Credits: 4*
- **OR** BIO 1210 - General Biology I *Credits: 4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- COMM 1301 - Public Speaking *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*
- PHIL 1101 - Ethics *Credits: 3*
- PSY 1012 - General Psychology II *Credits: 3*
- NTRN 1002 - Nutrition I: Principles of Nutrition *Credits: 3*
- HIST 1001 - Western History to the 1500s *Credits: 3*
- **OR** HIST 1002 - Western History from the 1500s *Credits: 3*
- DENT 1005 - Introduction to Dental Hygiene I *Credits: 1*
- DENT 1006 - Introduction to Dental Hygiene II *Credits: 1*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** ECON 1002 - Principles of Microeconomics *Credits: 3*
- FREN 1012 - Elementary French II *Credits: 4 or higher*
- **OR** ITAL 1012 - Elementary Italian II *Credits: 4 or higher*
- **OR** SPAN 1012 - Elementary Spanish II *Credits: 4 or higher*

Total Credits: 65

Pre-Nutrition Transfer Degree, AS (LASC-AS-NTR)

This program is designed for students who seek to become a Registered Dietitian/Nutritionist. Upon completion of the associate pre-nutrition degree, students have the opportunity to apply for transfer to a 4- year university to complete the degree for Registered Dietitian/Nutritionist.

Learning Outcomes:

- Demonstrate ability to think critically and creatively.
- Demonstrate ability to effectively communicate in oral and written form.
- Demonstrate ability to understand basic scientific principles.
- Demonstrate ability to understand, evaluate and apply nutrition principles.

Articulation Schools: University of Connecticut - Storrs, University of New Haven, and University of Maine. University of St. Joseph articulation agreement in process.

Check if your transfer school will accept hybrid or online science labs for transfer.

General Education Courses (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 or higher *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1011 - Introduction to Nutrition *Credits: 3*
- ANTH 1001 - Introduction to Anthropology *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (43 credits)

- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- CHEM 1210 - General Chemistry I *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- CHEM 2310 - Organic Chemistry I *Credits: 4*
- BIO 1210 - General Biology I *Credits: 4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- Two 200-level Language and Culture Courses *Credits: 6* *Note: students who test out of language courses are still required to take two 200-level courses as recommended by an advisor.*
- ENG 1020 - Composition II and Literature *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- **OR** SOC 1001 - Principles of Sociology *Credits: 3*
- *Students planning on transferring to a 4-year school should consult with their transfer school on the course to take in this category.*

Total Credits 64-65

Radiation Therapy Program, AS (RADT-AS-GW)

The mission of the Radiation Therapy Programs is to provide a learner centered Joint Review Committee on Education in Radiologic Technology (JRCERT) accredited educational program that will render qualified and compassionate radiation therapists for the community.

Learning Outcomes:

- Graduates will pass the American Registry of Radiologic Technology (ARRT) exam on the first attempt and score at or above the national average.
- Graduates will obtain employment in radiation therapy.
- The program will provide competent graduates for the community.
- Students will be satisfied with didactic course instruction.
- Students will be satisfied with clinical instruction.
- Students will demonstrate critical thinking.
- Students will demonstrate effective communication skills.
- Students will exhibit ethical and professional behaviors appropriate for a health care professional.
- Students will demonstrate specific skills necessary to be competent entry level Radiation Therapy Professionals.

The Radiation Therapy associate degree program enables graduates to work as radiation therapists. Radiation therapy uses high energy X-rays to treat diseases, primarily cancer. Using highly specialized computerized equipment, the radiation is targeted to abnormal cells while minimizing the side effects. The Radiation Therapist is a vital member of the health care team in the Radiation Oncology Department. This individual is responsible for administering, monitoring, and documenting the prescribed course of treatment from the radiation oncologist.

The Radiation Therapist is involved in assessing the physical and emotional needs of the patients and making the appropriate referrals. This unique profession combines technical and interpersonal skills and offers many career possibilities available to trained radiation therapists, including management, dosimetry, education, applications specialist, sales, and technology-related fields.

The Radiation Therapy Program at Gateway Community College is accredited through the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, Phone: (312) 704-5300, Fax: (312) 704-5304, Website: <https://www.jrcert.org/>, Email: mail@jrcert.org, Program Website: <https://gatewayct.edu/Radiation-Therapy>

Admission requirements

The Radiation Therapy programs at the CT State Community College are selective admission programs.

Admissions Procedure:

1. All students must first apply to CT State College.
2. Unless waived, all applicants must take placement tests in reading, English, and mathematics.
3. Attendance at one program specific information session.
4. Students must have a 2.7 GPA
5. Complete the following prerequisite courses
 - ENG 1010 - Composition (C or higher)
 - BIO 2111 - Anatomy & Physiology I (C or higher taken within past five years of program start date)
Note that enrollment in BIO 2111 may require completion of pre-requisite science courses
 - BIO 2112 - Anatomy & Physiology II (C or higher taken within past five years of program start date)
 - MATH 1610 - Precalculus (C or higher taken within past five years of program start date)
6. Submit official copies of all transcripts.
7. Participate in an interview.

Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Students in this program are responsible for expenses including but not limited to uniforms, physical examinations and blood work, travel to clinical sites, parking, meals, CPR training, background check and toxicology screening, dosimeters, textbooks, liability insurance, Trajecsys and Castle Branch. Specific information about these costs is available on the Radiation Therapy webpage and in the Radiation Therapy Program Student Handbook. Financial aid information is available through the College Financial Aid office.

Graduation Criteria

All program students must complete the following to receive an associate degree from the program. See the student handbook for complete details.

- Complete all didactic curricula with a final grade of C or better.
- Complete all clinical curricula with a final grade of C or better.
- Complete all competency exams with a final grade of 100%.
- Maintain all hospital and program standards as outlined in the program handbook.

Graduates of the program are eligible to take the American Registry of Radiologic Technologists (ARRT) national certification examination.

Clinical 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.

Gateway Campus Clinical instruction will take place at the following sites:

- 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
- Greenwich Hospital, Greenwich, CT

Note: Students are responsible for their own transportation to and from class and clinical assignments.

Due to standards from The Joint Commission, students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit a criminal background check, required immunization records and other documentation needed to meet the standards. CT State Community College cannot be responsible for finding an alternate clinical placement for a student who fails to meet the required hospital requirements. A student who is unable to complete the required clinical experience will be unable to complete the requirements for the associate degree in Radiation Therapy but may be able to apply some or all of the credits completed to an associate degree in General Studies. Students are advised to meet with a Counselor to discuss degree completion requirements.

Radiation Therapy General Education Core (23 credits)

- ENG 1010 - Composition *Credits: 3* [pre-admission requirement]
- MATH 1610 - Precalculus *Credits: 4* [pre-admission requirement]
- COMM 1302 - Interpersonal Communication *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- BIO 1210 - General Biology I *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Radiation Therapy Program Core (57 credits, 8 credits pre-program)

- BIO 2111 - Anatomy & Physiology I *Credits: 4* [pre-admission requirement]
- BIO 2112 - Anatomy & Physiology II *Credits: 4* [pre-admission requirement]
- RADT 2018 - Understanding Cancer *Credits: 3*
- RST 2000 - Cross Sectional Anatomy *Credits: 3* (Gateway campus)
- **OR** RADT 1040 - CT Imaging and Sectional Anatomy *Credits: 3* (Manchester campus)
- RST 1005 - Radiologic Science Physics *Credits: 3*
- RADT 1001 - Principles and Practices of Radiation Therapy I *Credits: 3*
- RADT 1002 - Principles and Practices of Radiation Therapy II *Credits: 3*
- RADT 1195 - Clinical Practice I *Credits: 2*
- RADT 1295 - Clinical Practice II *Credits: 1*
- RADT 1395 - Clinical Practice III *Credits: 2*
- RADT 1495 - Clinical Practice IV *Credits: 3*
- RADT 2001 - Principles and Practices of Radiation Therapy III *Credits: 3*
- RADT 2002 - Principles and Practices of Radiation Therapy IV *Credits: 3*
- RADT 2195 - Clinical Practice V *Credits: 3*
- RADT 2295 - Clinical Practice VI *Credits: 1*
- RADT 2395 - Clinical Practice VII *Credits: 3*
- RADT 2020 - Treatment Planning I *Credits: 3*
- RADT 2021 - Treatment Planning II *Credits: 3*
- RADT 2222 - Radiation Oncology I *Credits: 2*
- RADT 2032 - Radiation Oncology II *Credits: 2*
- RADT 2024 - Radiobiology and Protection *Credits: 3*
- RADT 2025 - Radiation Therapy Physics *Credits: 3*
- RADT 2040 - Operational & Quality Management in Radiation Therapy *Credits: 2*
- RADT 2090 - Radiologic Science Seminar *Credits: 3*

Gateway Courses (3 credits)

- RST 1000 - Introduction to Patient Care for Radiologic Sciences *Credits: 2*
- RST 1000L - Introduction to Patient Care for Radiologic Sciences Lab *Credits: 1*

Total Program Credits: 72 (Pre-program Credits: 19)

Radiation Therapy Program, AS (RADT-AS-MA)

The Radiation Therapy associate degree program enables graduates to work as radiation therapists. Radiation therapy uses high energy X-rays to treat diseases, primarily cancer. Using highly specialized computerized equipment, the radiation is targeted to abnormal cells while minimizing the side effects. The Radiation Therapist is a vital member of the health care team in the Radiation Oncology Department. This individual is responsible for administering, monitoring, and documenting the prescribed course of treatment from the radiation oncologist. The Radiation Therapist is involved in assessing the physical and emotional needs of the patients and making the appropriate referrals. This unique profession combines technical and interpersonal skills and offers many career possibilities available to trained radiation therapists, including management, dosimetry, education, applications specialist, sales, and technology-related fields.

Mission

The **mission** of the Radiation Therapy Program is to provide an academically rigorous and innovative learner-centered JRCERT accredited educational program that will render qualified and compassionate radiation therapists for the community.

Goals & Learning Outcomes

Goal/Outcome 1: Students will demonstrate critical thinking.

1. Students will accurately perform new patient set-ups.
2. Students will create and develop a treatment plan

Goal/Outcome 2: Students will demonstrate effective communication skills.

1. Students will utilize appropriate communication skills in the clinical setting.
2. Students will demonstrate effective written communication.
3. Students will demonstrate effective oral communication.

Goal/Outcome 3: Students will exhibit ethical and professional behaviors appropriate of a health care professional.

1. Students will display professionalism in the clinical setting.
2. Students demonstrate professional growth through participation in continuing education.

Goal/Outcome 4: Students will demonstrate specific skills necessary to be competent entry level Radiation Therapy Professionals.

1. Students will accurately perform all treatment procedures.
2. Students will demonstrate basic simulation skills.

The Radiation Therapy Program at CT State Manchester is accredited through the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, Phone: (312) 704-5300, Fax: (312) 704-5304, Website: <https://www.jrcert.org/>, Email: mail@jrcert.org, Program Website: <https://ctstate.edu/academics/programs/radiation-therapy>

Admission Requirements

The Radiation Therapy programs at CT State Community College are selective admission programs. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Admissions Procedure:

1. All students must first apply to CT State College.
2. Unless waived, all applicants must take placement tests in reading, English, and mathematics.
3. Attendance at one program specific information session.
4. Students must have a 2.7 GPA
5. Complete the following prerequisite courses
 - o ENG 1010 - Composition (C or higher)
 - o BIO 2111 - Anatomy & Physiology I (C or higher taken within past five years of program start date)*Note that enrollment in BIO 2111 may require completion of pre-requisite science courses*

- BIO 2112 - Anatomy & Physiology II (C or higher taken within past five years of program start date)
 - MATH 1610 - Precalculus (C or higher taken within past five years of program start date)
6. Submit official copies of all transcripts.
 7. Participate in an interview.

Students in this program are responsible for expenses including but not limited to uniforms, physical examinations and blood work, travel to clinical sites, parking, meals, CPR training, background check and toxicology screening, dosimeters, textbooks, liability insurance, Trajecsyst and Castle Branch. Specific information about these costs is available on the Radiation Therapy webpage and in the Radiation Therapy Program Student Handbook. Financial aid information is available through the College Financial Aid office.

Graduation Criteria

All program students must complete the following to receive an associate degree from the program. See the student handbook for complete details.

- Complete all didactic curricula with a final grade of C (75%) or better.
- Complete all clinical curricula with a final grade of C (80%) or better.
- Complete all competency exams with a final grade of 100%.
- Maintain all hospital and program standards as outlined in the program handbook.

Graduates of the program are eligible to take the American Registry of Radiologic Technologists (ARRT) national certification examination.

Clinical 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.

A current list of Manchester Campus clinical instruction sites is maintained on the Program Webpage.

Note: Students are responsible for their own transportation to and from class and clinical assignments.

Due to standards from The Joint Commission, students are advised that the healthcare facilities to which they are assigned for clinical rotations may require that they submit a criminal background check, required immunization records and other documentation needed to meet the standards. CT State Community College cannot be responsible for finding an alternate clinical placement for a student who fails to meet the required hospital requirements. A student who is unable to complete the required clinical experience will be unable to complete the requirements for the associate degree in Radiation Therapy but may be able to apply some or all of the credits completed to an associate degree in General Studies. Students are advised to meet with a Counselor to discuss degree completion requirements.

Radiation Therapy General Education Core (23 credits)

- ENG 1010 - Composition *Credits: 3* [pre-admission requirement]
- MATH 1610 - Precalculus *Credits: 4* [pre-admission requirement]
- COMM 1302 - Interpersonal Communication *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- BIO 1210 - General Biology I *Credits: 4*
- PSY 1011 - General Psychology I *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Radiation Therapy Program Core (57 credits, 8 credits pre-program)

- BIO 2111 - Anatomy & Physiology I *Credits: 4* [pre-admission requirement]
- BIO 2112 - Anatomy & Physiology II *Credits: 4* [pre-admission requirement]

- RADT 2018 - Understanding Cancer *Credits: 3*
- RST 2000 - Cross Sectional Anatomy *Credits: 3* (Gateway campus)
- **OR** RADT 1040 - CT Imaging and Sectional Anatomy *Credits: 3* (Manchester campus)
- RST 1005 - Radiologic Science Physics *Credits: 3*
- RADT 1001 - Principles and Practices of Radiation Therapy I *Credits: 3*
- RADT 1002 - Principles and Practices of Radiation Therapy II *Credits: 3*
- RADT 1195 - Clinical Practice I *Credits: 2*
- RADT 1295 - Clinical Practice II *Credits: 1*
- RADT 1395 - Clinical Practice III *Credits: 2*
- RADT 1495 - Clinical Practice IV *Credits: 3*
- RADT 2001 - Principles and Practices of Radiation Therapy III *Credits: 3*
- RADT 2002 - Principles and Practices of Radiation Therapy IV *Credits: 3*
- RADT 2195 - Clinical Practice V *Credits: 3*
- RADT 2295 - Clinical Practice VI *Credits: 1*
- RADT 2395 - Clinical Practice VII *Credits: 3*
- RADT 2020 - Treatment Planning I *Credits: 3*
- RADT 2021 - Treatment Planning II *Credits: 3*
- RADT 2222 - Radiation Oncology I *Credits: 2*
- RADT 2032 - Radiation Oncology II *Credits: 2*
- RADT 2024 - Radiobiology and Protection *Credits: 3*
- RADT 2025 - Radiation Therapy Physics *Credits: 3*
- RADT 2040 - Operational & Quality Management in Radiation Therapy *Credits: 2*
- RADT 2090 - Radiologic Science Seminar *Credits: 3*

Manchester Course (3 credits)

- RST 1021 - Radiologic Science Patient Care *Credits: 3*

Total Program Credits: 72 (Pre-program Credits: 19)

Radiography Program - Gateway, AS (RDGR-AS-GW)

The mission of the Connecticut State Community College Radiography program is to provide a comprehensive radiography program that will graduate competent, entry-level radiologic technologists for the healthcare community.

Radiography or "x-ray" uses very small doses of ionizing radiation to produce images of internal structures of the body for the diagnosis of disease or injury. Radiographers are technologists who operate imaging equipment to produce quality images of the body for a Radiologist or other ordering provider to interpret. The associate degree program in Radiography prepares students for employment as entry level radiographers in hospitals, outpatient facilities, medical offices, community health agencies, or nondestructive testing industries where radiation is used for quality control. 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. Each campus will have some degree of differentiation in course offerings and sequencing based on clinical capacity, student enrollment and Joint Review Committee on Education in Radiologic Technology (JRCERT) approval.

Students are assigned to clinical practice at various medical facilities throughout the state of Connecticut. Upon completion of the program, graduates are eligible to take the national certifying examination in radiography as administered by the American Registry of Radiologic Technologists (ARRT) in Radiography.

In addition to the College's general education core curriculum, the Connecticut State Community College Radiography program has a set of common program courses. Additionally, each campus may have its own set of differentiated options that must be taken to be eligible for graduation. Differentiated options are courses that meet the needs of the individual campus for a variety of reasons including but not limited to clinical site requirements, clinical site capacity, campus course offerings, and clinical competency requirements. Because each campus is required to maintain an individual accreditation from the Joint Review Committee on Education in Radiologic Technology (JRCERT), they may require differentiated options, and may have differentiated course sequencing, students cannot transfer from one campus program to another campus.

The Radiography program is a competency-based program. The credits associated with each clinical practice course are not a direct reflection of contact hours. One credit of clinical practice is equal to 120 hours of clinical practice.

Students who wish to transfer to an approved four-year program in radiography to achieve advanced level certification in computed tomography (CT), magnetic resonance imaging (MRI) or other disciplines, or programs for health care management should consult their campus' Radiography Program Coordinator regarding established transfer articulation agreements.

Admissions Procedure:

The Radiography programs at the Connecticut State Community College are selective admission programs. All students must first apply to the Connecticut State Community College. Unless waived, all applicants must take placement tests in reading, English, and mathematics. Students must attend a campus specific Radiography program information session within one year prior to applying to the Radiography program. Applications are available annually, starting October 1st. Students must have a 2.7 GPA (Grade Point Average), and complete the following courses prior to the February 1st application deadline:

- ENG 1010 - Composition (C or higher)
- BIO 2111 - Anatomy & Physiology I (C+ or higher taken within past five years of program start date)
- BIO 2112 - Anatomy & Physiology II (C+ or higher taken within past five years of program start date) *Students may apply to the Program while in the process of completing BIO 2112 during the spring semester of application year.*

Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Applicants will be required to complete the TEAS within three (3) years prior to the application deadline. Official results must be provided with the program application for the specified year of application.

Students in the radiography program may be responsible for expenses including but not limited to uniforms, physical examinations and blood work, travel to clinical sites, parking, meals, CPR training, background check and toxicology screening, textbooks, liability insurance, lead markers, and online clinical management and immunization services such as Trajecsyst and

Castle Branch. Specific information about these costs is available on the campus specific radiography webpage and on the campus specific Radiography Program Student Handbook. Financial aid information is available through the Connecticut State Community College Financial Aid office.

Please note:

To begin the clinical component of the Program, all accepted students will be required to:

1. Submit an updated health assessment with no restrictions
2. Submit documentation of updated vaccination requirements including blood work and titers as necessary
3. Pass a background check
4. Pass a toxicology screening

Positive toxicology screens can prevent students from participating in a clinical assignment per facility contractual agreements.

The following guides the response to a positive toxicology screening for any student:

1. All specimens identified as non-negative/positive on the initial test shall be confirmed, reviewed, and interpreted by the vendor.
2. The student is required to provide documentation by a healthcare provider in the event there is a medical explanation for a positive result (i.e., the result of a prescribed medication). In accordance with federal law, a positive toxicology screen for legally prescribed marijuana can prohibit a student from being placed in a clinical setting that accepts federal funding.
3. If a student challenges a result, only the original sample can be retested.

Learning Outcomes: (Based on JRCERT accreditation standards)

Upon completion of the Program:

- **Goal 1: Students will demonstrate effective communication skills**

Student Learning Outcomes:

1. Students will use effective oral communication skills with a wide variety of audiences in the clinical setting
2. Students will practice effective written communication skills

- **Goal 2: Students will utilize critical thinking skills**

Student Learning Outcomes:

1. Students will assess images for diagnostic quality
2. Students will assess images and make appropriate adjustment(s) as needed

- **Goal 3: Students will be clinically competent when performing entry level imaging procedures**

Student Learning Outcomes:

1. Students will accurately position patients for radiographic procedures based on patient assessment
2. Students will select appropriate technical factors to obtain diagnostic quality images based on patient assessment
3. Students will utilize radiation safety for self and others

- **Goal 4: Students will demonstrate professional behavior**

Student Learning Outcomes:

1. Students will demonstrate professionalism in the program
2. Students will participate in professional activities with state and national organizations

The Radiography Program at Gateway Community College is accredited through the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, Phone: (312) 704-5300, Fax: (312) 704-5304, Website: <https://www.jrcert.org/>, Email: mail@jrcert.org, Program Website: <https://gatewayct.edu/Radiography>

Students will be charged the Supplemental Course (program) Fee Level 1 every fall and spring semesters while in the program.

Graduation Requirements:

- Complete the CT State general education core curriculum
- Complete the Radiography program curriculum with a grade of C or higher in each program specific course and a C+ or higher in Anatomy & Physiology I and II course and College Algebra course.
- Complete the American Registry of Radiologic Technologists (ARRT) Clinical Competency Requirements
- Complete American Registry of Radiologic Technology General Patient Care Competency Requirements.
- Be Cardiopulmonary Resuscitation (CPR) or Basic Life Support (BLS) certified

Clinical Curriculum:

The structure of the clinical curriculum is designed to be sequential and progress in complexity. Each campus program will have their own clinical sites that are approved and recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Students will be assigned to the clinical education sites approved for the campus program they are accepted into.

Lists of current clinical sites are posted on the program webpage.

Radiography General Education Core (22-23 credits)

- ENG 1010 - Composition *Credits: 3 (pre-admission requirement)*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4 (pre-admission requirement)*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Radiography Program Core (42 credits)

- RAD 1002 - Radiographic Procedures I *Credits: 3*
- RAD 1002L - Radiographic Procedures I Lab *Credits: 1*
- RAD 1010 - Radiographic Procedures II *Credits: 3*
- RAD 1010L - Radiographic Procedures II Lab *Credits: 1*
- RAD 1011 - Imaging/Exposure I *Credits: 3*
- RAD 1012 - Imaging/Exposure II *Credits: 3*
- RAD 1094 - Radiography Clinical I *Credits: 2*
- RAD 1194 - Radiography Clinical II *Credits: 2*
- RAD 2001 - Radiographic Procedures III *Credits: 3*
- RAD 2001L - Radiographic Procedures III Lab *Credits: 1*
- RAD 2002 - Imaging/Exposure III *Credits: 3*
- RAD 2002L - Imaging/Exposure III Lab *Credits: 1*
- RAD 2090 - Senior Seminar *Credits: 3*
- RAD 2015 - Radiographic Pathology *Credits: 3*
- RAD 2022 - Radiobiology & Radiation Safety for the Radiographer *Credits: 3*
- RAD 2094 - Radiography Clinical IV *Credits: 3*
- BIO 2112 - Anatomy & Physiology II *Credits: 4 (pre-admission requirement)*

Gateway Courses (13 credits)

- RST 1000 - Introduction to Patient Care for Radiologic Sciences *Credits: 2*
- RST 1000L - Introduction to Patient Care for Radiologic Sciences Lab *Credits: 1*
- RAD 1001 - Introduction to Radiologic Sciences and Patient Care *Credits: 3*
- RAD 1011L - Imaging/Exposure I Lab *Credits: 1*
- RAD 1094A - Radiography Winter Clinical I *Credits: 0.5*

- RAD 2094A - Radiography Winter Clinical II *Credits: 0.5*
- RAD 1294 - Radiography Clinical III *Credits: 2*
- RAD 2194 - Radiography Clinical V *Credits: 3*

Total Credits: 77-78

Clinical Curriculum

The structure of the clinical curriculum is designed to be sequential and progress in complexity. Each campus program will have their own clinical sites that are approved and recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Students will be assigned to the clinical education sites approved for the campus program they are accepted into. The following campuses are currently affiliated with the following sites (clinical sites may be added or removed as necessary):

Gateway Campus:

Bridgeport Hospital
Bridgeport Hospital Milford Campus
Bridgeport Hospital Park Avenue Medical Center Griffin Hospital
Griffin Imaging & Diagnostics Center at Ivy Brook
Yale New Haven Hospital Milford Sports Medicine
Yale New Haven Hospital Pediatric Specialty Center
Yale New Haven Hospital Spine Center at Long Wharf
Yale New Haven Hospital, St. Raphael's Campus
Yale New Haven Hospital Sports Medicine at Guilford
Yale New Haven Hospital, York Street Campus
West Haven VA Medical Center

Radiography Program - Manchester, AS (RDGR-AS-MA)

The mission of the Connecticut State Community College Radiography program is to provide a comprehensive radiography program that will graduate competent, entry-level radiologic technologists for the healthcare community.

Radiography or "x-ray" uses very small doses of ionizing radiation to produce images of internal structures of the body for the diagnosis of disease or injury. Radiographers are technologists who operate imaging equipment to produce quality images of the body for a Radiologist or other ordering provider to interpret. The associate degree program in Radiography prepares students for employment as entry level radiographers in hospitals, outpatient facilities, medical offices, community health agencies, or nondestructive testing industries where radiation is used for quality control. 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. Each campus will have some degree of differentiation in course offerings and sequencing based on clinical capacity, student enrollment and Joint Review Committee on Education in Radiologic Technology (JRCERT) approval.

Students are assigned to clinical practice at various medical facilities throughout the state of Connecticut. Upon completion of the program, graduates are eligible to take the national certifying examination in radiography as administered by the American Registry of Radiologic Technologists (ARRT) in Radiography.

In addition to the College's general education core curriculum, the Connecticut State Community College Radiography program has a set of common program courses. Additionally, each campus may have its own set of differentiated options that must be taken to be eligible for graduation. Differentiated options are courses that meet the needs of the individual campus for a variety of reasons including but not limited to clinical site requirements, clinical site capacity, campus course offerings, and clinical competency requirements. Because each campus is required to maintain an individual accreditation from the Joint Review Committee on Education in Radiologic Technology (JRCERT), they may require differentiated options, and may have differentiated course sequencing, students cannot transfer from one campus program to another campus.

The Radiography program is a competency-based program. The credits associated with each clinical practice course are not a direct reflection of contact hours. One credit of clinical practice is equal to 120 hours of clinical practice.

Students who wish to transfer to an approved four-year program in radiography to achieve advanced level certification in computed tomography (CT), magnetic resonance imaging (MRI) or other disciplines, or programs for health care management should consult their campus' Radiography Program Coordinator regarding established transfer articulation agreements.

Admissions Procedure:

The Radiography programs at the Connecticut State Community College are selective admission programs. All students must first apply to the Connecticut State Community College. Unless waived, all applicants must take placement tests in reading, English, and mathematics. Students must attend a campus-specific Radiography program information session within one year prior to applying to the Radiography program. Applications are available annually. Students must have a 2.7 GPA (Grade Point Average), and complete the following courses prior to the February 1st application deadline:

- ENG 1010 - Composition (C or higher)
- BIO 2111 - Anatomy & Physiology I (C+ or higher taken within past five years of program start date)
- BIO 2112 - Anatomy & Physiology II (C+ or higher taken within past five years of program start date) *Students may apply to the Program while in the process of completing BIO 2112 during the spring semester of application year.*
- must be eligible for MATH 1600 - Pathway to Calculus: College Algebra before program start date

Applicants will be required to complete the TEAS test within three (3) years prior to the application deadline. Official results must be provided with the program application for the specified year of application. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Students in the radiography program may be responsible for expenses including but not limited to uniforms, physical examinations and blood work, travel to clinical sites, parking, meals, CPR training, background check and toxicology screening, textbooks, liability insurance, lead markers, and online clinical management and immunization services such as Trajecsyst and Castle Branch. Specific information about these costs is available on the campus specific radiography webpage and on the

campus specific Radiography Program Student Handbook. Financial aid information is available through the Connecticut State Community College Financial Aid office.

Please note:

To begin the clinical component of the Program, all accepted students will be required to:

1. Submit an updated health assessment with no restrictions
2. Submit documentation of updated vaccination requirements including blood work and titers as necessary
3. Pass a background check
4. Pass a toxicology screening

Positive toxicology screens can prevent students from participating in a clinical assignment per facility contractual agreements.

The following guides the response to a positive toxicology screening for any student:

1. All specimens identified as non-negative/positive on the initial test shall be confirmed, reviewed, and interpreted by the vendor.
2. The student is required to provide documentation by a healthcare provider in the event there is
3. a medical explanation for a positive result (i.e., the result of a prescribed medication). In accordance with federal law, a positive toxicology screen for legally prescribed marijuana can prohibit a student from being placed in a clinical setting that accepts federal funding.
4. If a student challenges a result, only the original sample can be retested.

Learning Outcomes: (Based on JRCERT accreditation standards)

Goal 1: Students will demonstrate effective communication skills

Student Learning Outcomes:

1. Students will use effective oral communication skills with a wide variety of audiences in the clinical setting
2. Students will practice effective written communication skills

Goal 2: Students will utilize critical thinking skills

Student Learning Outcomes:

1. Students will assess images for diagnostic quality
2. Students will assess images and make appropriate adjustment(s) as needed

Goal 3: Students will be clinically competent when performing entry level imaging procedures

Student Learning Outcomes:

1. Students will accurately position patients for radiographic procedures based on patient assessment
2. Students will select appropriate technical factors to obtain diagnostic quality images based on patient assessment
3. Students will utilize radiation safety for self and others

Goal 4: Students will demonstrate professional behavior

Student Learning Outcomes:

1. Students will demonstrate professionalism in the program
2. Students will participate in professional activities with state and national organizations

The Radiation Therapy Program at Manchester Community College is accredited through the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, Phone: (312) 704-5300, Fax: (312) 704-5304, Website: <https://www.jrcert.org/>, Email: mail@jcert.org, Program Website: <https://www.manchestercc.edu/offices/academic-affairs/divisions/science-technology-engineering-mathematics/health-careers/radiation-therapy/>

Students will be charged the Supplemental Course (program) Fee Level 1 every fall and spring semesters while in the program.

Graduation Requirements:

- Complete the CT State general education core curriculum
- Complete the Radiography program curriculum with a grade of C or higher in each program specific course and a C+ or higher in Anatomy & Physiology I and II course and College Algebra course.
- Complete the American Registry of Radiologic Technologists (ARRT) Clinical Competency Requirements
- Complete American Registry of Radiologic Technology General Patient Care Competency Requirements.
- Be Cardiopulmonary Resuscitation (CPR) or Basic Life Support (BLS) certified

Clinical Curriculum:

The structure of the clinical curriculum is designed to be sequential and progress in complexity. Each campus program will have their own clinical sites that are approved and recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Students will be assigned to the clinical education sites approved for the campus program they are accepted into. The Manchester campus is currently affiliated with the following sites (clinical sites may be added or removed as necessary):

- Connecticut Children's: Glastonbury facility
- Connecticut Children's: Hartford facility
- Hartford Hospital
- Hospital of Central Connecticut, New Britain
- Jefferson Radiology, Avon
- Jefferson Radiology, Hartford
- Jefferson Radiology, West Hartford
- Midstate Medical Center, Meriden
- Orthopedic Surgical Partners, Manchester
- Prospect Manchester Hospital, Inc D/B/A Manchester Memorial Hospital
- UConn Health Center/John Dempsey Hospital, Farmington
- Vernon Imaging

Radiography General Education Core (22-23 credits)

- ENG 1010 - Composition *Credits: 3 (pre-admission requirement)*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4 (pre-admission requirement)*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Radiography Program Core (42 credits)

- RAD 1002 - Radiographic Procedures I *Credits: 3*
- RAD 1002L - Radiographic Procedures I Lab *Credits: 1*
- RAD 1010 - Radiographic Procedures II *Credits: 3*
- RAD 1010L - Radiographic Procedures II Lab *Credits: 1*
- RAD 1011 - Imaging/Exposure I *Credits: 3*
- RAD 1012 - Imaging/Exposure II *Credits: 3*
- RAD 1094 - Radiography Clinical I *Credits: 2*
- RAD 1194 - Radiography Clinical II *Credits: 2*
- RAD 2001 - Radiographic Procedures III *Credits: 3*
- RAD 2001L - Radiographic Procedures III Lab *Credits: 1*
- RAD 2002 - Imaging/Exposure III *Credits: 3*
- RAD 2002L - Imaging/Exposure III Lab *Credits: 1*
- RAD 2090 - Senior Seminar *Credits: 3*
- RAD 2015 - Radiographic Pathology *Credits: 3*
- RAD 2022 - Radiobiology & Radiation Safety for the Radiographer *Credits: 3*
- RAD 2094 - Radiography Clinical IV *Credits: 3*
- BIO 2112 - Anatomy & Physiology II *Credits: 4 (pre-admission requirement)*

Manchester Courses (12 credits)

- RST 1021 - Radiologic Science Patient Care *Credits: 3*
- RST 1005 - Radiologic Science Physics *Credits: 3*
- RAD 1094A - Radiography Winter Clinical I *Credits: 0.5*
- RAD 2094A - Radiography Winter Clinical II *Credits: 0.5*
- RAD 1294 - Radiography Clinical III *Credits: 2*
- RAD 2194 - Radiography Clinical V *Credits: 3*

Total Credits: 76-77

Radiography Program - Middlesex, AS (RDGR-AS-MX)

The mission of the Connecticut State Community College Radiography program is to provide a comprehensive radiography program that will graduate competent, entry-level radiologic technologists for the healthcare community.

Radiography or "x-ray" uses very small doses of ionizing radiation to produce images of internal structures of the body for the diagnosis of disease or injury. Radiographers are technologists who operate imaging equipment to produce quality images of the body for a Radiologist or other ordering provider to interpret. The associate degree program in Radiography prepares students for employment as entry level radiographers in hospitals, outpatient facilities, medical offices, community health agencies, or nondestructive testing industries where radiation is used for quality control. 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. Each campus will have some degree of differentiation in course offerings and sequencing based on clinical capacity, student enrollment and Joint Review Committee on Education in Radiologic Technology (JRCERT) approval.

Students are assigned to clinical practice at various medical facilities throughout the state of Connecticut. Upon completion of the program, graduates are eligible to take the national certifying examination in radiography as administered by the American Registry of Radiologic Technologists (ARRT) in Radiography.

In addition to the College's general education core curriculum, the Connecticut State Community College Radiography program has a set of common program courses. Additionally, each campus may have its own set of differentiated options that must be taken to be eligible for graduation. Differentiated options are courses that meet the needs of the individual campus for a variety of reasons including but not limited to clinical site requirements, clinical site capacity, campus course offerings, and clinical competency requirements. Because each campus is required to maintain an individual accreditation from the Joint Review Committee on Education in Radiologic Technology (JRCERT), they may require differentiated options, and may have differentiated course sequencing, students cannot transfer from one campus program to another campus.

The Radiography program is a competency-based program. The credits associated with each clinical practice course are not a direct reflection of contact hours. One credit of clinical practice is equal to 120 hours of clinical practice.

Students who wish to transfer to an approved four-year program in radiography to achieve advanced level certification in computed tomography (CT), magnetic resonance imaging (MRI) or other disciplines, or programs for health care management should consult their campus' Radiography Program Coordinator regarding established transfer articulation agreements.

Admissions Procedure:

The Radiography programs at the Connecticut State Community College are selective admission programs. All students must first apply to the Connecticut State Community College. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage. The Radiography Handbook 2024-26 contains essential information for students and prospective students.

Unless waived, all applicants must take placement tests in reading, English, and mathematics. Students must attend a campus specific Radiography program information session within one year prior to applying to the Radiography program. Students must have a 2.7 GPA (Grade Point Average), and complete the following courses prior to the application deadline:

- ENG 1010 - Composition (C or higher)
- BIO 2111 - Anatomy & Physiology I (C+ or higher taken within past five years of program start date)
- BIO 2112 - Anatomy & Physiology II (C+ or higher taken within past five years of program start date) *Students may apply to the Program while in the process of completing BIO 2112 during the spring semester of application year.*
- eligibility for MATH 1600 - Pathway to Calculus: College Algebra before program start date

Applicants will be required to complete the TEAS test within three (3) years prior to the application deadline. Official results must be provided with the program application for the specified year of application.

Students in the radiography program may be responsible for expenses including but not limited to uniforms, physical examinations and blood work, travel to clinical sites, parking, meals, CPR training, background check and toxicology screening, textbooks, liability insurance, lead markers, and online clinical management and immunization services such as Trajecsys and Castle Branch. Specific information about these costs is available on the Middlesex Radiography Program webpage. Financial aid information is available through the Connecticut State Community College Financial Aid office.

Please note:

To begin the clinical component of the Program, all accepted students will be required to:

1. Submit an updated health assessment with no restrictions
2. Submit documentation of updated vaccination requirements including blood work and titers as necessary
3. Pass a background check
4. Pass a toxicology screening

Positive toxicology screens can prevent students from participating in a clinical assignment per facility contractual agreements.

The following guides the response to a positive toxicology screening for any student:

1. All specimens identified as non-negative/positive on the initial test shall be confirmed, reviewed, and interpreted by the vendor.
2. The student is required to provide documentation by a healthcare provider in the event there is
3. a medical explanation for a positive result (i.e., the result of a prescribed medication). In accordance with federal law, a positive toxicology screen for legally prescribed marijuana can prohibit a student from being placed in a clinical setting that accepts federal funding.
4. If a student challenges a result, only the original sample can be retested.

Learning Outcomes: (Based on JRCERT accreditation standards)

Upon completion of the Program:

Goal 1: Students will demonstrate effective communication skills

Student Learning Outcomes:

1. Students will use effective oral communication skills with a wide variety of audiences in the clinical setting
2. Students will practice effective written communication skills

Goal 2: Students will utilize critical thinking skills

Student Learning Outcomes:

1. Students will assess images for diagnostic quality
2. Students will assess images and make appropriate adjustment(s) as needed

Goal 3: Students will be clinically competent when performing entry level imaging procedures

Student Learning Outcomes:

1. Students will accurately position patients for radiographic procedures based on patient assessment
2. Students will select appropriate technical factors to obtain diagnostic quality images based on patient assessment
3. Students will utilize radiation safety for self and others

Goal 4: Students will demonstrate professional behavior

Student Learning Outcomes:

1. Students will demonstrate professionalism in the program
2. Students will participate in professional activities with state and national organizations

The Radiography Program at CT State Middlesex is accredited through the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, Phone: (312) 704-5300, Fax: (312) 704-5304, Website: <https://www.jrcert.org/>, Email: mail@jrcert.org, Program Website: <https://ctstate.edu/programs/radiography>

Students will be charged the Supplemental Course (program) Fee Level 1 every fall and spring semesters while in the program.

Graduation Requirements:

- Complete the CT State general education core curriculum
- Complete the Radiography program curriculum with a grade of C or higher in each program specific course and a C+ or higher in Anatomy & Physiology I and II course and College Algebra course.
- Complete the American Registry of Radiologic Technologists (ARRT) Clinical Competency Requirements
- Complete American Registry of Radiologic Technology General Patient Care Competency Requirements.
- Be Cardiopulmonary Resuscitation (CPR) or Basic Life Support (BLS) certified

Clinical Curriculum:

The structure of the clinical curriculum is designed to be sequential and progress in complexity. Each campus program will have their own clinical sites that are approved and recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Students will be assigned to the clinical education sites approved for the campus program they are accepted into. A list of current clinical sites is maintained on the program website.

Radiography General Education Core (22-23 credits)

- ENG 1010 - Composition *Credits: 3 (pre-admission requirement)*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4 (pre-admission requirement)*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Radiography Program Core (42 credits)

- RAD 1002 - Radiographic Procedures I *Credits: 3*
- RAD 1002L - Radiographic Procedures I Lab *Credits: 1*
- RAD 1010 - Radiographic Procedures II *Credits: 3*
- RAD 1010L - Radiographic Procedures II Lab *Credits: 1*
- RAD 1011 - Imaging/Exposure I *Credits: 3*
- RAD 1012 - Imaging/Exposure II *Credits: 3*
- RAD 1094 - Radiography Clinical I *Credits: 2*
- RAD 1194 - Radiography Clinical II *Credits: 2*
- RAD 2001 - Radiographic Procedures III *Credits: 3*
- RAD 2001L - Radiographic Procedures III Lab *Credits: 1*
- RAD 2002 - Imaging/Exposure III *Credits: 3*
- RAD 2002L - Imaging/Exposure III Lab *Credits: 1*
- RAD 2090 - Senior Seminar *Credits: 3*
- RAD 2015 - Radiographic Pathology *Credits: 3*
- RAD 2022 - Radiobiology & Radiation Safety for the Radiographer *Credits: 3*
- RAD 2094 - Radiography Clinical IV *Credits: 3*
- BIO 2112 - Anatomy & Physiology II *Credits: 4 (pre-admission requirement)*

Middlesex Courses (10 credits)

- RAD 1001 - Introduction to Radiologic Sciences and Patient Care *Credits: 3*
- RAD 1013 - Advanced Patient Care *Credits: 2*
- RAD 1294 - Radiography Clinical III *Credits: 2*
- RAD 2194 - Radiography Clinical V *Credits: 3*

Total Credits: 74-75

Radiography Program - Naugatuck & Capital, AS (RDGR-AS-NC)

The mission of the Connecticut State Community College Radiography program is to provide a comprehensive radiography program that will graduate competent, entry-level radiologic technologists for the healthcare community.

Radiography or "x-ray" uses very small doses of ionizing radiation to produce images of internal structures of the body for the diagnosis of disease or injury. Radiographers are technologists who operate imaging equipment to produce quality images of the body for a Radiologist or other ordering provider to interpret. The associate degree program in Radiography prepares students for employment as entry level radiographers in hospitals, outpatient facilities, medical offices, community health agencies, or nondestructive testing industries where radiation is used for quality control. 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. Each campus will have some degree of differentiation in course offerings and sequencing based on clinical capacity, student enrollment and Joint Review Committee on Education in Radiologic Technology (JRCERT) approval.

Students are assigned to clinical practice at various medical facilities throughout the state of Connecticut. Upon completion of the program, graduates are eligible to take the national certifying examination in radiography as administered by the American Registry of Radiologic Technologists (ARRT) in Radiography.

In addition to the College's general education core curriculum, the Connecticut State Community College Radiography program has a set of common program courses. Additionally, each campus may have its own set of differentiated options that must be taken to be eligible for graduation. Differentiated options are courses that meet the needs of the individual campus for a variety of reasons including but not limited to clinical site requirements, clinical site capacity, campus course offerings, and clinical competency requirements. Because each campus is required to maintain an individual accreditation from the Joint Review Committee on Education in Radiologic Technology (JRCERT), they may require differentiated options, and may have differentiated course sequencing, students cannot transfer from one campus program to another campus.

The Radiography program is a competency-based program. The credits associated with each clinical practice course are not a direct reflection of contact hours. One credit of clinical practice is equal to 120 hours of clinical practice.

Students who wish to transfer to an approved four-year program in radiography to achieve advanced level certification in computed tomography (CT), magnetic resonance imaging (MRI) or other disciplines, or programs for health care management should consult their campus' Radiography Program Coordinator regarding established transfer articulation agreements.

Admissions Information:

The Radiography programs at the Connecticut State Community College are selective admission programs. All students must first apply to the Connecticut State Community College. Unless waived, all applicants must take placement tests in reading, English, and mathematics. Students must attend a campus specific Radiography program information session within one year prior to applying to the Radiography program. Students must have a 2.7 GPA (Grade Point Average), and complete the following courses prior to the application deadline:

- ENG 1010 - Composition (C or higher)
- BIO 2111 - Anatomy & Physiology I (C+ or higher taken within past five years of program start date)
- BIO 2112 - Anatomy & Physiology II (C+ or higher taken within past five years of program start date) *Students may apply to the Program while in the process of completing BIO 2112 during the spring semester of application year.*
- also must be eligible for MATH 1600 - Pathway to Calculus: College Algebra by the fall program start date

Applicants will be required to complete the TEAS test within three (3) years prior to the application deadline. Official results must be provided with the program application for the specified year of application.

Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Students in the radiography program may be responsible for expenses including but not limited to uniforms, physical examinations and blood work, travel to clinical sites, parking, meals, CPR training, background check and toxicology screening.

textbooks, liability insurance, lead markers, and online clinical management and immunization services such as Trajecsys and Castle Branch. Specific information about these costs is available on the campus specific radiography webpage and on the campus specific Radiography Program Student Handbook. Financial aid information is available through the Connecticut State Community College Financial Aid office.

Please note: To begin the clinical component of the Program, all accepted students will be required to:

1. Submit an updated health assessment with no restrictions
2. Submit documentation of updated vaccination requirements including blood work and titers as necessary
3. Pass a background check
4. Pass a toxicology screening

Positive toxicology screens can prevent students from participating in a clinical assignment per facility contractual agreements. The following guides the response to a positive toxicology screening for any student:

1. All specimens identified as non-negative/positive on the initial test shall be confirmed, reviewed, and interpreted by the vendor.
2. The student is required to provide documentation by a healthcare provider in the event there is a medical explanation for a positive result (i.e., the result of a prescribed medication). In accordance with federal law, a positive toxicology screen for legally prescribed marijuana can prohibit a student from being placed in a clinical setting that accepts federal funding.
3. If a student challenges a result, only the original sample can be retested.

Learning Outcomes:

(Based on JRCERT accreditation standards)

Upon completion of the Program:

Goal 1: Students will demonstrate effective communication skills

Student Learning Outcomes:

- 1: Students will use effective oral communication skills with a wide variety of audiences in the clinical setting
- 2: Students will practice effective written communication skills

Goal 2: Students will utilize critical thinking skills

Student Learning Outcomes:

- 1: Students will assess images for diagnostic quality
- 2: Students will assess images and make appropriate adjustment(s) as needed

Goal 3: Students will be clinically competent when performing entry level imaging procedures

Student Learning Outcomes:

- 1: Students will accurately position patients for radiographic procedures based on patient assessment
- 2: Students will select appropriate technical factors to obtain diagnostic quality images based on patient assessment
- 3: Students will utilize radiation safety for self and others

Goal 4: Students will demonstrate professional behavior

Student Learning Outcomes:

- 1: Students will demonstrate professionalism in the program

2: Students will participate in professional activities with state and national organizations

The Radiography Program at CT State Naugatuck Valley is accredited through the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, Phone: (312) 704-5300, Fax: (312) 704-5304, Website: <https://www.jrcert.org/>, Email: mail@jrcert.org, Program Website: <https://www.capitalcc.edu/academics/programs/rad-tech/>

The Radiography Program at CT State Capital is accredited through the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, Phone: (312) 704-5300, Fax: (312) 704-5304, Website: <https://www.jrcert.org/>, Email: mail@jrcert.org, Program Website: <https://nv.edu/Academics/Academic-Programs/Areas-of-Study/Radiologic-Technology>

Students will be charged the Supplemental Course (program) Fee Level 1 every fall and spring semesters while in the program.

Graduation Requirements:

- Complete the CT State general education core curriculum
- Complete the Radiography program curriculum with a grade of C or higher in each program specific course and a C+ or higher in Anatomy & Physiology I and II course and College Algebra course.
- Complete the American Registry of Radiologic Technologists (ARRT) Clinical Competency Requirements
- Complete American Registry of Radiologic Technology General Patient Care Competency Requirements.
- Be Cardiopulmonary Resuscitation (CPR) or Basic Life Support (BLS) certified

Clinical Curriculum:

The structure of the clinical curriculum is designed to be sequential and progress in complexity. Each campus program will have their own clinical sites that are approved and recognized by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Students will be assigned to the clinical education sites approved for the campus program they are accepted into. A list of current clinical affiliations is posted on the program website.

Radiography General Education Core (22-23 credits)

- ENG 1010 - Composition *Credits: 3 (pre-admission requirement)*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4 (pre-admission requirement)*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Radiography Program Core (42 credits)

- RAD 1002 - Radiographic Procedures I *Credits: 3*
- RAD 1002L - Radiographic Procedures I Lab *Credits: 1*
- RAD 1010 - Radiographic Procedures II *Credits: 3*
- RAD 1010L - Radiographic Procedures II Lab *Credits: 1*
- RAD 1011 - Imaging/Exposure I *Credits: 3*
- RAD 1012 - Imaging/Exposure II *Credits: 3*
- RAD 1094 - Radiography Clinical I *Credits: 2*
- RAD 1194 - Radiography Clinical II *Credits: 2*
- RAD 2001 - Radiographic Procedures III *Credits: 3*
- RAD 2001L - Radiographic Procedures III Lab *Credits: 1*
- RAD 2002 - Imaging/Exposure III *Credits: 3*
- RAD 2002L - Imaging/Exposure III Lab *Credits: 1*

- RAD 2090 - Senior Seminar *Credits: 3*
- RAD 2015 - Radiographic Pathology *Credits: 3*
- RAD 2022 - Radiobiology & Radiation Safety for the Radiographer *Credits: 3*
- RAD 2094 - Radiography Clinical IV *Credits: 3*
- BIO 2112 - Anatomy & Physiology II *Credits: 4 (pre-admission requirement)*

Additional Naugatuck and Capital courses (7 credits)

- RAD 1001 - Introduction to Radiologic Sciences and Patient Care *Credits: 3*
- RAD 1394 - Radiography Clinical Internship III *Credits: 1*
- RAD 2194 - Radiography Clinical V *Credits: 3*

Total Credits: 71-72

Radiography: Computed Tomography Certificate (CATC-CC)

The Computed Tomography (CT) program at the Middlesex Campus of CT State Community College is designed to prepare certified/registered imaging professionals registered with the American Registry of Radiologic Technologists (ARRT) in Radiography, Nuclear Medicine Technology (registration with Nuclear Medicine Technology Certification Board (NMTCB) is also accepted), or Radiation Therapy for immediate employment in the workplace as CT Technologists in hospitals, clinics, and medical offices. The program emphasizes that quality patient care will be provided by individuals who have received instruction based on educational and instructional guidelines consistent with the profession.

This is a selective admissions program. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Learning Outcomes:

The Middlesex Campus of CT State CT Program is dedicated to educating and training students to become certified/registered, professional, and competent technologists in the field of CT within Radiologic Sciences. The mission statement is realized through the attainment of the following goals:

- Students will correctly apply positioning skills for patient CT procedures based on patient assessment.
- Students will select appropriate technical factors for patient CT procedures based on patient assessment.
- Students will practice radiation safety.
- Students will demonstrate professional behaviors.
- Students will use effective oral communication skills.
- Students will practice effective written communication skills.

This is a selective admission program; thus, students must be accepted into the program in order to register for program courses. Selective admissions criteria are completed program application which includes high school transcript, complete immunization records, ARRT/NMTCB certification, copy of a current State of Connecticut Radiographer license (as applicable), and interview. According to the ARRT supporting category requirements, the supporting categories prerequisites (primary certifications) for computed tomography are radiography, nuclear medicine technology (NMTCB) and radiation therapy. Thus, the post primary certification will be computed tomography.

The Middlesex Campus of CT State CT Certificate program is a two-semester program for certified/registered Radiographers interested in a career as a CT Technologist. The program accepts and starts a new class during the fall semester each year.

Following the successful completion of all Program requirements and obligations to the college, students are awarded the Certificate in CT and are eligible to take the ARRT post-primary exam in CT. A minimum score of 75 on the national post-primary certification examination is required for CT certification.

The program adheres to CT State Student and Faculty Non-Discrimination policies in that there is no discrimination of student or faculty on the basis of race, color, national or ethnic origin, religion, age, sex, marital or veteran status, sexual orientation, physical disability, or any other legally protected status.

Our graduates are allied health professionals who administer ionizing radiation for diagnostic, therapeutic or research purposes. They perform CT procedures and related techniques producing data at the request of and interpretation by a licensed independent practitioner. Employment opportunities include education, sub-specialization, sales and applications, and administration.

Required Courses

- CAT 2001 - Cross Sectional Anatomy I *Credits: 1*
- CAT 2002 - CT Image Display, Post Processing & Quality Assurance I *Credits: 2*
- CAT 2003 - CT Procedures and Instrumentation I *Credits: 2*
- CAT 2004 - Clinical Experience I *Credits: 4*

- CAT 2005 - Cross Sectional Anatomy II *Credits: 2*
- CAT 2006 - CT Image Display, Post Processing & Quality Assurance II *Credits: 3*
- CAT 2007 - CT Procedures and Instrumentation II *Credits: 3*
- CAT 2008 - Clinical Experience II *Credits: 4*

Total Credits: 21

Radiography: Magnetic Resonance Imaging (MRIC-CC)

The Magnetic Resonance Imaging (MRI) program at the Middlesex Campus of CT State Community College is designed to prepare certified imaging professionals registered with the American Registry of Radiologic Technologists (ARRT) in Radiography, Nuclear Medicine (Nuclear Medicine Technology Certification Board (NMTCB) is also accepted), Radiation Therapy, or Sonography (American Registry for Diagnostic Medical Sonographers (ARDMS) is also accepted) for immediate employment in the workplace as Magnetic Resonance (MR) Technologists in hospitals, clinics, and medical offices. The program emphasizes that quality patient care will be provided by individuals who have received instruction based on educational and instructional guidelines consistent with the profession.

Learning Outcomes:

The Middlesex Campus of CT State MRI Program is dedicated to educating and training students to become certified, professional, and competent technologists in the field of MRI within Radiologic Sciences.

- Students will correctly apply positioning skills for patient MRI procedures based on patient assessment.
- Students will select appropriate technical factors for patient MRI procedures based on patient assessment.
- Students will practice MRI safety.
- Students will correctly apply positioning skills for patient MRI procedures based on patient assessment.
- Students will select appropriate technical factors for patient MRI procedures based on patient assessment.
- Students will practice MRI safety.
- Students will demonstrate professional behaviors.
- Students will use effective oral communication skills.
- Students will practice written communication skills.

Our graduates are allied health professionals who utilize strong magnetic fields on humans for diagnostic, therapeutic or research purposes. They perform MRI procedures and related techniques producing data at the request of and interpretation by a licensed independent practitioner. Employment opportunities include education, sub-specialization, sales and applications, and administration.

MRI Certificate students must be certified/registered imaging professionals registered with the ARRT in Radiography, Nuclear Medicine Technology (registration with NMTCB is also accepted), or Radiation Therapy or Sonography (ARDMS).

This program prepares students to take the national MRI certification examination provided by the ARRT.

This is a selective admission program; thus, students must be accepted into the program in order to register for program courses. A completed program application includes

- official college/university transcripts from all colleges attended
- complete immunization records
- ARRT/NMTCB/ARDMS certification
- copy of a current State of Connecticut Radiographer license (as applicable)
- an interview

Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

According to the ARRT supporting category requirements, the supporting categories pre-requisites (primary certifications) for MRI are radiography, nuclear medicine technology (NMTCB), radiation therapy and sonography (ARDMS). Thus, the post primary certification will be MRI. The Middlesex Campus of CT State MRI Certificate program is a two-semester program for certified/registered Radiographers and Sonographers interested in a career as a MR Technologist.

The program accepts and starts a new class during the fall semester each year. Following the successful completion of all Program requirements and obligations to the college, students are awarded the MRI Certificate and are eligible to take the ARRT

post-primary exam in MRI. A minimum score of 75 on the ARRT post-primary certification examination is required for certification as a MRI Technologist.

Our graduates are allied health professionals who utilize strong magnetic fields on humans for diagnostic, therapeutic or research purposes. They perform MRI procedures and related techniques producing data at the request of and interpretation by a licensed independent practitioner. Employment opportunities include education, sub-specialization, sales and applications, and administration.

Required Courses

- MRI 2001 - Cross Sectional Anatomy I *Credits: 1*
- **OR** CAT 2001 - Cross Sectional Anatomy I *Credits: 1*
- MRI 2002 - MRI Pathology I *Credits: 1*
- MRI 2003 - MRI Procedures and Instrumentation I *Credits: 2*
- MRI 2004 - MRI Image Quality, Equipment and Safety Essentials I *Credits: 2*
- MRI 2094 - Clinical Experience I *Credits: 4*
- MRI 2005 - Cross Sectional Anatomy II *Credits: 2*
- **OR** CAT 2005 - Cross Sectional Anatomy II *Credits: 2*
- MRI 2007 - MRI Pathology II *Credits: 1*
- MRI 2008 - MRI Procedures and Instrumentation II *Credits: 3*
- MRI 2009 - MRI Image Quality, Equipment and Safety Essentials II *Credits: 2*
- MRI 2194 - Clinical Experience II *Credits: 4*

Total Credits: 22

Radiography: Mammography Certificate (MAMM-CC)

The Mammography program at the Middlesex Campus of CT State Community College (CT State) is designed to prepare certified/registered Radiographers for immediate employment in the workplace as Mammographers in hospitals, clinics, and medical offices. The program emphasizes that quality patient care will be provided by individuals who have received instruction based on educational and instructional guidelines consistent with the mammography profession. This is a selective admission program. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Learning Outcomes:

The Mammography Program at the Middlesex Campus of CT State is dedicated to educating and training students to become certified, professional, and competent technologists in the field of Mammography within Radiologic Sciences. The mission statement is realized through the attainment of the following goals:

- Students will correctly apply positioning skills for patient mammography procedures based on patient assessment.
- Students will select appropriate technical factors for patient mammography procedures based on patient assessment.
- Students will practice radiation safety.
- Students will correctly apply positioning skills for patient mammography procedures based on patient assessment.
- Students will select appropriate technical factors for patient mammography procedures based on patient assessment.
- Students will practice radiation safety.
- Students will demonstrate professional behaviors.
- Students will use effective oral communication skills.
- Students will practice effective written communication skills.

The Program's mission is achieved when the student has successfully completed and achieved all Program Goal sand Outcomes. The program mission complements the missions and values of our clinical affiliates.

Students must be current certified/registered radiographers. This program prepares students to take the national mammography certification examination provided by the American Registry of Radiologic Technologists (ARRT).

This is a selective admission program; thus, students must be accepted into the program in order to register for program courses. Selective admissions criteria are completed program application which includes high school transcript, complete 203 immunization records, ARRT certification, copy of a current State of Connecticut Radiographer license, and interview. According to the ARRT supporting category requirements, the supporting category pre-requisite (primary certification) for mammography is radiography. Thus, the post primary certification will be mammography.

The Mammography Certificate program at the Middlesex Campus of CT State is a one-semester program for certified Radiographers interested in a career as a Mammographer. Students are trained to meet the standards contained in the Practice Standards for Medical Imaging and Radiation Therapy Technologists - Mammography Practice Standards.

Following the successful completion of all Program requirements and obligations to the college, students are awarded the Certificate in Mammography and are eligible to take the ARRT post-primary exam in mammography. A minimum score of 75 on the ARRT post-primary certification examination is required for certification/registration as a Mammographer.

The program adheres to CT State Student and Faculty Non-Discrimination policies in that there is no discrimination of student or faculty on the basis of race, color, national or ethnic origin, religion, age, sex, marital or veteran status, sexual orientation, physical disability, or any other legally protected status. Our graduates are allied health professionals who administer ionizing radiation for diagnostic, therapeutic or research purposes. A mammography technologist performs breast imaging procedures and related techniques producing data at the request of and with interpretation by a licensed independent practitioner. The mammographer performs the breast imaging procedures that create mammographic images needed for diagnosis. Employment opportunities include education, sub-specialization, sales and applications, and administration.

Required Courses

- MAM 2001 - Principles of Mammography *Credits: 4*
- MAM 2094 - Mammography Clinical Experience *Credits: 4*

Total Credits: 8

Respiratory Care, AS (RESP-AS-MA and RESP-AS-NN)

The Respiratory Care Program prepares students to enter a dynamic and progressive health care profession. Respiratory Therapists work with advanced technology making it possible to help patients with respiratory and cardiac disorders. The associate degree program in Respiratory Care provides hands-on education in diverse settings including human patient simulation, adult and neonatal/pediatric critical care, emergency care, long-term care, pulmonary rehabilitation, and diagnostic services. Respiratory Therapists are vital members of the health care team who work closely with physicians providing education and support to patients with acute and chronic lung conditions.

Learning Outcomes:

Upon successful completion of the program, the graduate will:

- Assist physicians/licensed independent practitioners in the diagnosis, management, and treatment of patients affected by cardiopulmonary disorders.
- Collect and evaluate clinical information relevant to their role as a respiratory therapist.
- Participate in the inter-disciplinary plan of care.
- Provide patient education concerning health management and prevention of respiratory disease.
- Demonstrate proficiency in all skills and competencies required of a respiratory therapist described by the Commission on Accreditation for Respiratory Care (CoARC).
- Promote evidence-based practice by using established clinical practice guidelines and evaluating published research for its relevance to patient care.
- Collaborate and communicate effectively with patients, their families, and members of the health care team to enhance patient care.
- Adhere to American Association for Respiratory Care (AARC) statement of ethics and professional conduct.
- Apply principles and practices of patient safety and process improvement in all aspects of respiratory care.
- Incorporate principles of social, behavioral, biological sciences and humanities to the role of Respiratory Therapist.

Admission Process:

Respiratory Care is a selective admissions program. All students must first apply to Connecticut State Community College. There is also a Respiratory Care Application that must be submitted prior to the application deadline date. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Unless waived, all applicants must take placement tests in reading, English and mathematics. Students must meet the following admission requirements:

- Attend a mandatory Respiratory Care Program information session.
- Have a minimum GPA of 2.5 and complete the following courses prior to the application deadline.
- ENG 1010 Composition (grade of "C" or higher)
- MATH 1010 Intermediate Algebra or higher {grade of "C" or higher}
- CHEM 1110 Concepts of Chemistry or CHEM 1210 General Chemistry I (grade of "C" or higher and within 5 years of program start date)
- BIO 2111 Anatomy & Physiology I (meets the grade pre-requisite of BIO 2112 and within the past five years of the program start date)

TEAS (test for essential academic skills) testing is required as part of the application process. Applicants will be considered for admission to the program if they have earned a score of 53.3% or higher. (www.ATTesting.com)

Criminal Background checks and Toxicology screenings.

Clinical sites require criminal background checks and toxicology screening completed on any Respiratory Care student who will be attending a clinical rotation at their facility. Some clinical sites require additional FASC III background check checks at an additional cost.

Students must follow instructions for obtaining these tests.

The following guides the response to a positive toxicology screening for any student

- All specimens identified as non-negative/positive on the initial test shall be confirmed, reviewed, and interpreted by the vendor.
- The student is required to provide documentation by a healthcare provider in the event there is a medical explanation for a positive result (i.e., the result of a prescribed medication). In accordance with federal law, a positive toxicology screen for legally prescribed marijuana can prohibit a student from being placed in a clinical setting that accepts federal funding.
- If a student challenges a result, only the original sample can be retested.

Any student that does not pass a background check or toxicology screen may be prevented from participating in a clinical assignment per facility contractual agreements. Results of student background checks and toxicology screenings do not become a part of the student's educational records, as defined by the Family Educational Rights and Privacy Act (FERPA).

Health Requirements:

All students are required to have a physical examination performed within 12 months of the Respiratory Care program clinical start date, with documentation of ability to perform the technical standards with no restrictions. In addition to the college's healthcare requirements, a health assessment form and immunization records must be completed and submitted electronically by the student into the health form tracking system, by the assigned date, prior to attending clinical rotation.

Additional Program fees:

Students will be charged the Supplemental Course (program) Fee Level 1 every fall and spring semester while in the program. Some other additional fees include:

- Uniforms and stethoscope
- Medical insurance
- Physical examination, blood work, immunizations, vaccinations
- CPR training
- Textbooks and lab supplies
- Transportation and associated costs for clinical sites
- Electronic clinical management system subscription.
- Electronic medical tracking/background management system subscription.
- Toxicology screening(s)
- Background check(s)
- TEAS test

The CT State Community College Manchester Respiratory Care Program (A.S. degree) is accredited by the Commission on Accreditation for Respiratory Care. Information about COARC can be obtained by visiting www.coarc.com. Manchester Community College Program number: 200044. Program outcomes can be obtained by clicking on the link below:
<https://coarc.com/students/programmatic-outcomes-data/>

The CT State Community College Naugatuck Valley Respiratory Care Program (A.S. degree) is accredited by the Commission on Accreditation for Respiratory Care. Information about COARC can be obtained by visiting www.coarc.com. Naugatuck Valley Community College Program number: 200460. Program outcomes can be obtained by clicking on the link below:
<https://coarc.com/students/programmatic-outcomes-data/>

The Ct State Community College Norwalk Respiratory Care Program (A.S. degree) is accredited by the Commission on Accreditation for Respiratory Care. Information about COARC can be obtained by visiting www.coarc.com. Norwalk Community College Program number: 200090. Program outcomes can be obtained by clicking on the link below:
<https://coarc.com/students/programmatic-outcomes-data/>

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3 [pre-admission requirement]*
- MATH 1010 or higher *Credits: 3 [pre-admission requirement]*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1110 - Concepts of Chemistry *Credits: 4 [pre-admission requirement] or higher*
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (50-54 credits)

- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- RESP 1021 - Cardiopulmonary Anatomy and Physiology *Credits: 3*
- RESP 1031 - Respiratory Care Pharmacology *Credits: 3*
- RESP 1041 - Principles of Respiratory Care I *Credits: 3*
- RESP 1041L - Principles of Respiratory Care I Lab *Credits: 1*
- RESP 1042 - Principles of Respiratory Care II *Credits: 5*
- RESP 1094 - Clinical Practicum *Credits: 2*
- RESP 2001 - Future Trends *Credits: 2*
- RESP 2051 - Cardiopulmonary Pathophysiology *Credits: 3*
- RESP 2060 - Mechanical Ventilation *Credits: 4*
- RESP 2065 - Advanced Critical Care *Credits: 3*
- RESP 2071 - Diagnostic Respiratory Care *Credits: 3*
- RESP 2094 - Advanced Clinical Practicum I *Credits: 2*
- RESP 2194 - Advanced Clinical Practicum II *Credits: 2*
- RESP 2085 - Perinatal and Pediatric Respiratory Care *Credits: 2*
- PHYS 1100 - Introductory Physics *Credits: 4 (Manchester Campus only)*

Total Credits: 72-77 (includes 14-18 pre-program credits)

Surgical Technology, AS (SURG-AS-GH)

PLEASE NOTE: Students admitted for the spring 2025 term will follow the Academic Requirements from the 2023-2024 catalog. Students admitted for the summer 2025 and later will follow the curriculum below.

Surgical Technologists are integral members of the surgical team who work closely with surgeons, registered nurses, and anesthesia personnel. Surgical Technologists are also responsible for assembling and organizing all the specialized instruments, equipment and tools needed for a wide variety of surgical procedures. They are experts in sterile technique and are responsible for maintaining the sterile field during surgery.

Learning Outcomes:

Upon successful completion of the program, the graduate will:

- Apply principles of anatomy, physiology, pathophysiology, and microbiology to perioperative patient care.
- Distinguish the elements, action, and use of medications and anesthetic agents used during the perioperative experience.
- Demonstrate safe practice in the role of Surgical Technologist.
- Display competence in technical skills and aseptic technique in the perioperative environment.
- Practice responsible and accountable behavior within the role and competencies of the Surgical Technologist.
- Organize the intraoperative environment efficiently as a member of the surgical team.
- Apply learned knowledge and skills in the cognitive, psychomotor, and affective domains to become nationally certified as a Surgical Technologist.

Surgical Technology is a selective admission program. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

The Surgical Technology Program at CT State Community College Gateway Campus is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA). The program is accredited by the: Commission on Accreditation of Allied Health Education Programs (CAAHEP), www.caahep.org, 9355-113th St., N, #7709, Seminole, FL 33775. Phone: (727) 210-2350. Fax: (727) 210-2354. Email: mail@caahep.org. Accreditation Review Council on Education in Surgical Technology and Surgical Assisting: 19751 East Mainstreet, Suite #339, Parker, CO 80138, Phone: (303) 694 - 9262, Email: info@arcstsa.org

General Education Courses (22-24 credits)

- ENG 1010 - Composition *Credits: 3 (pre-admission requirement)*
- MATH 1001 or higher - *it is strongly recommended that students take one of the MATH prerequisites for CHEM 1110 (pre-admission requirement)**
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 2111 - Anatomy & Physiology I *Credits: 4 (pre-admission requirement)*
- PSY 1011 - General Psychology I *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- **OR** ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*
- CHEM 1110 is a pre-requisite for pre-admission requirement BIO 2350

Program Courses (46 credits)

- BIO 2350 - Microbiology *Credits: 4 (classes may be in progress during the summer of the application year) **
- BIO 2112 - Anatomy & Physiology II *Credits: 4 (classes may be in progress during the summer of the application year)*
- CSA 1110 - Introduction to Software Applications *Credits: 3*
- HIMT 1000 - Medical Terminology *Credits: 3 (pre-admission requirement)*

- **OR** MDAS 1025 - Medical Terminology for Clinical and Administrative Professions *Credits: 3*
- **OR** BOT 1800 - Medical Terminology and Anatomy *Credits: 3*
- SUR 1110 - Operating Room Techniques *Credits: 4*
- SUR 1090 - Operating Room Skills Seminar *Credits: 4*
- SUR 2094 - Clinical Surgical Experience I *Credits: 6*
- SUR 2194 - Clinical Surgical Experience II *Credits: 6*
- SUR 2213 - Surgical Procedures I *Credits: 3*
- SUR 2214 - Surgical Procedures II *Credits: 3*
- SUR 2215 - Surgical Technology Pharmacology *Credits: 3*
- SUR 2290 - Advanced Seminar for Surgical Technologist *Credits: 3*

Total Credits: 68-70

Surgical Technology: Manchester Campus-Hartford Hospital, AS (SURG-AS-HH)

The purpose of the Manchester campus-Hartford Hospital Surgical Technology program is to educate individuals in surgical technology.

The goal of this program is to provide students with the opportunity to develop the skills and knowledge necessary to gain employment as entry-level surgical technologists and become contributing members of the health care team in accordance with the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA) required minimum expectation statement for surgical technology programs "to prepare competent, entry-level surgical technologists in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains." This will be accomplished by preparing competent graduates through didactic coursework in the cognitive learning domain and through clinical scrub experience in the psychomotor and affective learning domains. The program goal meets or exceeds the criteria set forth in the current Commission on Accreditation of Allied Health Education Programs (CAAHEP) Standards and Guidelines for the Accreditation of Educational Programs in Surgical Technology.

The consortium agreement, between the CT State Community College Manchester Campus (MC) and Hartford Hospital, was developed in response to both a community and workforce need in Connecticut for surgical technologists. A consortium agreement is unique as it mandates the separation of curriculum with General Education Core course education and Core ST curriculum courses as required by ARC/STSA accreditation standards and guidelines. This consortium supports the Association of Surgical Technologist (AST) statements on the Associate Degree model for entry-level Certified Surgical Technologist (CST) with first year prerequisite courses taken prior to acceptance into the ST program. This includes the CT State Community College General Education component as well as science courses, including Anatomy and Physiology I and II, as baseline knowledge recommended by the AST Surgical Technology curriculum. AST's statement... "Logically, this prerequisite year could be developed into a sequence of courses that provide foundational preparation for sophomore surgical technology courses and comprehensive coverage of each state's general education requirements" ...aligns with the MC Hartford Hospital ST Program curriculum sequencing. This consortium agreement denotes separate and shared responsibilities for both entities involved in the education of surgical technology students. General education core courses instruction is the sole responsibility of CT State Community College faculty and core ST curriculum course instruction is provided on the Hartford Hospital campus and is the sole responsibility of Hartford Hospital qualified Surgical Technology Instructors. CT State Community College provides academic support services i.e., admission, financial aid, transcript evaluation and grants the AS degree. Hartford Hospital provides and supports all surgical technology student lab spaces, lab materials and lab instruction with all ST instructors and the consortium director being Hartford Hospital employees as per the consortium agreement. ST students perform clinical rotations throughout the Hartford Healthcare System (HHC) in the state of Connecticut.

Learning Outcomes:

Upon successful completion of all the MCC Hartford Hospital Surgical Technology program requirements, the graduate will be prepared to:

- Incorporate the theoretical knowledge of the basic sciences, medical terminology, pharmacology and pathophysiology into clinical practice as a qualified, entry level surgical technologist.
- Demonstrate proficient practice in aseptic technique, proper use and care of instrumentation, clinical judgments with anticipation of the surgeon and surgical case needs.
- Demonstrate a comprehensive understanding of Health Insurance Portability and Accountability Act (HIPAA), AST standards, principles and scope of practice, ethical, legal, moral and cultural diversity of the patient population in the perioperative setting.
- Demonstrate proficient communication skills to effectively work as a member of the surgical team and professionally interact with patients and the healthcare community.
- Demonstrate a strong surgical conscience, self-discipline, professional work ethic and longstanding commitment to personal and educational growth.
- Sit for the National Board of Surgical Technology of Surgical Assisting (NBSTSA) CST National Certification Exam.

The MCC Hartford Hospital Surgical Technology Program at Manchester Community College is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA). The program is accredited by the: Commission on Accreditation of Allied Health Education Programs (CAAHEP), www.caahep.org, 9355-113th St., N, #7709, Seminole, FL 33775. Phone: (727) 210-2350. Fax: (727) 210-2354. Email: mail@caahep.org. Accreditation Review Council on Education in Surgical Technology and Surgical Assisting: 19751 East Main Street, Suite #339, Parker, CO 80138, Phone: (303) 694 - 9262, Email: info@arcstsa.org

Application to the Program

Consideration for admission to the MC Hartford Hospital Surgical Technology program follows a sequential application and selective admission process. The Surgical Technology applicant may not advance in the process if the prior step has not been completed.

1. Complete the following required non-core Surgical Technology courses (34 credits) or their equivalent, if transferring, and demonstrate a minimum GPA of 2.5 in all courses completed:
 - BIO 2111 Anatomy & Physiology I
 - BIO 2112 Anatomy & Physiology II
 - BIO 2350 Microbiology
 - CCS 1001 - College & Career Success
 - COMM 1302 Interpersonal Communication or COMM 1301 Public Speaking
 - ENG 1010 Composition
 - MATH 1001 - Quantitative Literacy
 - Any required pre-requisite course for BIO 2111 that is vetted in Scientific Reasoning or Scientific Knowledge and Understanding
 - Elective: Any one course from General Education category - Social/Behavioral Science
 - Elective: Any one course from General Education category - Arts and Humanities
2. Attend a virtual and/or in person Surgical Technology information session before the application deadline
3. Submit the CT State Community College General Application for Admission and choose 'General Studies' for your major. [Please note you will automatically be admitted to the college once required supplemental items are provided but must apply for the Surgical Technology Program separately (step 5).
4. Submit official copies of all transcripts. Electronic transcripts are encouraged, but paper copies are acceptable.
 - For electronic transcripts, visit your previous institutions' website for instructions on how to order online transcripts.
 - To mail a transcript, please send it to CT State Community College
 - Current CT State Community College students may submit unofficial transcripts to the Hartford Hospital Surgical Technology Program Director
5. Submit the online Surgical Technology Application.
6. Sit for ST program entrance literacy exam. Demonstrate a minimum score of 70 percent on ST program entrance exam to advance to step 7.
7. Attend an in-person interview with an oral and written component. After completing steps 1-7, the Surgical Technology Interview Committee will offer admission to ST applicants based on final rubric score and number of HHC facility scrub slots available. Students offered fall admission to the ST program are required to complete steps 8-10.
8. Attend Surgical Technology program orientation (scheduled for summer of admission year.)
9. Submit and pass a background check (paperwork provided at Surgical Technology program orientation).
10. Demonstrate that program's physical standards are met through submission of current physical examination/immunization records (form provided at Surgical Technology program orientation).
11. Wear Surgical Technology program scrubs and appropriate personal protective equipment (as designated in Program Handbook) while on HHC campus and facilities.
12. Achieve/maintain a minimum grade of 2.5 GPA throughout the course to maintain program enrollment.

Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

General Education Courses (34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- **OR** BIO 1210 - General Biology I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- COMM 1302 - Interpersonal Communication *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*
- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*

Program Courses (28 credits) - Hartford Hospital Campus

- SURH 2010 - Surgical Technology Principles and Practices *Credits: 4*
- SURH 2020 - Surgical Technology Peri-Operative Practice *Credits: 4*
- SURH 2050 - Medical Terminology for Surgical Technologists *Credits: 2*
- SURH 2190 - Surgical Technologist Role and Responsibilities *Credits: 2*
- SURH 2194 - Surgical Technologist Level I Skills *Credits: 2*
- SURH 2210 - Pathophysiology/Pharmacology for the Surgical Technologist *Credits: 3*
- SURH 2294 - Surgical Technologist Level II Skills *Credits: 4*
- SURH 2394 - Surgical Technologist Level III Skills *Credits: 4*
- SURH 2290 - The Surgical Technologist Professional *Credits: 3*

Total Credits: 62

Veterinary Technology - Middlesex, AS (VETT-AS-MX)

The CT State-Middlesex Veterinary Technology Program is accredited by the American Veterinary Medical Association Committee on Veterinary Technician Education and Activities (AVMA CVTEA) as a program for educating veterinary technicians. Successful degree completion prepares students for immediate employment in veterinary practices, biomedical research, zoo/wildlife medicine, industry, military, livestock health management, and pharmaceutical sales. Through classroom, laboratory, and field experience students are prepared for entry-level positions in the veterinary/animal fields, with a special focus on companion animal medicine and practice. Graduates are able to sit for the Veterinary Technician National Exam (VTNE). VTNE preparation and job placement assistance are provided.

Learning Outcomes:

- Sit for the Veterinary Technician National Exam.
- Demonstrate skills and knowledge of domestic animals including normal values for temperature, pulse, and respiration; conduct a thorough and accurate physical examination including the proper use of the stethoscope; and restrain animals for physical examination and veterinary techniques.
- Perform animal nursing and critical care for all common domestic animals including: restraint, administering medications, diagnostic sampling for laboratory evaluation, maintaining fluid therapy, applying and removing bandages and splints, and applying established emergency protocols.
- Assist with animal surgery including knowledge of routine procedures and operating room equipment; prepare the patient, veterinary personnel, and equipment for sterile surgical procedures; and function effectively as a surgical assistant to the veterinary surgeon during surgical procedures.
- Induce, stabilize, monitor, and maintain anesthesia under supervision of the veterinarian; recognize and report anesthetic emergencies; and apply resuscitation techniques and cardiopulmonary resuscitation (CPR).
- Assist with diagnostic imaging including radiography and ultrasound; produce and evaluate radiographs to provide diagnostic images for veterinary interpretation and diagnosis; and properly clean and maintain diagnostic imaging equipment.
- Perform common laboratory procedures: hematologic examinations, blood chemistries, urinalysis, parasitic examinations, cytological procedures, microbiological procedures, and necropsy.
- Provide competent assistance with office procedures: telephone contacts, scheduling appointments, admitting and discharging patients, maintaining medical and financial records, and establishing and maintaining a clean and orderly veterinary facility.
- Communicate with the public, clients, and colleagues through both verbal and written communication skills, including effective listening.
- Demonstrate knowledge of the common medicines used in veterinary medicine including: types and groups of drugs; indications, contraindications and side effects; labeling and packaging of dispensed drugs; using weights and measures correctly; calculating dosages; and safely storing, handling, and disposing of controlled substances, biologics, therapeutic agents, and hazardous wastes.
- Differentiate between normal and abnormal patient responses to medication.
- Understand basic knowledge of animal health and husbandry, and common diseases and disease processes for all common domestic animals.
- Demonstrate skills and knowledge associated with the use of common laboratory animals including basic principles of animal research and local, state, and federal animal welfare regulations.
- Demonstrate skills and knowledge associated with cleaning, sanitizing, and sterilizing equipment and facilities, including knowledge of products, equipment, procedures, and techniques routinely used in reducing, eliminating, or preventing contamination of the animal-care institutions.

The CT State Community College Veterinary Technology programs are campus-specific programs with selective admissions. The programmatic accrediting body, Committee on Veterinary Technician Education and Activities, requires campus-specific accreditations and all program-required VET courses must be completed at the campus of admittance as each program provides students with clinical experiences unique to their campus location. All prerequisite courses and general education (non-VET) post-admittance courses can be completed at any campus of CT State Community College.

The Veterinary Technology programs have enrollment caps and selective admission. The Veterinary Technology programs have the following application requirements:

- Completion of the following prerequisite courses (all with a grade of C or better): ENG 1010, MATH 1010 or higher, BIO 1210, CHEM 1110. The biology and chemistry must have been completed within five years prior to the application deadline.
- Two letters of recommendation. One each from a teacher (academic) and supervisor (professional).
- Personal statement/essay stating the applicant's goals & reasons for program entry.
- Preference is given to students with a GPA of 2.7 or higher.
- Interview with Veterinary Technology admissions committee. Not all eligible students will be selected for an interview.

Given the selective nature of the admissions process, admission cannot be guaranteed. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Veterinary Technology General Education Core (22-24 credits)

- ENG 1010 - Composition *Credits: 3 (preadmission requirement)*
- MATH 1010 or higher *Credits: 3-4 (preadmission requirement)*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1110 - Concepts of Chemistry *Credits: 4 (This is a preadmission requirement/competency. This can be met in a variety of ways prior to program admission.)*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- VET 1002 - Veterinary Office Management and Communication *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Veterinary Technology Program Core (51 credits)

- BIO 1210 - General Biology I *Credits: 4 (preadmission requirement)*
- VET 1001 - Introduction to Veterinary Technology *Credits: 3*
- VET 1003 - Animal Care and Handling *Credits: 3*
- VET 1026 - Veterinary Terminology and Medical Math *Credits: 2*
- VET 1051 - Small Animal Clinical Nursing *Credits: 4*
- VET 1052 - Large Animal Clinical Nursing *Credits: 4*
- VET 2001 - Veterinary Anatomy & Physiology I *Credits: 4*
- VET 2002 - Veterinary Anatomy & Physiology II *Credits: 4*
- VET 2005 - Veterinary Laboratory Procedures *Credits: 2*
- VET 2012 - Principles of Veterinary Imaging *Credits: 1*
- VET 2020 - Animal Pathophysiology *Credits: 3*
- VET 2030 - Veterinary Anesthesia and Surgical Nursing *Credits: 3*
- VET 2035 - Veterinary Microbiology and Immunology *Credits: 4*
- VET 2038 - Veterinary Parasitology *Credits: 3*
- VET 2040 - Periodontology and Oral Radiology *Credits: 2*
- VET 2050 - Principles of Pharmacology for Veterinary Technicians *Credits: 3*
- VET 2095 - Veterinary Technology Externship I *Credits: 1*
- VET 2195 - Veterinary Technology Externship II *Credits: 1*

Middlesex Specific Course (3 credits)

- VET 2031 - Combined Clinical Course for Veterinary Surgical Nursing, Lab Procedures, and Radiology *Credits: 3*

Program Credits: 62-63 (plus 14-15 preadmission credits)

Veterinary Technology - Northwestern, AS (VETT-AS-NW)

The CT State - Northwestern Connecticut Campus Veterinary Technology Program is accredited by the American Veterinary Medical Association Committee on Veterinary Technician Education and Activities (AVMA CVTEA) as a program for educating veterinary technicians. Successful degree completion prepares students for immediate employment in veterinary practices, biomedical research, zoo/wildlife medicine, industry, military, livestock health management, and pharmaceutical sales. Through classroom, laboratory, and field experience students are prepared for entry-level positions in the veterinary/animal fields, with a special focus on companion animal medicine and practice. Graduates are able to sit for the Veterinary Technician National Exam (VTNE). VTNE preparation and job placement assistance are provided.

Learning Outcomes:

- Sit for the Veterinary Technician National Exam.
- Demonstrate skills and knowledge of domestic animals including normal values for temperature, pulse, and respiration; conduct a thorough and accurate physical examination including the proper use of the stethoscope; and restrain animals for physical examination and veterinary techniques.
- Perform animal nursing and critical care for all common domestic animals including: restraint, administering medications, diagnostic sampling for laboratory evaluation, maintaining fluid therapy, applying and removing bandages and splints, and applying established emergency protocols.
- Assist with animal surgery including knowledge of routine procedures and operating room equipment; prepare the patient, veterinary personnel, and equipment for sterile surgical procedures; and function effectively as a surgical assistant to the veterinary surgeon during surgical procedures.
- Induce, stabilize, monitor, and maintain anesthesia under supervision of the veterinarian; recognize and report anesthetic emergencies; and apply resuscitation techniques and cardiopulmonary resuscitation (CPR).
- Assist with diagnostic imaging including radiography and ultrasound; produce and evaluate radiographs to provide diagnostic images for veterinary interpretation and diagnosis; and properly clean and maintain diagnostic imaging equipment.
- Perform common laboratory procedures: hematologic examinations, blood chemistries, urinalysis, parasitic examinations, cytological procedures, microbiological procedures, and necropsy.
- Provide competent assistance with office procedures: telephone contacts, scheduling appointments, admitting and discharging patients, maintaining medical and financial records, and establishing and maintaining a clean and orderly veterinary facility.
- Communicate with the public, clients, and colleagues through both verbal and written communication skills, including effective listening.
- Demonstrate knowledge of the common medicines used in veterinary medicine including: types and groups of drugs; indications, contraindications and side effects; labeling and packaging of dispensed drugs; using weights and measures correctly; calculating dosages; and safely storing, handling, and disposing of controlled substances, biologics, therapeutic agents, and hazardous wastes.
- Differentiate between normal and abnormal patient responses to medication.
- Understand basic knowledge of animal health and husbandry, and common diseases and disease processes for all common domestic animals.
- Demonstrate skills and knowledge associated with the use of common laboratory animals including basic principles of animal research and local, state, and federal animal welfare regulations.
- Demonstrate skills and knowledge associated with cleaning, sanitizing, and sterilizing equipment and facilities, including knowledge of products, equipment, procedures, and techniques routinely used in reducing, eliminating, or preventing contamination of the animal-care institutions.

The CT State Community College Veterinary Technology programs are campus-specific programs with selective admissions. The programmatic accrediting body, Committee on Veterinary Technician Education and Activities, requires campus-specific accreditations and all program-required VET courses must be completed at the campus of admittance as each program provides students with clinical experiences unique to their campus location. All prerequisite courses and general education (non-VET) post-admittance courses can be completed at any campus of CT State Community College.

The Veterinary Technology programs have enrollment caps and selective admission. The Veterinary Technology programs have the following application requirements:

- Completion of the following prerequisite courses (all with a grade of C or better): ENG 1010, MATH 1010 or higher, BIO 1210, CHEM 1110. The biology and chemistry must have been completed within five years prior to the application deadline.
- Two letters of recommendation. One each from a teacher (academic) and supervisor (professional).
- Personal statement/essay stating the applicant's goals & reasons for program entry.
- Preference is given to students with a GPA of 2.7 or higher.
- Interview with Veterinary Technology admissions committee. Not all eligible students will be selected for an interview.

Given the selective nature of the admissions process, admission cannot be guaranteed. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Veterinary Technology General Education Core (22-24 credits)

- ENG 1010 - Composition *Credits: 3 (preadmission requirement)*
- MATH 1010 or higher *Credits: 3-4 (preadmission requirement)*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1110 - Concepts of Chemistry *Credits: 4 (This is a preadmission requirement/competency. This can be met in a variety of ways prior to program admission.)*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- VET 1002 - Veterinary Office Management and Communication *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Veterinary Technology Program Core (51 credits)

- BIO 1210 - General Biology I *Credits: 4 (preadmission requirement)*
- VET 1001 - Introduction to Veterinary Technology *Credits: 3*
- VET 1003 - Animal Care and Handling *Credits: 3*
- VET 1026 - Veterinary Terminology and Medical Math *Credits: 2*
- VET 1051 - Small Animal Clinical Nursing *Credits: 4*
- VET 1052 - Large Animal Clinical Nursing *Credits: 4*
- VET 2001 - Veterinary Anatomy & Physiology I *Credits: 4*
- VET 2002 - Veterinary Anatomy & Physiology II *Credits: 4*
- VET 2005 - Veterinary Laboratory Procedures *Credits: 2*
- VET 2012 - Principles of Veterinary Imaging *Credits: 1*
- VET 2020 - Animal Pathophysiology *Credits: 3*
- VET 2030 - Veterinary Anesthesia and Surgical Nursing *Credits: 3*
- VET 2035 - Veterinary Microbiology and Immunology *Credits: 4*
- VET 2038 - Veterinary Parasitology *Credits: 3*
- VET 2040 - Periodontology and Oral Radiology *Credits: 2*
- VET 2050 - Principles of Pharmacology for Veterinary Technicians *Credits: 3*
- VET 2095 - Veterinary Technology Externship I *Credits: 1*
- VET 2195 - Veterinary Technology Externship II *Credits: 1*

Northwestern Specific Courses (3 credits)

- VET 2006 - Clinical Application to Veterinary Laboratory Procedures *Credits: 1*
- VET 2013 - Clinical Diagnostic Imaging for the Veterinary Technician *Credits: 1*
- VET 2032 - Clinical Anesthesia, Surgical Nursing and Dentistry for Veterinary Technicians *Credits: 1*

Program Credits: 62-63 (plus 14-15 preadmission credits)

Veterinary Technology - Norwalk, AS (VETT-AS-NK)

The CT State-Norwalk Veterinary Technology Program is accredited by the American Veterinary Medical Association Committee on Veterinary Technician Education and Activities (AVMA CVTEA) as a program for educating veterinary technicians. Successful degree completion prepares students for immediate employment in veterinary practices, biomedical research, zoo/wildlife medicine, industry, military, livestock health management, and pharmaceutical sales. Through classroom, laboratory, and field experience students are prepared for entry-level positions in the veterinary/animal fields, with a special focus on companion animal medicine and practice. Graduates are able to sit for the Veterinary Technician National Exam (VTNE). VTNE preparation and job placement assistance are provided.

Learning Outcomes:

- Sit for the Veterinary Technician National Exam.
- Demonstrate skills and knowledge of domestic animals including normal values for temperature, pulse, and respiration; conduct a thorough and accurate physical examination including the proper use of the stethoscope; and restrain animals for physical examination and veterinary techniques.
- Perform animal nursing and critical care for all common domestic animals including: restraint, administering medications, diagnostic sampling for laboratory evaluation, maintaining fluid therapy, applying and removing bandages and splints, and applying established emergency protocols.
- Assist with animal surgery including knowledge of routine procedures and operating room equipment; prepare the patient, veterinary personnel, and equipment for sterile surgical procedures; and function effectively as a surgical assistant to the veterinary surgeon during surgical procedures.
- Induce, stabilize, monitor, and maintain anesthesia under supervision of the veterinarian; recognize and report anesthetic emergencies; and apply resuscitation techniques and cardiopulmonary resuscitation (CPR).
- Assist with diagnostic imaging including radiography and ultrasound; produce and evaluate radiographs to provide diagnostic images for veterinary interpretation and diagnosis; and properly clean and maintain diagnostic imaging equipment.
- Perform common laboratory procedures: hematologic examinations, blood chemistries, urinalysis, parasitic examinations, cytological procedures, microbiological procedures, and necropsy.
- Provide competent assistance with office procedures: telephone contacts, scheduling appointments, admitting and discharging patients, maintaining medical and financial records, and establishing and maintaining a clean and orderly veterinary facility.
- Communicate with the public, clients, and colleagues through both verbal and written communication skills, including effective listening.
- Demonstrate knowledge of the common medicines used in veterinary medicine including: types and groups of drugs; indications, contraindications and side effects; labeling and packaging of dispensed drugs; using weights and measures correctly; calculating dosages; and safely storing, handling, and disposing of controlled substances, biologics, therapeutic agents, and hazardous wastes.
- Differentiate between normal and abnormal patient responses to medication.
- Understand basic knowledge of animal health and husbandry, and common diseases and disease processes for all common domestic animals.
- Demonstrate skills and knowledge associated with the use of common laboratory animals including basic principles of animal research and local, state, and federal animal welfare regulations.
- Demonstrate skills and knowledge associated with cleaning, sanitizing, and sterilizing equipment and facilities, including knowledge of products, equipment, procedures, and techniques routinely used in reducing, eliminating, or preventing contamination of the animal-care institutions.

The CT State Community College Veterinary Technology programs are campus-specific programs with selective admissions. The programmatic accrediting body, Committee on Veterinary Technician Education and Activities, requires campus-specific accreditations and all program-required VET courses must be completed at the campus of admittance as each program provides students with clinical experiences unique to their campus location. All prerequisite courses and general education (non-VET) post-admittance courses can be completed at any campus of CT State Community College.

The Veterinary Technology programs have enrollment caps and selective admission. Applicants must meet the following application requirements:

- Completion of the following prerequisite courses (all with a grade of C or better): ENG 1010, MATH 1010 or higher, BIO 1210, CHEM 1110. The biology and chemistry must have been completed within five years prior to the application deadline.
- Two letters of recommendation. One each from a teacher (academic) and supervisor (professional).
- Personal statement/essay stating the applicant's goals & reasons for program entry.
- Preference is given to students with a GPA of 2.7 or higher.
- Interview with Veterinary Technology admissions committee. Not all eligible students will be selected for an interview.

Given the selective nature of the admissions process, admission cannot be guaranteed. Detailed information regarding selective admission events and deadlines is available on the CT State Selective Admissions Webpage.

Veterinary Technology General Education Core (22-24 credits)

- ENG 1010 - Composition *Credits: 3 (preadmission requirement)*
- MATH 1010 or higher *Credits: 3-4 (preadmission requirement)*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1110 - Concepts of Chemistry *Credits: 4 (This is a preadmission requirement/competency. This can be met in a variety of ways prior to program admission.)*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- VET 1002 - Veterinary Office Management and Communication *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Veterinary Technology Program Core (51 credits)

- BIO 1210 - General Biology I *Credits: 4 (preadmission requirement)*
- VET 1001 - Introduction to Veterinary Technology *Credits: 3*
- VET 1003 - Animal Care and Handling *Credits: 3*
- VET 1026 - Veterinary Terminology and Medical Math *Credits: 2*
- VET 1051 - Small Animal Clinical Nursing *Credits: 4*
- VET 1052 - Large Animal Clinical Nursing *Credits: 4*
- VET 2001 - Veterinary Anatomy & Physiology I *Credits: 4*
- VET 2002 - Veterinary Anatomy & Physiology II *Credits: 4*
- VET 2005 - Veterinary Laboratory Procedures *Credits: 2*
- VET 2012 - Principles of Veterinary Imaging *Credits: 1*
- VET 2020 - Animal Pathophysiology *Credits: 3*
- VET 2030 - Veterinary Anesthesia and Surgical Nursing *Credits: 3*
- VET 2035 - Veterinary Microbiology and Immunology *Credits: 4*
- VET 2038 - Veterinary Parasitology *Credits: 3*
- VET 2040 - Periodontology and Oral Radiology *Credits: 2*
- VET 2050 - Principles of Pharmacology for Veterinary Technicians *Credits: 3*
- VET 2095 - Veterinary Technology Externship I *Credits: 1*
- VET 2195 - Veterinary Technology Externship II *Credits: 1*

Norwalk Specific Courses (3 credits)

- VET 2006 - Clinical Application to Veterinary Laboratory Procedures *Credits: 1*
- VET 2013 - Clinical Diagnostic Imaging for the Veterinary Technician *Credits: 1*
- VET 2033 - Clinical Approach to Veterinary Anesthesia and Surgical Nursing *Credits: 1*

Program Credits: 62-63 (plus 14-15 preadmission credits)

Science & Mathematics

Biochemistry Studies - CSCU Transfer Degree, AA (BIOC-AA-TAP)

Biochemistry is the study of the chemical processes which occur within and between living organisms. The study of biochemistry deals with the structures, functions and interactions of macromolecules: lipids, nucleic acids, carbohydrates, and proteins. The following program provides a firm grounding in mathematics, physics, biology, and chemistry.

Learning Outcomes:

Students completing the CSCU Biochemistry Pathway and earning an Associate's Degree will be able to:

- Understand and apply a chemical knowledge base to biological phenomena, including theories of chemical bonding and reactivity.
- Communicate scientific knowledge in written and verbal formats.
- Demonstrate technical competencies in the application of laboratory skills and safety.
- Interpret, use and apply scientific literature in the context of biochemical problems.

Students who earn an Associate in Arts degree in Biochemistry Studies from Connecticut State Community College can transfer their degree to either the Central Connecticut State University (CCSU), Eastern Connecticut State University (ECSU), Southern Connecticut State University (SCSU) or Western Connecticut State University (WCSU). Students will be credited as meeting the General Education requirements. Students must remain in the corresponding Biochemistry major program for the following bachelor's degrees:

- CCSU: Biochemistry - American Chemical Society (ACS) Certified, B.S.
- CCSU: Biochemistry - General Track, B.S.
- ECSU: Biochemistry, B.S.
- SCSU: Chemistry - Concentration: Biochemistry, B.S.
- WCSU: Chemistry - Biochemistry Option, ACS Approved, B.S.
- WCSU: Chemistry - Biochemistry Option, non-ACS Approved, B.S.

Full-time students may complete this program in two years. Most courses may not be taken online and some courses are offered during summer sessions. Students who transfer should be able to graduate in 2 years. This assumes a student follows the degree pathway plan created for the student at the time of admission to a four-year school listed above. There are laboratory fees associated with most program courses.

Framework Courses (33-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1210 - General Chemistry I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- CHEM 1220 - General Chemistry II *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (28 credits)

- BIO 1210 - General Biology I *Credits: 4*
- MATH 2600 - Calculus I *Credits: 4*
- CHEM 2310 - Organic Chemistry I *Credits: 4*
- CHEM 2320 - Organic Chemistry II *Credits: 4*
- PHYS 2201 - Calculus-Based Physics I *Credits: 4*

- BIO 2350 - Microbiology *Credits: 4*
- BIO 1220 - General Biology II *Credits: 4*
- **OR** PHYS 2202 - Calculus-Based Physics II *Credits: 4* (*BIO 1220 is recommended for students who wish to transfer to SCSU and WCSU, otherwise students should take PHYS 2202.)

Total Credits 61-62

Biology Studies - CSCU Transfer Degree, AA (BIOL-AA-TAP)

This program prepares students to transfer into one of the Connecticut State University (CSU) biology programs.

Learning Outcomes:

Outcomes: Students completing the Connecticut State Colleges & Universities (CSCU) Biology Pathway and earning an Associate's Degree will be able to describe:

- the mechanism by which the diversity of life evolved over time.
- the basic units of structure that define the function of all living things.
- how information is stored and exchanged, within and among organisms.
- how living things transform energy and matter.
- how living systems are interconnected and interacting.

Competencies: Student completing the CSCU Biology Pathway and earning an Associate's Degree will be able to:

- Apply the process of science
- Use quantitative reasoning
- Use modeling and simulation to describe living systems
- Apply concepts and knowledge from within and outside of biology in order to interpret biological phenomena
- Communicate biological concepts and interpretations
- Discuss the relationship between Science and Society

This program follows the first two years of standard biology majors program and transfers into many public and private universities across the country. Student can transfer into the following programs under the Transfer Ticket transfer agreements:

- Central CT State University: Ecology, Biodiversity, Evolution, Bachelor of Science (B.S.)
- Central CT State University: Environmental Science, B.S.
- Central CT State University: General Biology, B.S.
- Eastern CT State University: Biology, Bachelor of Arts (B.A.)
- Eastern CT State University: Biology, B.S.
- Southern CT State University: Biology, B.A.
- Southern CT State University: Biology, B.S.
- Western CT State University: Biology - Professional Option, B.A.
- Western CT State University: Ecological Option, B.A.

Framework Courses (33-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1210 - General Biology I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (27-28 credits)

- BIO 1220 - General Biology II *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- MATH 2600 - Calculus I *Credits: 4*
- **OR** Elective CRTY - Creativity Course *Credits: 3*
- **OR** Elective GLKY - Global Knowledge Course *Credits: 3*
- PHYS 1201 - General Physics I *Credits: 4*
- **AND** PHYS 1202 - General Physics II *Credits: 4*
- **OR** CHEM 2310 - Organic Chemistry I *Credits: 4*
- **AND** CHEM 2320 - Organic Chemistry II *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- **AND** PHYS 2202 - Calculus-Based Physics II *Credits: 4*

Choose Two 2000-Level Lab Science Biology Courses (8 Credits)

- BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 2112 - Anatomy & Physiology II *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- BIO 2822 - Molecular Biotechniques *Credits: 4*
- BIO 2830 - Advanced Techniques in Biotechnology *Credits: 4*
- BIO 2630 - Molecular Genetics *Credits: 4*
- BIO 2865 - Principles of Synthetic Biology *Credits: 4*
- BIO 2700 - Ecology *Credits: 4*
- BIO 2098 - Special Topics in Biology *Credits: 3-4*

Total Credits: 60-62

Biotechnology (BIOT-AS)

The Biotechnology Associate of Science Degree is designed to prepare students with a comprehensive background and laboratory technical skills for the purpose of immediate entry into laboratory positions.

Learning Outcomes:

Successful graduates will have gained the following skills and knowledge, which will provide them with the flexibility to quickly adapt to a variety of employment or educational options in biotechnology and science.

- Conduct themselves as laboratory technicians in a biotechnology laboratory with the basic skills and knowledge required to function effectively in a research setting, adherence to Good Laboratory Practices (GLP) and safety guidelines and procedures.
- Demonstrate proficiencies in both basic and advanced principles of chemistry and biology that are required by a person working as a laboratory technician or planning to enter into a four-year college science program.
- Explain the basic principles of genetics, molecular biology, cell biology, chemistry, biochemistry, and microbiology.
- Employ sterile technique in the handling of microbial cultures with knowledge of what is safe and what is hazardous.
- Prepare solutions and perform accurate measurements using precision instruments such as spectrometers and micropipettes.
- Demonstrate skills in the use of molecular laboratory techniques including cloning to create recombinant deoxyribonucleic acid (DNA) constructs, polymerase chain reaction (PCR), protein purification, and immunoblotting.
- Utilize computers to collect and analyze experimental data and to document data in clear and concise technical reports.
- Evaluate biotechnology techniques that are utilized in original scientific research literature and communicate their significance using the appropriate scientific terminology.
- Recognize the ethical issues that are relevant to the field of biotechnology.

This program has articulation agreements with the Biomolecular Sciences Program at Central Connecticut State University and the Biology and Biochemistry Programs at Eastern Connecticut State University.

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1210 - General Chemistry I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (38-39 credits)

- MATH 1012 - Trigonometry with Embedded Algebra *Credits: 4*
- **OR** MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- MATH 1600 Recommended
- CHEM 1220 - General Chemistry II *Credits: 4*
- BIO 1210 - General Biology I *Credits: 4*
- BIO 1220 - General Biology II *Credits: 4*
- BIO 1810 - Basic Techniques in Biotechnology *Credits: 4*
- **OR** BIO 2822 - Molecular Biotechniques *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- ENG 1020 - Composition II and Literature *Credits: 3*
- **OR** ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- BIO 1809 - Principles of Biotechnology *Credits: 3*

- **OR** BIO 2095 - Biotechnology Internship *Credits: 3*
- **OR** Advanced Elective from list below *Credits: 3-4*
- *Students currently employed in the Biotechnology field may prefer to select an Advanced Science Elective.*

Choose Two Advanced Science Electives (8 credits)

- BIO 2020 - Biochemistry *Credits: 4*
- **OR** CHEM 2410 - Biochemistry *Credits: 4*
- BIO 2830 - Advanced Techniques in Biotechnology *Credits: 4*
- BIO 2630 - Molecular Genetics *Credits: 4*
- BIO 2865 - Principles of Synthetic Biology *Credits: 4*
- CHEM 1120 - Principles of Organic Chemistry and Biochemistry *Credits: 4*
- CHEM 2310 - Organic Chemistry I *Credits: 4*
- CHEM 2320 - Organic Chemistry II *Credits: 4*
- CHEM 2510 - Instrumental Analysis *Credits: 4*

Total Credits: 60-61

Biotechnology Certificate (BIOT-CC)

The Biotechnology Certificate is designed to prepare students with technical skills for the purpose of entry into laboratory positions or to strengthen the skills of students currently employed in laboratory settings.

Learning Outcomes:

Successful graduates will have gained the following skills and knowledge, which can be applied to industrial or academic laboratory settings.

- Conduct themselves as professional laboratory technicians capable of following laboratory safety guidelines and procedures.
- Demonstrate proficiencies in both basic and advanced principles of chemistry and biology that are required by a person working as a laboratory technician.
- Explain the basic principles of genetics, molecular biology, cell biology, chemistry, biochemistry, and microbiology.
- Employ sterile technique in the handling of microbial cultures.
- Prepare solutions and perform accurate measurements using precision instruments such as spectrometers and micropipettes.
- Demonstrate skills in the use of molecular laboratory techniques including cloning to create recombinant deoxyribonucleic acid (DNA) constructs or polymerase chain reaction (PCR).
- Utilize computers to collect and analyze experimental data and to document data in clear and concise technical reports.
- Develop biotechnology techniques based on research in primary scientific literature.

Required Courses

- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- BIO 1809 - Principles of Biotechnology *Credits: 3*
- **OR** BIO 2095 - Biotechnology Internship *Credits: 3*
- BIO 1810 - Basic Techniques in Biotechnology *Credits: 4*
- **OR** BIO 2822 - Molecular Biotechniques *Credits: 4*
- **OR** Advanced Science Elective *Credits: 4* (choose from list below)

Advanced Science Electives (8 credits)

Internship or students currently employed in the Biotechnology field may prefer to select an additional Advanced Science Elective.

Choose two courses from among the following courses:

- BIO 2020 - Biochemistry *Credits: 4*
- **OR** CHEM 2410 - Biochemistry *Credits: 4*
- BIO 2830 - Advanced Techniques in Biotechnology *Credits: 4*
- BIO 2630 - Molecular Genetics *Credits: 4*
- BIO 2865 - Principles of Synthetic Biology *Credits: 4*
- CHEM 1120 - Principles of Organic Chemistry and Biochemistry *Credits: 4*
- CHEM 2310 - Organic Chemistry I *Credits: 4*
- CHEM 2320 - Organic Chemistry II *Credits: 4*
- CHEM 2510 - Instrumental Analysis *Credits: 4*

Total Credits: 18

Cannabis Studies Certificate (CANB-CC)

The Cannabis Studies certificate program will explore the legal challenges confronting cannabis farming, production, and consumer use, and provide instruction in cannabis cultivation techniques and cannabinoid/THC extraction processes. Students will study the farming economics of land, labor, and capital; governmental regulations and laws affecting small business; and developing opportunities in Western and alternative medicines and therapies. The 18-credit certificate includes classes in horticulture, law and policy, alternative medicine, botany, business, and communications.

Learning Outcomes:

Learners who complete the Cannabis Studies Certificate will:

- Understand the common challenges with cannabis production and how to address those challenges.
- Understand the process for growing cannabis and techniques of seeding, cloning cuttings, pruning and planting, postharvest handling, and cannabinoid/THC extraction.
- Be able to describe the legal challenges confronting cannabis farming, production, and consumer use.
- Understand how to develop an effective presentation for an informative, persuasive, or special occasion purpose talk related to the cannabis industry.
- Explain the relationship of business to society and the individual. This includes the interrelationships with law and politics and an understanding of governmental regulations and laws affecting small business.
- Recognize the major economic resources of the business production process: land, labor, and capital. Understand how to synergistically combine these for financial success.
- Determine methods for objectively evaluating current and future traditional western and alternative medicines and therapies.

Required Courses

- HORT 1200 - Horticulture of Cannabis *Credits: 3*
- CANB 1270 - Cannabis Law and Policy *Credits: 3*
- BUSN 1100 - Introduction to Business *Credits: 3*
- BENT 2180 - Entrepreneurship *Credits: 3*
- HLTH 1021 - A Survey of Alternative Healthcare *Credits: 3*
- BMGT 2040 - Managerial Communications *Credits: 3*

Total Credits: 18

Chemistry Studies - CSCU Transfer Degree, AA (CHEM-AA-TAP)

Chemistry is the branch of science that deals with the composition, structure, properties, and reaction of matter. Chemistry is a physical science within the STEM (Science, Technology, Engineering, and Mathematics) area of study. The Chemistry Studies program integrates scientific knowledge, laboratory skills and critical thinking. This program provides a solid grounding in Chemistry, as well as Mathematics and Physics, in preparation for continued study at junior-level status at a baccalaureate institution.

Learning Outcomes:

- Employ chemical principles by utilizing critical thinking and problem-solving skills in the solution of chemistry problems in the areas of general chemistry and organic chemistry.
- Plan and implement data collection strategies appropriate to a particular scientific question, record and present the data clearly, and analyze the results accurately.
- Recall and employ the proper procedures and regulations for safe handling, use, and disposal of chemicals.

Students who earn an Associate in Arts degree in Chemistry Studies can transfer their degree to either the Central Connecticut State University (CCSU), Southern Connecticut State University (SCSU) or Western Connecticut State University (WCSU). Students will be credited as meeting the General Education requirements. Students must remain in the corresponding Chemistry major program for the following bachelor's degrees:

CCSU: Chemistry - American Chemical Society (ACS) Certified, Bachelor of Science

CCSU: Chemistry - General Program, B.S.

SCSU: Chemistry - ACS Certified, B.S.

SCSU: Chemistry - non-ACS Certified, B.S.

WCSU: Chemistry - ACS Certified, B.S.

WCSU: Chemistry - non-ACS Certified, B.S.

Full-time students may complete this program in two years. Most courses may not be taken online, and some courses are offered during summer sessions. Students who transfer should be able to graduate in 2 years. This assumes a student follows the degree pathway plan created for the student at the time of admission to a four-year school listed above. There are laboratory fees associated with most program courses.

Framework Courses (33-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1210 - General Chemistry I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- CHEM 1220 - General Chemistry II *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (29 credits)

- CHEM 2310 - Organic Chemistry I *Credits: 4*
- CHEM 2320 - Organic Chemistry II *Credits: 4*
- MATH 2610 - Calculus II *Credits: 4*
- PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- **OR** PHYS 1201 - General Physics I *Credits: 4*
- PHYS 2202 - Calculus-Based Physics II *Credits: 4*

- **OR** PHYS 1202 - General Physics II Credits: 4
- Students who will transfer into an ACS certified program or WCSU's non-ACS certified program should take PHYS 2201 and PHYS 2202.

Unrestricted Free Electives (9 credits)

Students should consider beginning or completing work on foreign language requirements (at CCSU and WCSU) not already met in high school and beginning work on a minor (required at CCSU in some majors - up to 9 credits can be completed at the community college).

Total Credits: 62-63

Computer Information Systems: Data Analytics (CISD-AS)

The Computer Information Systems (CIS) degree program offers students a diverse technical curriculum that provides an understanding of many areas of information technology (IT). The program features a core of technical courses that cover topics such as database design, operating systems, and project management, and differentiated options that allow students to concentrate their learning in a particular area.

Students also have an opportunity to experience the workplace in an internship course, or via a simulated workplace capstone that allows them to work directly with employers or in a case study environment. They can leverage the skills acquired in this diverse program to prepare for employment, industry-recognized certification credentials or to pursue baccalaureate degrees. The CIS program allows students to tailor their degree to their interests by offering a wide range of electives. Certificates are also provided as a guide to assist students in the selection of electives.

Learning Outcomes:

- Develop the ability to analyze and design solutions through knowledge and comprehension of information systems concepts and skills.
- Develop strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs.
- Develop the ability to identify and solve unstructured problems in unfamiliar settings and exercise judgment based on facts.
- Develop mastery in communication by gaining proficiency in oral/written/electronic communication skills and the ability to explain systems development concepts and related technical issues to various stakeholders.
- Develop leadership skills by learning to work collaboratively with a diverse team, including organization, control, and assessment of group-based work, and provide leadership when appropriate.
- Develop the skills to apply current technology, analyze business problems, and design software and solve technical issues; apply word processing, spreadsheet, database, presentation, email, and collaborative software skills in a professional context.
- Develop the skills to communicate using network technologies, access information via the internet, and understand information integrity and security issues.
- Understand and respect the employer-employee relationship and appreciate the need to produce high quality work.
- Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

Data Analytics Option

The Data Analytics option will provide students with foundational knowledge and practical experience in data analysis vis-a-vis business and scientific applications. Students will understand how organizations strive to turn structured and unstructured data into useful information by using best practices, processes, and tools. Students will learn more about data sources, data significance, data attributes, data ethics, data security, and data governance. The option provides hands-on data analysis experience including use of spreadsheets and programming.

Learning outcomes:

- Describe key aspects of data in an organizational setting
- Implement foundational concepts of data computation, data structures, and analysis
- Utilize various technologies to organize, analyze, explore, and visualize data
- Execute data organization, exploration, and develop proficiency in a programming language (e.g. R)

Program Requirements*

*CSC 1201 *Introduction to Programming* and CSC 2213 *Object Oriented Programming* are not allowed in this program. Students are encouraged to take CSC 1211 - Java I or other programming language.

Computer Information System General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1010 Recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- **OR** Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Computer Information System Program Core (24-26 credits)

- CIS 1001 - Introduction to Computers *Credits: 3*
- CIS 1211 - Database Design I *Credits: 3*
- **OR** CSC 1231 - Database Development I *Credits: 4*
- CIS 1104 - Introduction to Operating Systems *Credits: 3*
- CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CIS 1143 - Project Management *Credits: 3*
- CIS 2994 - Coop Ed/Work Experience *Credits: 3*
- **OR** CIS 2990 - Capstone Research *Credits: 3*
- Open Elective *Credits: 3*
- Directed Elective - Any CIS, CSA, CST, CYS, or DTS course; CSC courses excluding CSC 1201 and CSC 2213 *Credits: 3-4*

Specialization Courses (15-17 credits)

- DTS 2215 - Data Ethics and Security *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- DTS 2201 - Programming in Data Science *Credits: 3*
- Directed Elective - Any CIS, CST, CYS, DTS course, CSC courses excluding CSC 1201 and 2213 *Credits: 3-4*
- Directed Elective - Any CIS, CSA, CST, CYS, DTS course, CSC courses excluding CSC 1201 and CSC 2213 *Credits: 3-4*

Total Credits: 60-67

Data Analytics Certificate (DTAN-CC)

The goal of the program curriculum is to provide students with an introduction to the industry programming standards of Python and R and knowledge of important fundamentals in Statistics and the Data Science Life Cycle. The certificate is designed as a four 4-credit course program that enables eager and interested students to obtain skills useful for the analysis of data in the workplace. Students take 2 courses in the fall semester and 2 courses in the spring semester to complete the certificate in one year.

Learning Outcomes:

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

- Extract data and solve data related problems using programming language.
- Produce and interpret data visualizations, numerical summaries, and confidence intervals to describe and explore data.
- Formulate and test statistical claims using relevant techniques and technologies.
- Recognize and investigate problems using data and apply the appropriate methods for resolution.
- Demonstrate the ability to prepare data for analysis.
- Describe ethical issues related to data privacy and sensitivity.
- Evaluate the consistency and completeness of data.

Required Courses

- MATH 1201 - Statistics I with Computer Applications *Credits: 4*
- CSC 1201 - Introduction to Programming *Credits: 4*
- DTS 2203 - Elements of Data Science *Credits: 4*
- DTS 2274 - Data Visualization *Credits: 4*

Total Credits: 16

Environmental Science: Environmental Biology, AS (EBIO-AS)

The Environmental Biology AS program is intended for students interested in Environmental Biology, Ecology, or a related field. The environmental field is a broad-based area of study and is truly interdisciplinary in nature. The subjects of biology, chemistry and geology are interwoven to provide a full picture of our environment and humanity's impact upon this system. The degree provides students with a foundation in the basic sciences and highlights the field's interdisciplinary nature, with a focus on the life sciences.

The goal of the Environmental Biology program is to prepare students to transfer into a biological environmental science program at a four-year institution. The requirements for the Environmental Biology program allow students to transfer seamlessly to most four-year colleges and to successfully complete their bachelor's degree in Environmental Biology, Ecology, or a related field without loss of credit or time.

Learning Outcomes:

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

- Research and assess the accuracy of information from print, online and media sources and be able to distinguish between scientific fact and media sensationalism.
- Apply the scientific method to environmental problems using both laboratory and field skills to gather, analyze and interpret scientific data.
- Scientifically analyze and critically evaluate local/regional/global environmental problems in terms of ecological principles and development of sustainable solutions.
- Demonstrate knowledge of the interdisciplinary nature of environmental science with the fundamental principles of biology, chemistry, geology, law and public policy.
- Describe the relationship between biotic organisms and the abiotic factors within an ecosystem.
- Demonstrate knowledge gained from scientific investigation by appropriate written, oral and mathematical means as these skills are vital to success as an environmental profession.
- Examine environmental problems and issues as well as establish personal positions on such issues and problems collaboratively.

General Education Courses (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ENV 1010 - Introduction to Environmental Science *Credits: 3*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3* (ECON elective recommended)
- Elective ORAX - Oral Communication Course *Credits: 3* (COMM 1301 recommended)
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40 credits)

- CSA 1110 - Introduction to Software Applications *Credits: 3*
- BIO 1210 - General Biology I *Credits: 4*
- BIO 1220 - General Biology II *Credits: 4*
- BIO 1750 - Introduction to Marine Science *Credits: 3*
- BIO 2350 - Microbiology *Credits: 4*
- BIO 2700 - Ecology *Credits: 4*
- CHEM 1210 - General Chemistry I *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- ENV 1100 - Environmental Regulations *Credits: 3*
- GEOL 1200 - Introduction to Physical Geology *Credits: 4*
- MATH 1200 - Statistics I *Credits: 3*

Total Credits: 61-62

Environmental Science: Environmental Science & Toxicology Certificate (ESTX-CC)

The Environmental Science and Toxicology certificate prepares students for entry-level technician positions in the fields of wastewater management, toxicology, pollution prevention and remediation and/or to continue their studies beyond the certificate to receive a two- or four-year degree. Most of the courses in the Certificate count towards the Environmental Science and Toxicology AS degree.

Learning Outcomes:

- Identify 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
- Analyze air, water, and soil samples from the field and laboratory for pollutants and toxins
- Identify career options in the environmental science, toxicology, and forensic science fields
- Explain the basic concepts of public health and occupational health and safety

Required Courses

- BIO 1210 - General Biology I *Credits: 4*
- CHEM 1210 - General Chemistry I *Credits: 4*
- ENV 1010 - Introduction to Environmental Science *Credits: 3*
- ENV 1010L - Introduction to Environmental Science Lab *Credits: 1*
- MATH 1610 - Precalculus *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- CHEM 2410 - Biochemistry *Credits: 4*
- ENV 2200 - Toxicology *Credits: 3*

- **Choose one course from the list below (3-4 credits):**
- BIO 1220 - General Biology II *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- CHEM 2310 - Organic Chemistry I *Credits: 4*
- CHEM 2320 - Organic Chemistry II *Credits: 4*
- EARTH 1010 - Earth Science *Credits: 3*
- EARTH 1020 - Natural Disasters *Credits: 3*
- ENV 1100 - Environmental Regulations *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- MATH 2610 - Calculus II *Credits: 4*
- PHYS 1201 - General Physics I *Credits: 4*
- PHYS 1202 - General Physics II *Credits: 4*
- PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- PHYS 2202 - Calculus-Based Physics II *Credits: 4*
- WMTR 1001 - Water Treatment and Distribution *Credits: 6*
- WMTR 1002 - Special Topics in Water Treatment *Credits: 3*
- WMTR 1003 - Special Topics in Water Distribution *Credits: 3*

Total Credits: 30-31

Environmental Science: Environmental Science and Toxicology, AS (ESTX-AS)

The Environmental Science and Toxicology program is intended for students interested in areas such as environmental field technician, laboratory technician, regulations, pollution prevention and remediation, solid and hazardous waste, water and wastewater, and public health protection, among others. It offers students a broad educational approach to the many careers available to them in the environmental field and allows for full transfer to a four-year institution.

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. This program can be used to meet the recently upgraded requirements for wastewater treatment plant operator licensure by the CT Department of Health Services.

Program Learning Outcomes: Upon successful completion of this degree 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

General Education Courses (21 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- ENV 1010 - Introduction to Environmental Science *Credits: 3*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- **OR** SOC 1001 - Principles of Sociology *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- **OR** ENG 1030 - Composition II and Non-fiction Texts *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40-41 credits)

- CENT 1016 - Computer Applications for Technology *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- BIO 1210 - General Biology I *Credits: 4*
- ENV 1010L - Introduction to Environmental Science Lab *Credits: 1*
- ENV 2200 - Toxicology *Credits: 3*
- ENV 2295 - Environmental Science and Toxicology Internship *Credits: 3*
- CHEM 1210 - General Chemistry I *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- PHYS 1201 - General Physics I *Credits: 4*
- CHEM 2410 - Biochemistry *Credits: 4*
- PHIL 1101 - Ethics *Credits: 3*

Choose One Restricted Electives (3-4 credits)

- BIO 1220 - General Biology II *Credits: 4*
- **OR** BIO 2350 - Microbiology *Credits: 4*
- **OR** CENT 1016 - Computer Applications for Technology *Credits: 3*
- **OR** EARTH 1010 - Earth Science *Credits: 3*
- **OR** EARTH 1020 - Natural Disasters *Credits: 3*
- **OR** ENV 1100 - Environmental Regulations *Credits: 3*
- **OR** WMTR 1002 - Special Topics in Water Treatment *Credits: 3*
- **OR** WMTR 1003 - Special Topics in Water Distribution *Credits: 3*

Total Credits: 61-62

Environmental Science: Sustainability, AS (SUST-AS)

The Environmental Science: Sustainability program is intended for students looking to acquire jobs or transfer to continue their studies in a variety of fields including geosciences (including hydrology, soil, and agricultural resources), energy resources, and sustainability, among others. The environmental science field has enjoyed rapid growth. Occupational employment projections indicate that job opportunities are increasing for environmental scientists. An increase in local, state and federal laws concerning environmental issues has provided increased opportunity for professionals in this field.

The emerging field of sustainable energy and sustainable resource management is spurring the growth of job opportunities as a result of the ever-increasing awareness to monitor and improve the quality of the environment, to study the effect that human activity has on terrestrial and aquatic systems, and to find ways to restore them.

Growth is also expected to be fueled by demands for waste regulation and for compliance monitoring. As the demand for oil and other fuels continues to change, recognizing the threat of increased pollution, an increasing amount of research is focusing on the development of alternate renewable and non-polluting energy sources.

Learning Outcomes:

Upon successful completion of all Program requirements, graduates will:

- Develop knowledge of the scientific basis for issues affecting the environment and their impact on society as well as the role of sustainable technologies in addressing these issues.
- Understand and be skilled at collecting, analyzing and presenting scientific data by various means including up- to-date computer technologies.
- Be able to use the scientific method for problem solving in biology, chemistry, geology, physics and environmental sciences, and be able to use this skill to address issues related to the environment.
- Research and assess the accuracy of appropriate information sources involving both print literature and electronic sources, including online databases and publications.
- Communicate knowledge and understanding of environmental sciences and related societal issues in appropriate written, oral and mathematical means.
- Demonstrate interrelationships and connections with other subject areas associated with a college-level education.
- Use a wide array of knowledge, principles and skills acquired in laboratory, field and lecture settings for use in transferring to baccalaureate degree program or for use in seeking further training toward a technical degree.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Component.

General Education Courses (22-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- ENV 1010 - Introduction to Environmental Science *Credits: 3*
- ECON 1002 - Principles of Microeconomics *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (38-39 credits)

- GEOL 1200 - Introduction to Physical Geology *Credits: 4*
- CHEM 1210 - General Chemistry I *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- BIO 1720 - General Ecology *Credits: 4*
- BIO 1210 - General Biology I *Credits: 4*
- MATH 1201 - Statistics I with Computer Applications *Credits: 4*

- ENV 1800 - Sustainable Energy and the Environment *Credits: 3*
- PHYS 1201 - General Physics I *Credits: 4*
- BIO 1220 - General Biology II *Credits: 4*
- **OR** PHYS 1202 - General Physics II *Credits: 4*

Choose One Restricted Elective (3-4 credits)

- BIO 1220 - General Biology II *Credits: 4*
- CAD 1010 - Introduction to CAD *Credits: 3*
- CHEM 2310 - Organic Chemistry I *Credits: 4*
- EGR 1110 - Introduction to Engineering *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- MATH 2610 - Calculus II *Credits: 4*
- OCEN 1010 - Introduction to Oceanography *Credits: 3*
- PHYS 1202 - General Physics II *Credits: 4*

Total Credits: 60-62

Foundations in Digital Analytics Certificate (DGFN-CC)

The Foundations in Digital Analytics Certificate provides students a foundation in data basics, probability and statistics, data analytics, data manipulation, data visualization and communication, and data ethics and security, while supporting students to acquire industry-informed and aligned digital and analytical skills necessary to succeed in a wide array of career opportunities. The certificate's learning outcomes are based on a national framework endorsed by Fortune 500 firms across the country. Students who complete the certificate will have the opportunity to earn industry-recognized badges in four domains: data analytics, data validations, data visualization, and data ethics and security. Participating students will be eligible for industry experience opportunities, such as participation in mentorship programs or capstone projects, to provide the student real-world industry experience. The certificate will incorporate industry-approved learning opportunities such as case studies and projects to build students' digital analytics skills for in-demand work.

Learning Outcomes:

- Explain the importance of the uses of data, data ethics, and data security.
- Implement foundational concepts of data manipulation, data analysis, data visualization, and communication.
- Utilize various technologies and programming languages to organize, analyze, explore, and visualize data.
- Apply statistical techniques to data to make sense of data and solve problems.
- Demonstrate the ability to apply all data-related concepts through case studies and projects.

Required Courses

- MATH 1200 - Statistics I *Credits: 3*
- DTS 2201 - Programming in Data Science *Credits: 3*
- DTS 2215 - Data Ethics and Security *Credits: 3*
- DTS 2258 - Data Journalism *Credits: 3*

Total Credits: 12

Horticulture Certificate (HORT-CC)

The Horticulture Certificate program is designed to develop the skills and understanding needed for students to take responsible positions in grounds maintenance, tree and shrub nurseries, wholesale plant growing, landscaping, garden centers and retail greenhouses, golf courses, lawn care, and parks/recreation departments. The certificate will be awarded on completion of all courses and a cooperative work experience.

Learning Outcomes:

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

- Identify common trees and shrubs, ground covers, various annuals, biennials, and perennials by botanical and common names, and describe the outstanding characteristics of each; summarize landscape, garden center and greenhouse uses; and know the cultural requirements of these plants.
- Identify foliage plants commonly used indoors by botanical and common names, state distinguishing characteristics of each, and describe their use and culture in various indoor landscape areas.
- Control the common weeds, insects, pests and diseases of ornamentals and turf.
- Select the proper procedures, define the physiological basis, and describe practical applications of the reproduction of plants by asexual and sexual methods.
- Describe proper design and operation of greenhouse environmental systems, and evaluate their advantages and disadvantages in commercial production.
- Demonstrate a responsible attitude in relationships with employers, fellow employees, and toward the world of work.
- Select appropriate techniques for the establishment and management of lawns and utility turf areas.
- Manage the procedures used in landscape constructions and in the maintenance of small engines.
- Design flower beds, and mixed borders; place trees and shrubs for a variety of gardens for both residential and commercial properties.
- Access available resources to incorporate technological innovations.
- Demonstrate those skills, abilities and values which allow a person to function as a free and responsible citizen.
- Apply mathematics to calculating area, volume and application rates of fertilizers and pesticides.
- Evaluate site conditions to design attractive, functional landscapes.

This Certificate is eligible for WIOA funding. The program prepares students to obtain their Home Improvement Contractor's License and Supervisory Pesticide Applicator's license. Additionally, graduates may go on to take the state DEEP Arboriculture Licensing Exam.

Required Courses

- HORT 1001 - Landscape Construction *Credits: 4*
- HORT 1002 - Woody Plants *Credits: 3*
- HORT 1003 - Herbaceous Plants *Credits: 3*
- HORT 1004 - Soil Systems *Credits: 3*
- HORT 2002 - Landscape Design 1 *Credits: 3*
- HORT 2007 - Landscape Maintenance *Credits: 3*
- HORT 2022 - Greenhouse Management *Credits: 4*
- HORT 2095 - CWE Cooperative Work Experience *Credits: 3*

Elective - Choose one HORT course:

- HORT 1006 - Fruit Production *Credits: 3*
- HORT 1007 - Vegetable and Herb Production *Credits: 3*
- HORT 1200 - Horticulture of Cannabis *Credits: 3*
- HORT 1015 - Turf Management *Credits: 3*
- HORT 2004 - Computers in Landscape Design *Credits: 3*

- HORT 2019 - Arboriculture *Credits: 3*
- HORT 2024 - Plant Propagation and Hybridization *Credits: 4*
- HORT 2050 - Hydroponic Production *Credits: 4*

Total Credits: 29

Horticulture, AS (HORT-AS)

The Horticulture Program is designed as a career program leading to the associate in science degree. The goal of the Horticulture Program is to prepare students for employment in plant production, landscape services, landscape design, or for further education. The program includes the completion of two full years of study and an appropriate supervised cooperative work experience with nurseries, landscape businesses and greenhouses. Naugatuck Valley campus is a member of the CT Nursery and Landscape Association, CT Greenhouse Growers Association, CT Horticulture Society, and CT Florist Association.

The Horticulture Program is recognized by the Guaranteed Admissions Program with the UCONN College of Agriculture, Health, and Natural Resources. Students interested in the UCONN guaranteed admissions program must speak with the Horticulture Program Coordinator before registering. Visit <http://admissions.uconn.edu/apply/transfer/gap> for additional details.

Program Learning Outcomes:

- Demonstrate proficiency in the construction of hardscape landscape components, including pavers, concrete and wood structures.
- Identify common ornamental trees and shrubs, ground covers by botanical and common names, and describe characteristics of each.
- Review and discuss the characteristics of soil, structure, soil erosion, and soil restoration.
- Identify common herbaceous perennials and annuals by botanical and common names, and describe characteristics of each.
- Analyze and design landscapes for both residential and commercial properties utilizing a variety of sustainable horticulture techniques and procedures and meet the needs of a diverse clientele.
- Select the proper procedures, define the physiological basis, and describe practical applications of the reproduction of plants by asexual and sexual methods.
- Describe proper design and operation of greenhouse environmental systems, and evaluate their advantages and disadvantages in commercial production.
- Summarize and assess plant growth requirements for commercial production of greenhouse crops, and economically produce a crop from seed or cutting to harvest and sales.
- Relate basic knowledge of botany to plant growth and culture.
- Solve problems related to the use of soil amendments, fertilizers, and plant growth control chemicals, and apply effective cost estimating, pricing, and record keeping techniques.
- Identify, analyze, and troubleshoot common landscape and greenhouse pests and diseases within the landscape utilizing integrated pest management

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- ART 1110 - Drawing I *Credits: 3*
- BIO 1550 - Botany *Credits: 4*
- ECON 1001 - Principles of Macroeconomics *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Required Courses (38-39 credits)

- HORT 1001 - Landscape Construction *Credits: 4*
- HORT 1002 - Woody Plants *Credits: 3*
- HORT 1003 - Herbaceous Plants *Credits: 3*
- HORT 1004 - Soil Systems *Credits: 3*
- HORT 2002 - Landscape Design 1 *Credits: 3*
- HORT 2007 - Landscape Maintenance *Credits: 3*

- HORT 2008 - Landscape Contract Administration *Credits: 3*
- HORT 2015 - Integrated Pest Management *Credits: 3*
- HORT 2022 - Greenhouse Management *Credits: 4*
- HORT 2095 - CWE Cooperative Work Experience *Credits: 3*

Choose 2 courses from:

- HORT 1006 - Fruit Production *Credits: 3*
- HORT 1007 - Vegetable and Herb Production *Credits: 3*
- HORT 1200 - Horticulture of Cannabis *Credits: 3*
- HORT 1015 - Turf Management *Credits: 3*
- HORT 2003 - Landscape Design 2 *Credits: 3*
- HORT 2004 - Computers in Landscape Design *Credits: 3*
- HORT 2019 - Arboriculture *Credits: 3*
- HORT 2024 - Plant Propagation and Hybridization *Credits: 4*
- HORT 2050 - Hydroponic Production *Credits: 4*

Total Credits: 60-61

Horticulture: Landscape Design Certificate (LNSC-CC)

The Horticulture Landscape Design Certificate is designed to prepare students for certification as Professional Landscape Designers. The certificate is designed to develop those skills in plant identification and culture, landscape construction skills, the maintenance of landscapes, as well as hand drawing, sketching, technical drafting, computer aided design, and portfolio assessments. This program is affiliated with the Association of Professional Landscape Designers (APLD)

Learning Outcomes:

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

- Identify the current repertoire of trees, shrubs, ground covers, vines, annuals, biennials, and perennials by botanical and common names, describe the outstanding characteristics of each; summarize landscape uses, know their cultural requirements; design herbaceous and mixed borders.
- Evaluate landscape areas and needs; select and place plants in a design; design and place hardscape features in a landscape; draw plans using traditional equipment and computer aided tools; outline techniques for low maintenance needs in both residential and commercial properties.
- Transfer portions of aerial designs into perceptual designs, using sketching techniques; develop a plan for pricing out landscape projects and bids; demonstrate oral skills to clients on design ideas; design landscape garden plans using computer design programs; manipulate computer designs to illustrate to landscape design development over time.
- Demonstrate how to bring color to the landscape through the four seasons with herbaceous and woody plants; how to establish and manage mass planting through the year.
- Demonstrate and explain how to prune deciduous and evergreen trees and shrubs for a variety of purposes.
- Interpret fertilizer needs for particular plants from the general recommendations of a soil analysis; recognize signs of nutrient deficiency.
- Demonstrate techniques for designing small properties; plan and select plants for different kinds of gardens (examples: for woods, meadows, marshes, water, rock gardens).
- Relate the historical development of the garden through the ages and be able to recognize the contributions and influences of great designers on gardens today.
- Relate and demonstrate how to use all the subtleties of color and design in the garden in two-dimensional and three-dimensional formats.
- Initiate, develop and present a significant design as an independent study project.
- Demonstrate a responsible attitude in relationships with employers, fellow employees, and toward the world of work.
- Access available resources to incorporate technological innovations.
- Be prepared for certification as a Professional Landscape Designer.
- Initiate landscape design through computer-aided programs.

This Certificate is eligible for WIOA funding. The program prepares students to obtain their certification as a Landscape Designer through the Association of Professional Landscape Designers. It also assists students with future career prospects as a Landscape Architect through the transfer to a four-year degree program.

Required Courses

- HORT 1001 - Landscape Construction *Credits: 4*
- HORT 1002 - Woody Plants *Credits: 3*
- HORT 1003 - Herbaceous Plants *Credits: 3*
- HORT 1004 - Soil Systems *Credits: 3*
- HORT 2002 - Landscape Design 1 *Credits: 3*
- HORT 2004 - Computers in Landscape Design *Credits: 3*
- HORT 2007 - Landscape Maintenance *Credits: 3*
- HORT 2008 - Landscape Contract Administration *Credits: 3*
- ART 1110 - Drawing I *Credits: 3*
- **OR** HORT 2003 - Landscape Design 2 *Credits: 3*

Total Credits: 28

Mathematics Studies - CSCU Transfer Degree, AA (MATH-AA-TAP)

The Mathematics Studies program fosters mathematical understanding, with applications to real-life scenarios, of branches of study including geometry, algebra, and calculus. The goal of the program is to provide a background in mathematics that will prepare students for the rigors of a four-year math degree. After completion, students will transfer seamlessly into a Bachelor of Mathematics Studies with a junior level status in the receiving CSCU (Connecticut State Colleges & Universities) institution as part of the CSCU transfer ticket program.

Learning Outcomes:

Students completing the CSCU Mathematics Studies Pathway and earning an Associate Degree will be able to:

- Read, interpret, and effectively communicate mathematics both verbally and in writing.
- Use appropriate technology to promote understanding and solve mathematical problems.
- Acquire and demonstrate substantial knowledge from Algebra and Calculus.
- Analyze, model, and solve real world problems, using various areas of mathematics.
- Think analytically and critically and be able to formulate problems, solve them, and interpret their solutions.
- Demonstrate the ability to use and understand multiple representations (including graphical, numerical and analytical) of mathematical concepts.

Students who earn an Associate of Arts degree in Mathematics Studies from the Connecticut State Community College can transfer their degree to either the Central Connecticut State University (CCSU), Eastern Connecticut State University (ECSU), Southern Connecticut State University (SCSU), Western Connecticut State University (WCSU), or Charter Oak State College (COSC). Students will be credited as meeting the General Education requirements. Students must remain in the corresponding Mathematics major program for the following bachelor's degrees:

CCSU

- Bachelor of Arts (B.A.) Mathematics
- B.A. Mathematics - Actuarial Science Specialization
- B.A. Mathematics - Statistics Specialization

ECSU

- B.A. Mathematics - Structures & Applications
- B.A. Mathematics - Math for Teachers
- Bachelor of Science (B.S.) Mathematics - Structures & Applications
- B.S. Mathematics - Actuarial Science
- B.S. Mathematics - Data Science

SCSU

- B.A. Mathematics
- B.S. Mathematics - Concentration: Applied

WCSU

- B.A. Mathematics
- B.A. Mathematics - Computer Science Option

COSC

- B.A. General Studies: Mathematics Concentration

Framework Courses (33-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Choose One Science Sequence:

- BIO 1210 - General Biology I *Credits: 4* **AND** BIO 1220 - General Biology II *Credits: 4*
- CHEM 1210 - General Chemistry I *Credits: 4* **AND** CHEM 1220 - General Chemistry II *Credits: 4*
- PHYS 1201 - General Physics I *Credits: 4* **AND** PHYS 1202 - General Physics II *Credits: 4*
- PHYS 2201 - Calculus-Based Physics I *Credits: 4* **AND** PHYS 2202 - Calculus-Based Physics II *Credits: 4*

Pathway Courses (27 credits)

- MATH 2610 - Calculus II *Credits: 4*
- MATH 2620 - Calculus III: Multivariable *Credits: 4*
- MATH 2621 - Linear Algebra *Credits: 4*
- **OR** MATH 2622 - Differential Equations *Credits: 4*
- MATH 2623 - Foundations of Advanced Mathematics *Credits: 4*
- One CSC designated programming language course: CSC 1203 or CSC 1211 *Credits: 3*
- Electives - Students should consider beginning or completing work on foreign language requirements not already met in high school and beginning work on a minor (required at CCSU for the general Mathematics B.A. - up to 9 credits can be completed at the community college.) They may also complete other General Education requirements. *Credits: 8*

Total Credits: 60-61

Natural Resources Certificate (NATR-CC)

The certificate offers students an opportunity to earn a credential while taking courses in their major field of study. It also supports the Natural Resources AS Degree at the Northwestern Campus. All courses in the certificate are embedded in the program and are geared to allow students to explore a variety of topics in natural resources while gaining exposure to both fieldwork and real-world applications of concepts learned in class. In addition, individuals with this certificate may be able to find work in entry-level positions with conservation organizations, private companies, or similar entities in natural resources.

Learning Outcomes:

- Apply scientific methodology to a question.
- Discuss experimental design and statistical analysis.
- Describe cellular, organismal, microbiological, and ecological principles of biology.
- Analyze population and community dynamics, ecosystem function, and systems thinking.
- Evaluate important natural resources as well as regional and global environmental concerns.
- Describe how science and risk assessment inform decision-making
- Identify the importance of wicked problems, resilience, and adaptive management in planning.
- Prepare for a career in Natural Resources, Environmental Science, or a related field

Required Courses

- ENV 1010 - Introduction to Environmental Science *Credits: 3*
- Natural Science Elective *Credits: 3-4*
- BIO 1720 - General Ecology *Credits: 4*
- **OR** BIO 2700 - Ecology *Credits: 4*
- **OR** BIO 1550 - Botany *Credits: 4*
- ENV 1000 - Exploring Environmental Careers *Credits: 1*
- EARTH 1010 - Earth Science *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*

Total Credits: 17-18

Natural Resources, AS (NATR-AS)

The Natural Resources AS program is designed for students with an interest in environmental science, forestry, fisheries, conservation ecology, environmental biology, sustainability, wildlife management, soil science, environmental health and monitoring, sustainable agriculture/horticulture, and resource economics. This degree in natural resources provides students with a strong background in basic sciences, including life and the physical sciences, in addition to introducing them to concepts in nature conservancy, resource management, and environmental risk and assessment.

Students may choose to transfer into programs such as those offered through the College of Agricultural and Natural Resources at UCONN, the School of Arts and Sciences at Central Connecticut State University, the Environmental Studies program at Southern Connecticut State University and many other college and university programs across the state, region, and country. Graduates of the program have successfully transferred to many bachelor-degree institutions. Some alumni are also now pursuing MS and PhDs in related fields of study. The Natural Resources Certificate is embedded in this program.

Learning Outcomes:

- Demonstrate basic, safe laboratory skills.
- Demonstrate a variety of safe field sampling techniques.
- Apply the scientific process, experimental design, and statistical analysis of real-world data.
- Describe cellular, organismal, microbiological, and ecological principles of biology.
- Explain energy and nutrient transfer relationships through ecosystems.
- Compare and contrast the characteristics of the kingdoms of life and discuss various mechanisms to identify species.
- Utilize dichotomous keys, biomolecular analysis, and other methods to identify organisms.
- Describe population and community dynamics, ecosystem function, and systems thinking.
- Explain abiotic processes shaping terrestrial and aquatic communities from direct sampling and analysis.
- Discuss deep time, genetics, evolution, and mechanisms of evolution including natural selection.
- Explain chemical and biomolecular concepts as they relate to life and environmental topics.
- Evaluate important natural resources to humans as well as regional and global environmental concerns.
- Describe how science and risk assessment inform decision-making.
- Identify the importance of wicked problems, resilience, and adaptive management in natural resource planning.
- Transfer to a 4-year program and prepare for a career in Natural Resources, Environmental Science, or a related field.

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- (ARTH 1001 or ARTH 1002 or PHIL 1101 Recommended)
- ENV 1010 - Introduction to Environmental Science *Credits: 3*
- ANTH 1001 - Introduction to Anthropology *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39-43 credits)

- ENV 1000 - Exploring Environmental Careers *Credits: 1*
- BIO 1720 - General Ecology *Credits: 4*
- **OR** BIO 2700 - Ecology *Credits: 4*
- BIO 1210 - General Biology I *Credits: 4*
- BIO 1220 - General Biology II *Credits: 4*
- BIO 2350 - Microbiology *Credits: 4*
- CSA 1111 - Spreadsheet Applications *Credits: 3*

- CHEM 1210 - General Chemistry I *Credits: 4*
- MATH 1200 - Statistics I *Credits: 3*

Directed Elective (3-4 credits)

- BIO 1550 - Botany *Credits: 4*
- **OR** BIO 1098 - Topics of Interest in Biology *Credits: 3*
- **OR** BIO 2098 - Special Topics in Biology *Credits: 3-4*
- **OR** ENV 2995 - Environmental Science Internship *Credits: 1-6*

Restricted Electives (Select 3) (9-12 credits)

- BIO 2600 - Principles of Genetics *Credits: 3*
- BIO 2630 - Molecular Genetics *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- DTS 2201 - Programming in Data Science *Credits: 3*
- EARTH 1010 - Earth Science *Credits: 3*
- ENV 2998 - Special Topics in Environmental Science *Credits: 3-4*
- GEOG 1010 - World Regional Geography *Credits: 3*
- GEOG 1300 - Introduction to Geographic Information Systems *Credits: 3*
- MATH 2200 - Statistics II *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- **OR** PHYS 1201 - General Physics I *Credits: 4*

Total Credits: 61-65

Natural Sciences and Mathematics, AS (NSMA-AS)

The Natural Sciences and Mathematics A.S. allows students to explore segments of various disciplines. This survey within the Sciences and Mathematics coursework provides options and alternatives for continuing studies at a four-year institution. The program also prepares qualified students to work at research facilities as laboratory or research assistants.

Learning Outcomes:

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

- 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, calculus, and/or trigonometry
- Incorporate an interdisciplinary approach to investigating scientific problems

General Education Courses (22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CHEM 1210 - General Chemistry I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (38-39 credits)

- BIO 1210 - General Biology I *Credits: 4*
- **OR** BIO 2111 - Anatomy & Physiology I *Credits: 4*
- BIO 1220 - General Biology II *Credits: 4*
- **OR** BIO 2112 - Anatomy & Physiology II *Credits: 4*
- CHEM 1220 - General Chemistry II *Credits: 4*
- MATH 1610 - Precalculus *Credits: 4*
- MATH 2600 - Calculus I *Credits: 4*
- PHIL 1101 - Ethics *Credits: 3*
- PHYS 1201 - General Physics I *Credits: 4*
- PHYS 1202 - General Physics II *Credits: 4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- **OR** Any Math course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Any Math course *Credits: 3-4*

Total Credits: 60-61

Physics Studies - CSCU Transfer Degree, AA (PHYS-AA-TAP)

The CSCU Pathway Transfer Degree: Physics Studies, A.A. degree program prepares students primarily for transfer to complete a B.S. degree in physics. Graduates will receive a background in mathematics, science, and general education courses for seamless transfer of all credits and junior status in a B.S. degree at Connecticut State Universities.

Learning Outcomes:

Students completing this degree will be prepared to transfer to the CSUs as an incoming Junior, and will be able to:

- Communicate using terminology appropriate to Physics Studies.
- Understand conceptual, theoretical and experimental methods used in Physics, and their applications to other fields and disciplines
- Develop critical thinking, and analytical and computational problem-solving skills.
- Recognize the broader impact of Physics in Society.

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

At Central Connecticut State University: Physics, B.S.

At Southern Connecticut State University: Physics, B.S. Physics, B.A.

Framework Courses (33 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 2600 - Calculus I *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- CHEM 1210 - General Chemistry I *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CHEM 1220 - General Chemistry II *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3* (Recommended COMM 1301)
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (29 credits)

- MATH 2610 - Calculus II *Credits: 4*
- MATH 2620 - Calculus III: Multivariable *Credits: 4*
- MATH 2622 - Differential Equations *Credits: 4*
- PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- PHYS 2202 - Calculus-Based Physics II *Credits: 4*
- Elective CRTY - Creativity Course *Credits: 3*
- Elective GLKY - Global Knowledge Course *Credits: 3*
- Unrestricted Elective - If you have not taken Physics in high school, you should use this elective to take PHYS 1100 *Credits: 3*

Total Credits: 62-63

Technology Studies: Data Science Certificate (DTSC-CC-COT)

The Certificate in Data Science provides exposure to key elements of data science including data structures and data sources, programming languages, statistical principles, computing and analytics, data management, machine learning tools, and data science applications. This certificate needs to be paired with a transfer associates degree in any field (recommended fields include mathematics, applied sciences, computer science, computer programming, business, marketing, web design).

Learning Outcomes:

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

- Master key facets of data investigation, including data wrangling, cleaning, sampling, management, exploratory analysis, regression and classification, prediction, and data communication
- Implement foundational concepts of data computation, such as data structure, algorithms, simulation, and analysis.
- Utilize various technologies to organize, analyze, explore, and visualize data
- Execute data organization, exploration, and develop proficiency in the programming language of R
- Apply advanced statistical techniques
- Understand machine learning models and their applications

Required Courses

- MATH 1200 - Statistics I *Credits: 3*
- MATH 2200 - Statistics II *Credits: 3*
- DTS 2201 - Programming in Data Science *Credits: 3*
- DTS 2220 - Introduction to Machine Learning *Credits: 3*
- CSA 1111 - Spreadsheet Applications *Credits: 3*
- Directed Elective *Credits: 3*

Total Credits: 18

Technology Studies: Data Science, AS (DTAS-AS-COT)

As part of the Connecticut College of Technology (COT), the Technology Studies A.S. degree provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in engineering, technology, industrial technology, mathematics, sciences, and foundational requirements that provide a solid comprehensive background for continuation in a four-year technology degree program or entry into the workforce. Upon completion of a Technology Studies A.S. degree, students can transfer to Central CT State University or the University of Hartford to complete designated B.S. degrees.

Learning 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 Technology Studies: Data Science Option associate degree program prepares students primarily to transfer to complete a B.S. degree in Data Science or Technology Management. Graduates will receive a background in mathematics, science, data literacy, programming, and general education courses for transfer into a four-year program.

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

- Transition seamlessly into a Bachelor of Science Degree Program in Data Science or Technology Management
- Apply appropriate mathematical and scientific principles to Data Science applications.
- Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
- Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
- Demonstrate the ability to assist in research, development, design, production, testing and various other functions associated with Data Science.
- Demonstrate a good understanding of Data Science principles/concepts.
- Demonstrate a good understanding of mathematical concepts.
- Demonstrate the ability to think through a problem in a logical manner.
- Organize and carry through to conclusion the solution to a problem.
- Demonstrate good communication skills.
- Demonstrate teamwork skills.

Technology Studies General Education Core (23-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1610 - Precalculus *Credits: 4*
- ART Elective *Credits: 3* (course vetted for ARHX)
- CHEM 1110 - Concepts of Chemistry *Credits: 4*
- **OR** CHEM 1210 - General Chemistry I *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- **OR** Elective SBSX course in ECON *Credits: 3*
- ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Technology Studies Program Core (10-11 credits)

- PHYS 1201 - General Physics I *Credits: 4*
- **OR** PHYS 2201 - Calculus-Based Physics I *Credits: 4*
- Elective BHEL - Behavioral Science Elective *Credits: 3* choose an ANTH, PSY or SOC course
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*

Data Science Courses (31-35 credits)

- DTS 2290 - Capstone Research *Credits: 3*
- Math or Programming or Computer Applications Elective *Credits: 3-4*
- MATH 2600 - Calculus I *Credits: 4*
- MATH 2200 - Statistics II *Credits: 3*
- DTS 2201 - Programming in Data Science *Credits: 3*
- **OR** DTS 2203 - Elements of Data Science *Credits: 4*
- DTS 2220 - Introduction to Machine Learning *Credits: 3*
- Math or Programming Elective *Credits: 3-4*
- Math or Programming Elective *Credits: 3-4*
- Specialization Electives *Credits: 6*

Total Credits: 64-69

Social & Behavioral Sciences

Archaeology Certificate (ARCL-CC)

This program is designed to train the avocational archaeologist and students pursuing archaeology as a career. Extensive field work, directed toward the rescue and preservation of local prehistory and history, is integral to the program. Successful completion of the certificate may enable the student to participate effectively in archaeological excavations world-wide.

Learning Outcomes

- Define archaeology and explain its relationship to anthropology and history
- Determine and employ methods to find, test, excavate, analyze, interpret, and report on archeological sites
- Acquire skills and knowledge to become a competent archeologist
- Identify major archeological periods and cultural traits, lifeways, and processes in various world regions

The program was designed for those having either an avocational or professional interest in studying archaeology. The program provides an educational opportunity that includes archaeological fieldwork and analysis in an environment conducive to a broad population of traditional and non- traditional students.

Required Courses

- ANTH 1201 - Introduction to Archaeology *Credits: 3*
- ANTH 2203 - Advanced Techniques in Archeology *Credits: 4*

Electives

Choose 3 approved courses from list below, 2 must be Anthropology courses Credits: 9-10

- ANTH 1005 - Introduction to Cultural Anthropology *Credits: 3*
- ANTH 1006 - Introduction to Biological Anthropology *Credits: 3*
- ANTH 1007 - Introduction to Forensic Anthropology *Credits: 3*
- ANTH 1301 - World Prehistory *Credits: 3*
- ANTH 2209 - Historical Archeology *Credits: 3*
- ANTH 2400 - Native Cultures of the Americas *Credits: 3*
- HIST 1015 - US History to 1877 *Credits: 3*
- GEOL 1200 - Introduction to Physical Geology *Credits: 4*
- CSA 1110 - Introduction to Software Applications *Credits: 3*
- SCI 2260 - Introduction to Forensic Science *Credits: 3*
- **OR** CJS 2260 - Introduction to Forensic Science *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*

Total Credits: 16-17

Civic Engagement Certificate (CIVC-CC)

The Certificate in Civic Engagement will prepare students for careers designed to positively impact the civic well-being of their communities. This will be accomplished through a diverse array of coursework and a hands-on practicum/internship focusing on sensitizing students to the needs of the community. The Civic Engagement Certificate has a multi-disciplinary curriculum designed to prepare students to communicate effectively, make sound decisions, and effect change in their communities.

The Civic Engagement certificate consists of 18 credits made up of 15 required general education courses and culminating in a 3-credit practicum which includes 80 hours of field work of the student's choosing in consultation with his or her advisor and the Director of the Civic Engagement Institute on the Farmington campus. Employers/businesses have become interested in socially responsible graduates. Students receiving this certificate meet that need and interest because they are prepared for the important role of addressing community needs and practicing civic responsibility.

Learning Outcomes:

- Define civic engagement and identify concrete examples of it both in the classroom and in the community.
- Describe their civic activity through an internship or practicum.
- Understand the interdisciplinary nature of required courses as it relates to civic engagement.
- Explain some of the community needs in terms of the social problems that exist in communities across the area.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- HIST 1015 - US History to 1877 *Credits: 3*
- CENG 2095 - Civic Engagement Practicum *Credits: 3*
- Gen Ed Elective *Credits: 3*
(*In consultation with CEI Director or Faculty Advisor*)
- Gen Ed Elective *Credits: 3*
(*In consultation with CEI Director or Faculty Advisor*)

Total Credits: 18

Criminal Justice, AS (CRJS-AS)

This program is for students who are interested in a career in law enforcement, corrections, security, or the court and legal system. The Associates in Science degree will allow a student to pursue a career immediately upon completion or to transfer to a four-year institution. The program offers a general track in criminal justice or students can choose one from among the eight areas of concentration.

Degree concentration areas include:

- Criminal Justice: Computer Crime Investigations, AS (CRJS-AS-CCI) - Manchester and Naugatuck Valley
- Criminal Justice: Corrections, AS (CRJS-AS-COR) - Asnuntuck, Gateway, Housatonic, and Tunxis
- Criminal Justice: Criminal Investigations, AS (CRJS-AS-CRI) - Housatonic and Manchester
- Criminal Justice: Homeland Security, AS (CRJS-AS-HLS) - Three Rivers and Tunxis
- Criminal Justice: Juvenile Justice, AS (CRJS-AS-JJS) - Gateway and Middlesex
- Criminal Justice: Law and Legal, AS (CRJS-AS-LL) - Housatonic and Manchester
- Criminal Justice: Law Enforcement, AS (CRJS-AS-LE) - All campuses
- Criminal Justice: Victimology, AS (CRJS-AS-VCT) Capital, Gateway, Middlesex and Naugatuck Valley

Criminal Justice Program Goals:

- Complete an Associate of Science degree in Criminal Justice.
- Acquire the skills necessary to secure employment within field of criminal justice.
- Transfer into a Bachelor Degree Program.

Criminal Justice Learning Outcomes:

- Demonstrate an understanding of the roles of police, courts and corrections and explain the functions they serve within the criminal justice system and the community.
- Apply principles of constitutional and criminal laws that protect the rights of and regulates conduct of a culturally diverse society.
- Demonstrate knowledge of theories, principles, processes of the criminal justice system.
- Prepare written documents and deliver oral presentations related to the criminal justice field.

Criminal Justice General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Recommended Science: CJS 2260 or CJS 2850
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Criminal Justice Additional General Education (6 credits)

- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** CJS 2570 - Writing and Research for Criminal Justice *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Criminal Justice Program Core (21 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*
- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- **OR** CJS 2880 - Careers in Criminal Justice *Credits: 3*
- CJS 2450 - Diversity and Multiculturalism in Criminal Justice *Credits: 3*
- **OR** CJS 2470 - Fair and Impartial Policing *Credits: 3*
- **OR** CJS 2550 - Ethical Issues in Criminal Justice *Credits: 3*
- **OR** CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ****Courses taken as part of the Criminal Justice core may not be used to satisfy the concentration electives.****

CJ Electives for General Degree (12 Credits)

- CJS Elective - 4 CJS courses (courses are specific if an option is chosen) *Credits: 12*

Total Credits: 60-61

Criminal Justice: Computer Crime Investigations, AS (CRJS-AS-CCI)

Computer Crimes Investigations: The Computer Crimes Investigations concentration area is designed for students seeking to pursue a career investigating computer and technology related crimes or those already in the field seeking to gain additional credentials. It combines specialized criminal justice, skill development and general education coursework to provide students with the knowledge and skills they need for a career in digital investigations. Computer Crimes Investigations is one of eight available areas of concentration within the field of Criminal Justice.

Criminal Justice Program Goals:

- Complete an Associate of Science degree in Criminal Justice.
- Acquire the skills necessary to secure employment within field of criminal justice.
- Transfer into a Bachelor Degree Program.

Criminal Justice Learning Outcomes:

- Demonstrate an understanding of the roles of police, courts and corrections and explain the functions they serve within the criminal justice system and the community.
- Apply principles of constitutional and criminal laws that protect the rights of and regulates conduct of a culturally diverse society.
- Demonstrate knowledge of theories, principles, processes of the criminal justice system.
- Prepare written documents and deliver oral presentations related to the criminal justice field.

Computer Crimes Investigations Learning Outcomes:

- Explain the process of conducting computer crime investigations and indicating security characteristics, threats, and responses.
- Demonstrate comprehensive knowledge of cybercrime-focused digital forensics and develop the ability to apply digital forensic knowledge to cybercrime cases.
- Apply principles of evidence collection and standards of legal admissibility to digital evidence and computer crime investigations.
- Identify career paths in the field of computer crime investigations.

Criminal Justice General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Recommended Science: CJS 2260 or CJS 2850
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Criminal Justice Additional General Education (6 credits)

- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** CJS 2570 - Writing and Research for Criminal Justice *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Criminal Justice Program Core (21 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*
- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- **OR** CJS 2880 - Careers in Criminal Justice *Credits: 3*
- CJS 2450 - Diversity and Multiculturalism in Criminal Justice *Credits: 3*
- **OR** CJS 2470 - Fair and Impartial Policing *Credits: 3*
- **OR** CJS 2550 - Ethical Issues in Criminal Justice *Credits: 3*
- **OR** CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ****Courses taken as part of the Criminal Justice core may not be used to satisfy the concentration electives.****

Computer Crimes Investigations Electives: Select 4 Courses (12 credits)

- CJS 1520 - Introduction to Digital Forensic Investigations *Credits: 3*
- CJS 2200 - Criminal Investigations *Credits: 3*
- CJS 2220 - Computer Investigation Techniques *Credits: 3*
- CJS 2240 - Computer Crimes *Credits: 3*
- CJS 2340 - Computer Security and Data Protection *Credits: 3*
- CJS 2350 - Information Warfare and Security *Credits: 3*
- CIS 1103 - Computer Ethics *Credits: 3*
- CYS 1101 - Practices in Security Management *Credits: 3*
- CIS 1001 - Introduction to Computers *Credits: 3*
- **OR** CIS 1141 - Introduction to Management Information Systems *Credits: 3*
- CST 1121 - Networking I *Credits: 3*

Total Credits: 60-62

Criminal Justice: Corrections, AS (CRJS-AS-COR)

The Criminal Justice: Corrections degree prepares students for entry into the field of corrections or for advancement opportunities for those currently employed in the field. It combines specialized criminal justice, corrections, and general education coursework to provide students with the knowledge and skills they need in the corrections field. Corrections is one of eight available areas of concentration within the field of Criminal Justice.

Criminal Justice Program Goals:

- Complete an Associate of Science degree in Criminal Justice.
- Develop skills necessary to secure employment within field of criminal justice.
- Transfer into a Bachelor Degree Program.

Criminal Justice Learning Outcomes:

- Demonstrate an understanding of the roles of police, courts and corrections and explain the functions they serve within the criminal justice system and the community.
- Apply principles of constitutional and criminal laws that protect the rights of and regulates conduct of a culturally diverse society.
- Demonstrate knowledge of theories, principles, processes of the criminal justice system.
- Prepare written documents and deliver oral presentations related to the criminal justice field.

Corrections Learning Outcomes:

- Explain the history and development of the system of corrections and community corrections in the United States and around the world and as well as the current role and function within the criminal justice system.
- Apply principles of constitutional and criminal laws that protect the rights of and regulate the conduct of individuals in a culturally diverse society in the context of correctional supervision.
- Demonstrate knowledge of theories, principles, and processes of the criminal justice system as they apply to the corrections field.
- Identify career paths in the field of corrections.

Criminal Justice General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Recommended Science: CJS 2260 or CJS 2850
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Criminal Justice Additional General Education (6 credits)

- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** CJS 2570 - Writing and Research for Criminal Justice *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Criminal Justice Program Core (21 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*
- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- **OR** CJS 2880 - Careers in Criminal Justice *Credits: 3*
- CJS 2450 - Diversity and Multiculturalism in Criminal Justice *Credits: 3*
- **OR** CJS 2470 - Fair and Impartial Policing *Credits: 3*
- **OR** CJS 2550 - Ethical Issues in Criminal Justice *Credits: 3*
- **OR** CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ****Courses taken as part of the Criminal Justice core may not be used to satisfy the concentration electives.****

Corrections Electives: Select 4 courses (12 credits)

- CJS 1020 - Introduction to Corrections *Credits: 3*
- CJS 1550 - Probation Practices and Policies *Credits: 3*
- CJS 2400 - Correctional Administration *Credits: 3*
- CJS 2410 - Correctional Counseling *Credits: 3*
- CJS 2430 - Institutional Treatment of the Offender *Credits: 3*
- CJS 2440 - Community Based Corrections *Credits: 3*
- CJS 2610 - Restorative Justice and Mediation *Credits: 3*
- PSY 2058 - Behavior Modification *Credits: 3*
- **OR** CJS 2800 - Victimology *Credits: 3*
- DARC 1058 - Biology of Addiction *Credits: 3*
- **OR** PSY 1040 - The Psychology of Addiction *Credits: 3*
- Combination of 3 one credit CJS courses *Credits: 3*

Total Credits: 60-62

Criminal Justice: Criminal Investigations, AS (CRJS-AS-CRI)

The Criminal Investigations concentration enables students to advance to investigative positions in their current employment or gain employment in an investigative position. It combines specialized criminal justice, investigative and general education coursework to provide students with the knowledge and skills needed in investigative roles. Criminal Investigations is one of eight available areas of concentration within the field of Criminal Justice.

Note: Current law enforcement officers may take courses in this track for professional development.

Criminal Justice Program Goals:

- Complete an Associate of Science degree in Criminal Justice.
- Develop skills necessary to secure employment within field of criminal justice.
- Transfer into a Bachelor Degree Program.

Criminal Justice Learning Outcomes:

- Demonstrate an understanding of the roles of police, courts and corrections and explain the functions they serve within the criminal justice system and the community.
- Apply principles of constitutional and criminal laws that protect the rights of and regulates conduct of a culturally diverse society.
- Demonstrate knowledge of theories, principles, processes of the criminal justice system.
- Prepare written documents and deliver oral presentations related to the criminal justice field.

Criminal Investigations Learning Outcomes:

- Explain the practical, legal and logistical components of a criminal investigation.
- Apply principles of constitutional and criminal laws to criminal investigations with a focus on 4th amendment standards of search and seizure as well as admissibility of evidence.
- Demonstrate the ability to prepare written reports that integrate best practices for various types of investigations.
- Identify career paths that focus on investigations.

Criminal Justice General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Recommended Science: CJS 2260 or CJS 2850
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Criminal Justice Additional General Education (6 credits)

- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** CJS 2570 - Writing and Research for Criminal Justice *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Criminal Justice Program Core (21 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*
- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- **OR** CJS 2880 - Careers in Criminal Justice *Credits: 3*
- CJS 2450 - Diversity and Multiculturalism in Criminal Justice *Credits: 3*
- **OR** CJS 2470 - Fair and Impartial Policing *Credits: 3*
- **OR** CJS 2550 - Ethical Issues in Criminal Justice *Credits: 3*
- **OR** CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ****Courses taken as part of the Criminal Justice core may not be used to satisfy the concentration electives.****

Criminal Investigations Electives: Select 4 courses (12 credits)

- CJS 1390 - Interview and Interrogation *Credits: 3*
- CJS 2200 - Criminal Investigations *Credits: 3*
- CJS 2210 - Arson Investigation *Credits: 3*
- CJS 1520 - Introduction to Digital Forensic Investigations *Credits: 3*
- **OR** CJS 2220 - Computer Investigation Techniques *Credits: 3*
- ART 1450 - Digital Photography I *Credits: 3*
- **OR** CJS 2270 - Forensic and Crime Scene Photography *Credits: 3*
- CJS 2370 - Crime Scene Processing *Credits: 3*
- CJS 2380 - White Collar Crime *Credits: 3*
- CJS 2720 - Inside the Criminal Mind *Credits: 3*
- **OR** PSY 2087 - Forensic Psychology *Credits: 3*
- ANTH 1007 - Introduction to Forensic Anthropology *Credits: 3*
- Combination of 3 one credit CJS courses *Credits: 3*

Total Credits: 60-62

Criminal Justice: Homeland Security Certificate (CRJS-CC-HLS)

This certificate offers students an in-depth understanding of the interrelated duties, relationships and issues of the agencies associated with Homeland Security. Upon completion of the certificate, students will be able to identify, describe and analyze security threats as individuals and in coordinated team settings. It is based on a model developed by Global Corporate College and the Transportation Security Administration (TSA). Tunxis partnered with both agencies to offer these three courses to TSA employees. Students with this certificate are more desirable for TSA employment.

This certificate is not eligible for Federal Financial Aid.

Learning Outcomes:

- Demonstrate an in-depth understanding of the interrelated duties, relationships and issues of the agencies associated with Homeland Security.

Required Courses

- CJS 1060 - Introduction to Homeland Security *Credits: 3*
- CJS 1580 - Intelligence Analysis and Security Management *Credits: 3*
- CJS 2810 - Transportation and Border Security *Credits: 3*

Total Credits: 9

Criminal Justice: Homeland Security, AS (CRJS-AS-HLS)

The Homeland Security concentration prepares students for the interdisciplinary field of homeland security. It combines specialized criminal justice, homeland security and general education coursework to provide students with the knowledge and understanding needed for careers in homeland security as well as careers requiring skill sets in planning and disaster response. Homeland Security is one of eight available areas of concentration within the field of Criminal Justice.

Note: This concentration area integrates a model developed by Global Corporate College and the Transportation Security Administration (TSA).

Criminal Justice Program Goals:

- Complete an Associate of Science degree in Criminal Justice.
- Acquire the skills necessary to secure employment within field of criminal justice.
- Transfer into a Bachelor Degree Program.

Criminal Justice Learning Outcomes:

- Demonstrate an understanding of the roles of police, courts and corrections and explain the functions they serve within the criminal justice system and the community.
- Apply principles of constitutional and criminal laws that protect the rights of and regulates conduct of a culturally diverse society.
- Demonstrate knowledge of theories, principles, processes of the criminal justice system.
- Prepare written documents and deliver oral presentations related to the criminal justice field.

Homeland Security Learning Outcomes:

- Explain the history and development of the field of homeland security in the United States and as well as the current role and function of agencies focused on national security, hazard mitigation and disaster response.
- Outline legal principles related to the field of homeland security as well as the administration of response organizations.
- Demonstrate knowledge of appropriate strategic, tactical and task considerations in responding to incidents of national significance.
- Identify career paths in the field of homeland security and disaster management.

Criminal Justice General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Recommended Science: CJS 2260 or CJS 2850
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Criminal Justice Additional General Education (6 credits)

- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** CJS 2570 - Writing and Research for Criminal Justice *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Criminal Justice Program Core (21 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*
- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- **OR** CJS 2880 - Careers in Criminal Justice *Credits: 3*
- CJS 2450 - Diversity and Multiculturalism in Criminal Justice *Credits: 3*
- **OR** CJS 2470 - Fair and Impartial Policing *Credits: 3*
- **OR** CJS 2550 - Ethical Issues in Criminal Justice *Credits: 3*
- **OR** CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ****Courses taken as part of the Criminal Justice core may not be used to satisfy the concentration electives.****

Homeland Security Electives: Select 4 courses (12 credits)

- CJS 1060 - Introduction to Homeland Security *Credits: 3*
- CJS 1390 - Interview and Interrogation *Credits: 3*
- CJS 1520 - Introduction to Digital Forensic Investigations *Credits: 3*
- CJS 1580 - Intelligence Analysis and Security Management *Credits: 3*
- CJS 1600 - Emergency Management and Disaster Mediation *Credits: 3*
- CJS 1720 - Domestic and International Terrorism *Credits: 3*
- CJS 2220 - Computer Investigation Techniques *Credits: 3*
- CJS 2810 - Transportation and Border Security *Credits: 3*
- CJS 2120 - Criminal Law II *Credits: 3*
- SOC 2003 - Introduction to Public Health *Credits: 3*

Total Credits: 60-62

Criminal Justice: Juvenile Justice, AS (CRJS-AS-JJS)

The Juvenile Justice concentration prepares students for work with juveniles and adolescents within the justice system and related fields. It combines specialized coursework in psychology, sociology, human services and criminal justice as well as general education coursework to provide students with the knowledge and skills they need in working with youth and adolescents. Students also gain experience in case management and intervention strategies. Juvenile Justice is one of eight available areas of concentration within the field of Criminal Justice.

Criminal Justice Program Goals:

- Complete an Associate of Science degree in Criminal Justice.
- Acquire the skills necessary to secure employment within field of criminal justice.
- Transfer into a Bachelor Degree Program.

Criminal Justice Learning Outcomes:

- Demonstrate an understanding of the roles of police, courts and corrections and explain the functions they serve within the criminal justice system and the community.
- Apply principles of constitutional and criminal laws that protect the rights of and regulates conduct of a culturally diverse society.
- Demonstrate knowledge of theories, principles, processes of the criminal justice system.
- Prepare written documents and deliver oral presentations related to the criminal justice field.

Juvenile Justice Learning Outcomes:

- Outline the major developmental theories and the relationship to juvenile delinquency.
- Describe the history and evolution of the juvenile justice system in America.
- Identify contemporary issues in juvenile justice.
- Articulate significant differences between the juvenile and adult justice systems in the United States.
- Apply evidence-based intervention strategies in addressing juvenile delinquency and identify career paths that involve work with juveniles.

Criminal Justice General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Recommended Science: CJS 2260 or CJS 2850
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Criminal Justice Additional General Education (6 credits)

- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** CJS 2570 - Writing and Research for Criminal Justice *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Criminal Justice Program Core (21 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*
- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- **OR** CJS 2880 - Careers in Criminal Justice *Credits: 3*
- CJS 2450 - Diversity and Multiculturalism in Criminal Justice *Credits: 3*
- **OR** CJS 2470 - Fair and Impartial Policing *Credits: 3*
- **OR** CJS 2550 - Ethical Issues in Criminal Justice *Credits: 3*
- **OR** CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ****Courses taken as part of the Criminal Justice core may not be used to satisfy the concentration electives.****

Juvenile Justice Electives: Select 4 courses (12 credits)

- CJS 1390 - Interview and Interrogation *Credits: 3*
- CJS 2020 - Juvenile Delinquency *Credits: 3*
- CJS 2030 - Juvenile Justice *Credits: 3*
- CJS 2610 - Restorative Justice and Mediation *Credits: 3*
- **OR** CJS 2440 - Community Based Corrections *Credits: 3*
- CJS 2720 - Inside the Criminal Mind *Credits: 3*
- **OR** PSY 2087 - Forensic Psychology *Credits: 3*
- CJS 2800 - Victimology *Credits: 3*
- CJS 2820 - Criminal Court Systems and Practices *Credits: 3*
- PSY 2049 - Disorders in Childhood and Adolescence *Credits: 3*
- DARC 1058 - Biology of Addiction *Credits: 3*
- **OR** PSY 1040 - The Psychology of Addiction *Credits: 3*
- PSY 2070 - Psychology of Trauma *Credits: 3*

Total Credits: 60-62

Criminal Justice: Law and Legal, AS (CRJS-AS-LL)

Location: Housatonic and Manchester

Law and Legal: The Law and Legal concentration provides students with an understanding of fundamental principles of law and analyzes the role and function of the American legal system within a societal and political context. This course of study develops critical thinking, logical reasoning and writing skills, and prepares students for baccalaureate study and law-related careers. Law and Legal is one of eight available areas of concentration within the field of Criminal Justice.

Criminal Justice Program Goals:

- Complete an Associate of Science degree in Criminal Justice.
- Acquire the skills necessary to secure employment within field of criminal justice.
- Transfer into a Bachelor Degree Program.

Criminal Justice Learning Outcomes:

- Demonstrate an understanding of the roles of police, courts and corrections and explain the functions they serve within the criminal justice system and the community.
- Apply principles of constitutional and criminal laws that protect the rights of and regulates conduct of a culturally diverse society.
- Demonstrate knowledge of theories, principles, processes of the criminal justice system.
- Prepare written documents and deliver oral presentations related to the criminal justice field.

Law and Legal Learning Outcomes:

- Explain the history and development of state, local and federal court systems in the United States and as well as the current role and function within the criminal justice system.
- Demonstrate knowledge of theories, principles, and processes of the criminal justice system as they apply to the law and courts.
- Outline the rights and protections afforded to citizens under the U.S. Constitution.
- Identify career paths in the law and legal field.

Criminal Justice General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Recommended Science: CJS 2260 or CJS 2850
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Criminal Justice Additional General Education (6 credits)

- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** CJS 2570 - Writing and Research for Criminal Justice *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Criminal Justice Program Core (21 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*
- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- **OR** CJS 2880 - Careers in Criminal Justice *Credits: 3*
- CJS 2450 - Diversity and Multiculturalism in Criminal Justice *Credits: 3*
- **OR** CJS 2470 - Fair and Impartial Policing *Credits: 3*
- **OR** CJS 2550 - Ethical Issues in Criminal Justice *Credits: 3*
- **OR** CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ****Courses taken as part of the Criminal Justice core may not be used to satisfy the concentration electives.****

Law and Legal Electives: Select 4 Courses (12 credits)

- CJS 1390 - Interview and Interrogation *Credits: 3*
- CJS 2100 - Constitutional Law *Credits: 3*
- **OR** POLS 2010 - Constitutional Law *Credits: 3*
- CJS 2120 - Criminal Law II *Credits: 3*
- CJS 2030 - Juvenile Justice *Credits: 3*
- CJS 2380 - White Collar Crime *Credits: 3*
- CJS 2480 - Research Methods in Criminal Justice *Credits: 3*
- CJS 2820 - Criminal Court Systems and Practices *Credits: 3*
- COMM 2303 - Argumentation and Debate *Credits: 3*
- POLS 1020 - Introduction to Law *Credits: 3*
- Combination of 3 one credit CJS courses *Credits: 3*

Total Credits: 60-62

Criminal Justice: Law Enforcement, AS (CRJS-AS-LE)

The Criminal Justice: Law Enforcement degree provides specialty, in-depth training to students interested in pursuing a career in law enforcement at the state, local or federal levels. It combines specialized criminal justice, law enforcement, and general education coursework to provide students with the knowledge and skills they need in the law enforcement field. Law Enforcement is one of eight available areas of concentration within the field of Criminal Justice.

Criminal Justice Program Goals:

- Complete an Associate of Science degree in Criminal Justice.
- Acquire the skills necessary to secure employment within field of criminal justice.
- Transfer into a Bachelor Degree Program.

Criminal Justice Learning Outcomes:

- Demonstrate an understanding of the roles of police, courts and corrections and explain the functions they serve within the criminal justice system and the community.
- Apply principles of constitutional and criminal laws that protect the rights of and regulates conduct of a culturally diverse society.
- Demonstrate knowledge of theories, principles, processes of the criminal justice system.
- Prepare written documents and deliver oral presentations related to the criminal justice field.

Law Enforcement Learning Outcomes:

- Explain the history and development of state, local and federal law enforcement agencies in the United States and as well as the current role and function within the criminal justice system.
- Apply principles of constitutional and criminal laws that protect the rights of and regulate the conduct of individuals in a culturally diverse society in the context of policing.
- Demonstrate knowledge of theories, principles, and processes of the criminal justice system as they apply to the law enforcement field.
- Identify career paths in the field of law enforcement.

Criminal Justice General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Recommended Science: CJS 2260 or CJS 2850
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Criminal Justice Additional General Education (6 credits)

- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** CJS 2570 - Writing and Research for Criminal Justice *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Criminal Justice Program Core (21 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*
- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- **OR** CJS 2880 - Careers in Criminal Justice *Credits: 3*
- CJS 2450 - Diversity and Multiculturalism in Criminal Justice *Credits: 3*
- **OR** CJS 2470 - Fair and Impartial Policing *Credits: 3*
- **OR** CJS 2550 - Ethical Issues in Criminal Justice *Credits: 3*
- **OR** CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ****Courses taken as part of the Criminal Justice core may not be used to satisfy the concentration electives.****

Law Enforcement Electives: Select 4 Courses (12 credits)

- CJS 1050 - Introduction to Law Enforcement *Credits: 3*
- **OR** CJS 1200 - Police and the Community *Credits: 3*
- CJS 1240 - Spanish for Criminal Justice Professionals *Credits: 3*
- CJS 1390 - Interview and Interrogation *Credits: 3*
- CJS 2200 - Criminal Investigations *Credits: 3*
- CJS 2370 - Crime Scene Processing *Credits: 3*
- CJS 2500 - Police Management and Administration *Credits: 3*
- CJS 2090 - Police Management Seminar *Credits: 3*
- CJS 2530 - Interpersonal Dynamics for Criminal Justice Professionals *Credits: 3*
- CJS 2580 - Street Gangs and Organized Crime *Credits: 3*
- Combination of 3 one credit CJS courses *Credits: 3*

Total Credits: 60-62

Criminal Justice: Victimology, AS (CRJS-AS-VCT)

*Disclaimer

The Victimology concentration prepares students for entry into a wide variety of positions in law enforcement, criminal justice, the courts, corrections, and victim services programs, as well as professional settings involving work with victims of crime, their families, and the community at large. It combines specialized criminal justice, victimology and general education coursework to provide students with knowledge and skills needed in working with victims. Victimology is one of eight available areas of concentration within the field of Criminal Justice.

Criminal Justice Learning Outcomes:

- Complete an Associate of Science degree in Criminal Justice.
- Develop skills necessary to secure employment within field of criminal justice.
- Transfer into a Bachelor Degree Program.
- Demonstrate an understanding of the roles of police, courts and corrections and explain the functions they serve within the criminal justice system and the community.
- Apply principles of constitutional and criminal laws that protect the rights of and regulates conduct of a culturally diverse society.
- Demonstrate knowledge of theories, principles, processes of the criminal justice system.
- Prepare written documents and deliver oral presentations related to the criminal justice field.

Victimology Student Learning Outcomes:

- Explain the historical development of victimology and the victim's movement in the United States.
- Demonstrate knowledge of theories, principles, and processes of the criminal justice system as they apply to working with victims of crime.
- Outline legal principles related to victim's rights.
- Identify career paths that involve working with victims.

Criminal Justice General Education Core (21-23 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Recommended Science: CJS 2260 or CJS 2850
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Criminal Justice Additional General Education (6 credits)

- Elective WRIX - Written Communication II Course *Credits: 3*
- **OR** CJS 2570 - Writing and Research for Criminal Justice *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Criminal Justice Program Core (21 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*

- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- **OR** CJS 2880 - Careers in Criminal Justice *Credits: 3*
- CJS 2450 - Diversity and Multiculturalism in Criminal Justice *Credits: 3*
- **OR** CJS 2470 - Fair and Impartial Policing *Credits: 3*
- **OR** CJS 2550 - Ethical Issues in Criminal Justice *Credits: 3*
- **OR** CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ****Courses taken as part of the Criminal Justice core may not be used to satisfy the concentration electives.****

Victimology Electives: Select 4 Courses (12 credits)

- CJS 1390 - Interview and Interrogation *Credits: 3*
- CJS 2200 - Criminal Investigations *Credits: 3*
- CJS 2610 - Restorative Justice and Mediation *Credits: 3*
- CJS 2720 - Inside the Criminal Mind *Credits: 3*
- **OR** PSY 2087 - Forensic Psychology *Credits: 3*
- CJS 2800 - Victimology *Credits: 3*
- CJS 2820 - Criminal Court Systems and Practices *Credits: 3*
- PSY 2070 - Psychology of Trauma *Credits: 3*
- SOC 2057 - Sociology of Mental Health & Illness *Credits: 3*
- PSY 2010 - Death and Dying *Credits: 3*
- **OR** SOC 2025 - Death and Dying *Credits: 3*
- SOC 2020 - Racial and Ethnic Diversity *Credits: 3*

Total Credits: 60-62

Criminology Studies - CSCU Transfer Degree, AA (CRIM-AA-TAP)

This program is a **CSCU Transfer Ticket Degree** that is intended for Connecticut Community College students to transfer to Connecticut State Universities (Southern CT State University, Central CT State University, Eastern State University, Western State University) and Charter Oak State College without either losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline.

Learning Outcomes:

- Complete an Associate of Arts degree in Criminology Studies.
- Transfer seamlessly into a Bachelor of Arts or Science Degree in Criminology or Sociology with a concentration in Criminology with junior-level status at the receiving CSCU institution as part of the CSCU Transfer Tickets program.
- Identify and explain the basic structures and functions of law enforcement, courts, and corrections within the criminal justice system.
- Interpret the basic concepts and functions of criminal law.
- Integrate multidisciplinary theories which constitute the basis for understanding criminality and victimization.
- Apply constitutional principles that protect the rights of individuals and regulate criminal justice practices and procedures.

Framework Courses (33-36 Credits)

- ENG 1010 - Composition *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- ****to meet the above science requirements it is recommended to take CJS 2850 to fulfill Scientific Reasoning OR CJS 2260 to fulfill Scientific Knowledge & Understanding. Students can earn credit for only one of these courses.****
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Recommended: 2000-level literature course
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*

Pathway Courses (27 credits)

- CJS 1010 - Introduction to Criminal Justice *Credits: 3*
- CJS 1020 - Introduction to Corrections *Credits: 3*
- CJS 1050 - Introduction to Law Enforcement *Credits: 3*
- CJS 2010 - Criminology *Credits: 3*
- **OR** SOC 2040 - Criminology *Credits: 3*
- CJS 2100 - Constitutional Law *Credits: 3*
- **OR** CJS 2130 - Evidence and Criminal Procedure *Credits: 3*
- Unrestricted Electives - 3 courses *Credits 9*

Select one of the following:

- CJS 2020 - Juvenile Delinquency *Credits: 3*
- **OR** SOC 2041 - Juvenile Delinquency *Credits: 3*
- CJS 2030 - Juvenile Justice *Credits: 3*
- CJS 2110 - Criminal Law I *Credits: 3*
- CJS 2200 - Criminal Investigations *Credits: 3*
- CJS 2260 - Introduction to Forensic Science *Credits: 3 if not taken as a part of General Education*
- CJS 2800 - Victimology *Credits: 3*
- CJS 2850 - Forensic Science with Laboratory *Credits: 4*
- CJS 2095 - Practicum in Criminal Justice *Credits: 3*
- CJS 2940 - Contemporary Issues in Criminal Justice *Credits: 3*
- CJS 2098 - Special Topics in Criminal Justice *Credits: 1-3*

Total Credits: 60-63

Disability Specialist Certificate (DSAB-CC)

People with disabilities are an integral part of the community and should receive necessary community-based supports.

This certificate program provides a concentration in on-the-job training in direct service situations, as well as specialized courses that relate to developmental disabilities, which prepares individuals for employment opportunities working people with disabilities, such as paraeducators and/or group home employees.

Learning Outcomes:

With the addition of experience in the field of disability and upon successful completion of all Disability Specialist certificate program requirements, graduates will:

- Define and discuss basic definitions, causes, psychological characteristics and educational approaches relevant to children with disabilities.
- Discuss how children and adults with disabilities have unique abilities rather than limitations.
- Compare various learning theories and their application to children and adults with disabilities.
- Demonstrate an understanding of ethical standards including confidentiality.
- Define ethical standards in the disability field and demonstrate confidentiality in written and oral assignments.

Required Courses

- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 2351 - Working with Individuals and Families *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- HSER 2441 - Human Services Agencies and Organizations *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- PSY 1163 - Children with Disabilities *Credits: 3*
- PSY 1173 - Adults with Disabilities *Credits: 3*
- PSY 1183 - Learning Process and Disability *Credits: 3*
- PSY 1184 - Assistive Technology Across the Lifespan *Credits: 3*
- PSY 1185 - Issues and Trends in Disabilities *Credits: 3*

Total Credits: 30

Disability Specialist, AS (DSAB-AS)

The Disability Specialist associate degree program prepares students to work in a wide range of positions in private and public educational and human service agencies. Through individual consultation, each student will pursue a course of study with an emphasis upon the unique vocational goals the individual wishes to achieve. Every effort will be made to provide specific skill instruction; however, the focus of the curriculum is on building a strong knowledge base coupled with a positive value base that will prepare each student to assist children and adults with disabilities toward the goals of full community inclusion and participation, and the attainment of their potential.

This program builds upon the Americans with Disabilities Act of 1990, a landmark piece of legislation that provides basic civil rights to millions of people with disabilities in America. Students will become an important part of this dynamic movement.

Since most work settings are in the schools, workplaces, community associations, apartments and homes in the community, an understanding of "community-building" and "individual capacity-building" techniques and procedures is stressed. Creativity, sensitivity and a capacity to concentrate on the abilities of the whole person are essential characteristics of a disability specialist.

Learning Outcomes:

Upon successful completion of all Disability Specialist degree program requirements, graduates will:

- Define and discuss basic definitions, causes, psychological characteristics and educational approaches relevant to children with disabilities.
- Discuss how children and adults with disabilities have unique abilities rather than limitations.
- Identify current trends and issues, and define the impact of current national and state laws and policies, affecting people with disabilities and their families.
- Compare various learning theories and their application to children and adults with disabilities.
- Define ethical standards in the disability field and demonstrate confidentiality in written and oral assignments.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Program Philosophy: People with disabilities are an integral part of the community and should receive necessary integrated community-based support.

Mission Statement: The Disability Specialist Program is to prepare students for careers in supporting children and adults with disabilities in the community by:

- recognizing and enhancing the dignity, respect and contribution of every child and adult with a disability
- providing information on job opportunities in the disability field to encourage the recruitment of young and continuing education students
- emphasizing, throughout the curriculum, community inclusion of all people with disabilities
- creating opportunities for interaction among the students, faculty, staff and members of the community with and without disabilities
- promoting the value of a Disability Specialist degree or certificate in the job market
- introducing students to assistive technology and other innovations in the continuously evolving field of supporting people with disabilities in the community.

Curriculum: Because of the flexible nature of this program, students may select a full- or part-time plan of study for an associate degree or a certificate option. There is no required course program requirements sequence in this associate degree.

General Education Courses (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 or MATH 1200 or MATH 1201 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*

- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- **OR** Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 2351 - Working with Individuals and Families *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- HSER 1034 - Introduction to the Mental Health System *Credits: 3*
- HSER 2696 - Human Services Field Work I *Credits: 3*
- PSY 1185 - Issues and Trends in Disabilities *Credits: 3*
- PSY 1163 - Children with Disabilities *Credits: 3*
- PSY 1173 - Adults with Disabilities *Credits: 3*
- PSY 1183 - Learning Process and Disability *Credits: 3*
- PSY 1184 - Assistive Technology Across the Lifespan *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- Open Elective *Credits: 3*

Total Credits: 60-63

Drug and Alcohol Recovery Counselor (DARC) Certificate (DARC-CC)

This program is ideal for individuals who are already working in the field of the treatment of substance use disorders, desire a fast-track to certification, are receiving clinical supervision, and/or hold an advanced degree in a closely related field (e.g., social work, counseling, etc.) who would like to supplement their expertise. DARC certificate recipients with degrees and/or experience are prepared for opportunities as counselors for those with substance use disorders in public and private agencies such as community and residential health facilities, hospitals, prevention organizations, youth and family services, and the criminal justice system.

The DARC certificate curriculum consists of 21 credits, meets the Connecticut Certification Board (CCB) requirements to become a CAC (certified addiction counselor), and prepares graduates to take the certification examination administered by CCB. The DARC certificate also satisfies the specialty education requirements for those currently holding a related Master's degree and are applying for licensure as an LADC.

Learning Outcomes:

Upon successful completion of the DARC Certificate, a recipient should be able to:

- Describe the physiological, emotional, physical, and psychological basis of substance use disorders.
- Define the causes and characteristics of substance use disorders relevant to various populations and cultures.
- Define, examine, and apply counseling theories to counseling those with substance use disorders.
- Define, demonstrate, and apply ethical principles and practices according to the CCB, and professional behavior for working directly in the counseling field.
- Demonstrate knowledge and skills related to counseling skills and relapse prevention education and strategies.
- Describe the categories of drugs and effects on the body, brain, and fetus.
- Describe characteristics of those with substance use disorders and specific treatment strategies for working with this population.
- Demonstrate the ability to develop, draft, and implement individual treatment plans.
- Describe and demonstrate the use of case management including screening, intake, evaluation, accurate records, treatment, and discharge in the treatment of persons with addiction.
- Describe and demonstrate skills involved in crisis intervention.
- Describe the purpose and availability of self-help groups for persons with substance use disorders.
- Describe the effects of substance use disorders on the family and community including education, health care, and the economy.
- Describe the stages of change model and recovery for families and their application to treatment of substance use disorders.
- Describe the transdisciplinary foundations and competencies required of substance abuse counselor.
- Describe the use of medication in the treatment of substance use disorders.

Required Courses

- DARC 1001 - Public Health Issues and Addiction *Credits: 3*
- DARC 1011 - Addiction Counseling I *Credits: 3*
- DARC 1012 - Group Counseling Theory and Techniques *Credits: 3*
- DARC 1058 - Biology of Addiction *Credits: 3*
- DARC 2011 - Addiction Counseling II *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- DARC Elective - *See advisor or program coordinator for most appropriate elective choice Credits: 3*

Total Credits: 21

Drug and Alcohol Recovery Counselor, AS (DARC-AS)

The Drug and Alcohol Recovery Counseling (DARC) program provides the education and training needed to work effectively in the field of substance abuse disorders and recovery counseling. Students examine the techniques of professional counseling, current public health, trends and issues affecting the science of substance abuse disorders, counseling theories, continuum of care, environmental and familial risk factors contributing to substance use disorders, and counselor code of ethics. Students develop an understanding of the process of substance use disorders such as problem gambling, trauma-informed care, and knowledge of multicultural aspects of working with clients; and apply knowledge in a clinical setting by participating in two semesters of internships and seminar. The DARC program may also be ideal for professionals with advanced degrees who seek specialization in substance abuse counseling and certification as a Certified Addictions Counselor (CAC) from the Connecticut Certification Board (CCB) or licensure as a LADC (licensed alcohol and drug counselor) from the Department of Public Health (with a qualifying Master's degree).

Learning Outcomes:

Upon successful completion of a DARC Program graduate should be able to:

- Describe the physiological, emotional, physical, and psychological basis of substance abuse disorders.
- Define the causes and characteristics of substance dependence and addiction relevant to various populations and cultures.
- Define, examine, and apply counseling theories to substance abuse disorders counseling sessions.
- Define, demonstrate, and apply ethical principles and practices according to the CCB, and professional behavior for working directly in the counseling field.
- Demonstrate knowledge and skills related to relapse prevention education and strategies.
- Describe the categories of drugs and effects on psychological functioning.
- Describe characteristics of persons with a substance abuse disorder(s) and specific treatment strategies for working with this population.
- Demonstrate the ability to develop, draft, and implement individual treatment plans.
- Discuss the purpose of clinical supervision, participate in two internships, and co-facilitate group counseling sessions under supervision.
- Describe and demonstrate the use of case management including screening, intake, evaluation, accurate records, treatment, and discharge in the treatment of persons with one or more substance abuse disorders.
- Describe and demonstrate skills involved in crisis intervention.
- Describe the purpose and availability of self-help groups for persons with substance abuse disorders.
- Describe the effects of substance abuse on the family and community including education, health care, and the economy.
- Describe the stages of change model and recovery for families and their application to treatment of substance abuse disorders.
- Describe the use of multicultural counseling skills to assessment, treatment, and aftercare for persons of different gender/gender identity, ethnicity, disability, race, sexual orientation, ages including the elderly, and stages of life including homeless populations.
- Describe the transdisciplinary foundations and competencies required of alcohol or drug counselor.
- Describe the use of medication in the treatment of substance abuse.
- Develop a comprehensive case study based on a biopsychosocial assessment, including diagnosis, treatment plan goals and interventions acceptable for submission to the Connecticut Certification Board (CCB).

Courses

All DAR course instructors are licensed drug and alcohol counselors by the State of CT Department of Public Health. Additionally, while certification is preferred for DAR course instructors it is not required. All DAR courses have a didactic component and most include experiential skill building. Students intending to graduate with a degree in DARC should earn a minimum grade of C in order to be adequately prepared for a career in addiction counseling and successfully complete the Counselor Certification Examination through CCB (Connecticut Certification Board).

Internships

Students must complete and submit a formal DARC internship application prior to the interview. Acceptance into a DARC internship with a seminar (DARC 2095, DARC 2195) is selective and not guaranteed. All interested students participate in a screening and interview process which is intended to evaluate whether the applicant possesses the skills, behaviors (practices), and attitudes necessary for work with individuals with a substance use disorder and/or co-occurring disorders. Interested applicants must have completed ENG 1010, DARC 1001, DARC 1011, DARC 1012 and DARC 1058 with a grade of C or better and the restricted elective DARC 2011 may be completed concurrently during the first or second semester of internship. DARC coursework older than 5 years need to be re-taken prior to the internship. After the interviews, students are formally notified regarding acceptance to internship and ability to register for DARC 2095. Students who complete DARC 2095 successfully and without incidence are then eligible for DARC 2195. During the internships, students are required to carry malpractice liability insurance (average yearly cost \$15.00). Students are billed separately for this coverage and will be asked to pay the premium at the time of registration.

Articulation Agreements

There are active articulation agreements with the University of Bridgeport (Goodwin University) and the BSW program at Southern Connecticut State University.

Employment

Graduates with a DARC associates degree are highly sought after for entry level opportunities as substance abuse counselors in public and private agencies such as community and residential health facilities, hospitals, prevention organizations, rehabilitation, youth services, government, and the criminal justice system. According to the Occupational Outlook Handbook (2016-17 Ed.), employment of addiction/substance abuse counselors is expected to grow by 22 percent from 2014-2024, much faster than average as addiction counseling services are increasingly covered by insurance. Connecticut is considered one of the states with the highest concentration of jobs in this field with a mean average wage of \$46,920.

General Education Courses (24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1010 - Intermediate Algebra *Credits: 3 (or higher)*
- ARTH 1001 - Global Art History Prehistory to 1500 CE *Credits: 3*
- **OR** ARTH 1003 - Global Modern Art History 1850 to Present *Credits: 3*
- **OR** MUS 1001 - Music History - Medieval-Baroque *Credits: 3*
- **OR** MUS 1002 - Music History - Classical-Contemporary *Credits: 3*
- BIO 1100 - Principles of the Human Body *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3 (COMM 1301 recommended for transfer)*
- **OR** COMM 1302 - Interpersonal Communication *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (36 credits)

- DARC 1001 - Public Health Issues and Addiction *Credits: 3*
- DARC 1011 - Addiction Counseling I *Credits: 3*
- DARC 1012 - Group Counseling Theory and Techniques *Credits: 3*
- DARC 1058 - Biology of Addiction *Credits: 3*
- DARC 2011 - Addiction Counseling II *Credits: 3*
- DARC 2095 - Counseling Internship I *Credits: 6*
- DARC 2195 - Counseling Internship II *Credits: 6*
- PHIL 1101 - Ethics *Credits: 3*
- PSY 2045 - Abnormal Psychology *Credits: 3*

Restricted Elective (3 credits):

- DARC 2020 - Co-Occurring Disorders *Credits: 3*
- DARC 1017 - Substance Abuse Prevention *Credits: 3*
- DARC 1019 - Addiction Counseling in a Correctional Setting *Credits: 3*
- DARC 2012 - Multicultural Addiction Counseling *Credits: 3*
- DARC 1014 - Introduction to Family Systems *Credits: 3*

Total Credits: 60

ECED: Administration, Management, and Leadership Certificate (ECAD-CC)

This administrator's certificate is designed to provide a balanced, high-quality education for current and prospective administrators that serve the educator, and all families and young children. Course work is completed in the areas of administration and leadership, education, psychology, communications, inclusion and equity, and business management that mirror the required state competencies. Students who complete this certificate are qualified to serve in an administrative role in an early care and educational setting that meets the diverse needs of all children between the ages of 0 and 8.

Learning Outcomes:

Upon successful completion of the certificate, a recipient should be able to:

- Develop and maintain an effective organization, curriculum, and physical facility.
- Demonstrate an understanding of the administrator's responsibilities using acquired knowledge and skills.
- Administer, manage, and maintain standards of quality childcare and education programs.
- Foster positive community and family relationships.
- Apply basic business management knowledge, tools, and skills.
- Plan, implement, and guide effective administrative and management systems, policies, and procedures in care and education.

Required Courses

- ECED 2706 - Administration and Supervision of Programs for Young Children *Credits: 3*
- ECED 2712 - Management and Leadership in Programs for Young Children *Credits: 3*
- ECED 2875 - Children, Families, and Communities *Credits: 3*
- PSY 2047 - Industrial & Organizational Psychology *Credits: 3*
- **OR** BMGT 2100 - Organizational Behavior *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- **OR** BMGT 2040 - Managerial Communications *Credits: 3*
- ECED 2825 - Anti-Bias, Equity, and Diversity in Education *Credits: 3*

Total Credits: 18

ECED: Early Childhood Education Certificate (ECED-CC)

The certificate is designed to develop skills and knowledge necessary and desirable to work with all young children and transfer to the Associate of Science degree Early Childhood Education program. Students who complete this 24-credit certificate can provide the basic aspects of professional childcare and inclusion education such as lesson planning, instruction, guiding student behavior, supporting families, and caring for and monitoring the safety for all young learners including those with special needs.

Learning Outcomes:

Upon successful completion of the ECED Certificate, a graduate should be able to:

- Know and promote child development by understanding young children characteristics; the multiple influences development; and recognize and create appropriate learning environments where all young children thrive.
- Facilitate meaningful opportunities to foster physical, social, emotional, language, cognitive, and aesthetic development for all children from birth through age eight.
- Build, support, and engage family and community relationships through understanding and valuing diversity and all families and knowledge of the community; and create respectful, reciprocal relationships that involve all families in their children's education and development.
- Develop a basic knowledge of and use observation, documentation, and assessment including assistive technology positively and responsibly to describe, discuss, and promote positive outcomes for a child's learning and development including children with developmental delays and disabilities.
- Use effective communication in a professional setting.

Required Courses

- ECED 1001 - Introduction to Early Childhood Care and Education *Credits: 3*
- ECED 1002 - Foundations of Child Development *Credits: 3*
- ECED 2515 - Exceptional Learners *Credits: 3*
- ECED 2331 - Language Development and Emergent Literacy in Young Children *Credits: 3*
- COMM 1302 - Interpersonal Communication *Credits: 3*
- **OR** COMM 1301 - Public Speaking *Credits: 3*
- **OR** COMM 1303 - Group Communication *Credits: 3*
- **OR** ENG 1010 - Composition *Credits: 3*
- **OR** ENG 1080 - Composition II: Technical Writing and Presentations *Credits: 3*
- ECED, EDUC, or SPED Electives *Credits: 9*

Total Credits: 24

ECED: Early Childhood Education: Career Track, AS (ECED-AS)

The Early Childhood Education program is designed to provide students with the skills, knowledge, and competencies necessary for effective teachers of all young children from birth through age eight in the 21st century. The curriculum provides a comprehensive general education core, pedagogical practice through field experiences, and a solid theoretical foundation in primary education as well as prepares graduates for transfer (course by course) to a baccalaureate program and prepares students for immediate employment in inclusive, diverse, and culturally responsive early care and education settings. For individuals currently employed in the field, this degree program strengthens and enhances professional competencies, skills, knowledge, and employability.

Field work is a principal instructional method and a requirement in specific program courses. Additional fees for field work such as background checks, fingerprinting, and other related costs are associated with this program of study. Early Childhood Education majors are expected to complete a minimum of 100 hours of observation and/or field work prior to student teaching and at minimum of 200 hours of student teaching.

Learning Outcomes:

Upon successful completion of all program requirements, graduates will:

- Know and promote child development by understanding young children's characteristics; the multiple influences on development; and recognize and create appropriate and inclusive learning environments where all young children thrive.
- Facilitate meaningful opportunities to foster physical, social, emotional, language, cognitive, and aesthetic development for all children including those with special needs from birth through age eight.
- Build, support, and engage family and community relationships through understanding and valuing diversity and all families and knowledge of the community; and create respectful, reciprocal relationships that involve families in their children's education and development.
- Develop knowledge of and use observation, documentation, and assessment including assistive technology positively and responsibly to describe, discuss, and promote positive outcomes for a child's learning and development.
- Design and deliver a challenging, high-quality, twenty-first century curriculum.
- Demonstrate sound knowledge of the academic disciplines, content areas, and concepts and a broad inventory of appropriate teaching approaches and methods.
- Use developmentally appropriate pedagogical strategies and tools including the responsible and effective use of technology.
- Demonstrate professionalism by identification of oneself as an educator; practicing the ethical and legal responsibilities outlined in professional standards; and committing themselves to reflection and evaluation, continuous professional development, self-advocacy, and advocacy for children, families, and the profession.

Areas of study in this degree program include the 21st century learning skills, language education (including bilingual), reading, writing, literature for a young audience, multiliteracies, anti-bias and multicultural education, communication written and oral, creativity and innovation, global awareness, cultural competency, self-directed learning, digital literacies, critical media literacy, STEM, multimodality, special education, teamwork/collaboration, professional growth, curricula, problem-solving, advocacy, the 21st century learning skills, and leadership. In the interaction and interplay of these areas, our students and faculty seek to broaden the scope to meet the needs of all learners in a diverse society.

Students are expected to complete a minimum of 100 hours of observation and/or field placement prior to student teaching and at minimum of 200 hours of student teaching.

The degree program and ECED courses are aligned with the following standards: CT State Core Knowledge and Competencies (CKC), Division of Early Childhood of the Council for Exceptional Children (DEC), Early Intervention/Early Childhood Special Education (EI/ECSE), National Association for the Education of Young Children (NAEYC), and Office of Special Education Programs (OSEP).

Previously, NAEYC accredited each CT Community College Early Childhood Education program individually. Now, as CT State, we are transitioning to one state-wide accreditation.

Graduates are eligible for transfer and admission to four-year colleges and universities. Please consult with a guided pathways advisor for the specific requirements for the transfer institution(s) of your choice.

Students planning to transfer to Central, Eastern, Southern, or Western Connecticut State University should follow the course selection guide found [here](#):

ECED: Early Childhood Education: Transfer Track, AS (ECED-AS-TRS)

General Education Courses (21-24 credits)

- CCS 1001 - College & Career Success *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- PHIL 1101 - Ethics *Credits: 3*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- HIST 1015 - US History to 1877 *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*

Program Courses (39 credits)

- PSY 1011 - General Psychology I *Credits: 3*
- ECED 1001 - Introduction to Early Childhood Care and Education *Credits: 3*
- ECED 1002 - Foundations of Child Development *Credits: 3*
- ECED 2410 - Observation, Documentation, and Assessment of Young Children *Credits: 3*
- ECED 2515 - Exceptional Learners *Credits: 3*
- ECED 2331 - Language Development and Emergent Literacy in Young Children *Credits: 3*
- ECED 2875 - Children, Families, and Communities *Credits: 3*
- ECED 2322 - Curriculum and Methods for Diverse Learners *Credits: 3*
- ECED 1303 - Creative Arts and Experiences *Credits: 3*
- **OR** ECED 1306 - Music and Movement for Children *Credits: 3*
- **OR** ECED 2307 - The Natural Sciences and Young Children *Credits: 3*
- **OR** ECED 2309 - STEM for Young Children *Credits: 3*
- ECED, EDUC, or SPED Electives *Credits: 6 - consult with advisor for choices*
- ECED 2690 - Student Teaching I *Credits: 3* **AND** ECED 2692 - Student Teaching II *Credits: 3*
- **OR** ECED 2695 - Student Teaching Practicum *Credits: 6*

Total Credits: 60-63

ECED: Early Childhood Education: Transfer Track, AS (ECED-AS-TRS)

This program is based on articulation agreements with four-year institutions for students who plan on transferring to earn a State of Connecticut Teacher Certification in early childhood education at Central, Eastern, Southern, or Western Connecticut State University. The curriculum includes a comprehensive general education core, pedagogical practice through field experiences, and an inclusive 21st century curriculum grounded in theory and evidence-based best practices. Students are strongly encouraged to consult with a guided pathways or transfer counselor in addition to their academic program advisor each semester to review the degree evaluation and plan of study for advising on course registration. Additionally, consulting with an academic advisor at the four-year university of their choice is strongly recommended. Field work is a principal instructional method and requirement in specific program courses.

Program Learning Outcomes:

Upon completion of all program requirements, graduates have/are prepared to:

- Transfer to one of the following Connecticut State Universities (CSUs) to complete their academic studies in teacher education for early childhood at Central, Eastern, Southern, or Western Connecticut State University.
- Transfer (for accepted students) to a School of Education from transfer advising (two-year campus transfer counselor, four-year campus transfer counselor, and degree program advisor).
- Completed a rigorous, competency-based education program of study.
- Earned an associate of science degree with an emphasis in teacher education (early childhood education) and careers in teaching.
- Promote child development by understanding young children's characteristics; the multiple influences on development; and recognize and create appropriate and inclusive learning environments where all young children thrive.
- Facilitate meaningful opportunities to foster physical, social, emotional, language, cognitive, and aesthetic development for all children including those with special needs from birth through age eight.
- Build, support, and engage family and community relationships through understanding and valuing diversity and all families and knowledge of the community; and create respectful, reciprocal relationships that involve families in their children's education and development.
- Develop knowledge of and use observation, documentation, and assessment including assistive technology positively and responsibly to describe, discuss, and promote positive outcomes for a child's learning and development.
- Design and deliver a challenging, high-quality, twenty-first century curriculum.
- Demonstrate sound knowledge of the academic disciplines, content areas, and concepts and a broad inventory of appropriate teaching approaches and methods.
- Use developmentally appropriate pedagogical strategies and tools including the responsible and effective use of technology.
- Demonstrate professionalism by identification of oneself as an educator; practicing the ethical and legal responsibilities outlined in professional standards; and committing themselves to reflection and evaluation, continuous professional development, self-advocacy, and advocacy for children, families, and the profession.

Under current provisions, graduates of this path of study with a grade point average of 2.7 or higher, who receive this associates degree can apply to the Schools of Education and/or Professional Studies at the following four-year universities: Central, Eastern, Southern, and Western Connecticut State Universities. Upon acceptance, credits may transfer toward a bachelor's degree in teacher education. Note that admission to the university does not automatically guarantee admission to the School of Education or the Teacher Education program.

The degree program and ECED courses are aligned with the following standards: CT State Core Knowledge and Competencies (CKC), Division of Early Childhood of the Council for Exceptional Children (DEC), Early Intervention/Early Childhood Special Education (EI/ECSE), National Association for the Education of Young Children (NAEYC), and Office of Special Education Programs (OSEP).

Previously, NAEYC accredited each CT Community College Early Childhood Education program individually. Now, as CT State, we are transitioning to one state-wide accreditation.

General Education Courses (21-23 credits)

- CCS 1001 - College & Career Success *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- MATH 1004 - Math for Elementary Education: Algebra/Number Systems *Credits: 3*
- PHIL 1101 - Ethics *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- HIST 1015 - US History to 1877 *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- ENG 1020 - Composition II and Literature *Credits: 3*

Program Courses (39 credits)

- PSY 1011 - General Psychology I *Credits: 3*
- ECED 1001 - Introduction to Early Childhood Care and Education *Credits: 3*
- ECED 1002 - Foundations of Child Development *Credits: 3*
- ECED 2875 - Children, Families, and Communities *Credits: 3*
- ECED 2410 - Observation, Documentation, and Assessment of Young Children *Credits: 3*
- ECED 2515 - Exceptional Learners *Credits: 3*
- ECED 2331 - Language Development and Emergent Literacy in Young Children *Credits: 3*
- ECED 2322 - Curriculum and Methods for Diverse Learners *Credits: 3*
- Open Electives: *Consult program advisor, a Guided Pathways Advisor, or transfer counselor* (MATH 1410 - Math for Elementary Education: Geometry/Data recommended for Elem. Ed focus) *Credits: 9*
- ECED 2690 - Student Teaching I *Credits: 3* **AND** ECED 2692 - Student Teaching II *Credits: 3*
- **OR** ECED 2695 - Student Teaching Practicum *Credits: 6*

Total Credits: 60-62

ECED: Infant and Toddler Certificate (ECED-CC-INF)

Students who complete this certificate are qualified to develop and foster a nurturing environment for all children birth to three in professional early care inclusive settings. In this certificate, the program of study is designed for students to demonstrate specialized knowledge that promotes positive outcomes for infants and toddlers and on healthy development including social and emotional development through observation, assessment, and documentation. Upon completion of the Infant and Toddler certificate, graduates are well prepared to assist in all aspects of a high-quality educational program that includes intentional teaching, supervision, guidance, and nurturing for ages birth to three and children at-risk.

Learning Outcomes:

Upon successful completion of the certificate, a graduate should be able to:

- Recognize and identify current and historical theoretical early childhood educational approaches specifically as it relates to all children ages 0 to 3.
- Apply child development theory to practice to all infants and toddlers including diverse learners and at-risk learners.
- Design developmentally appropriate curriculum for all young children ages 0-3.
- Practice intentional, respectful, reciprocal, and responsive teaching and care.
- Advocate for all young children and their families.
- Practice professional reflection.
- Incorporate theory into classroom practice utilizing standards, code of ethics, and best practices.
- Practice collaborative community education that includes area partners and families.

Required Courses

- ECED 1104 - Infant and Toddler Growth and Development *Credits: 3*
- ECED 1142 - Fundamentals of Infant and Toddler Care and Education *Credits: 3*
- ECED 1143 - Developmental Interventions for Infants and Toddlers at Risk *Credits: 3*
- ECED 2331 - Language Development and Emergent Literacy in Young Children *Credits: 3*
- ECED 1376 - Health and Wellness *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- ECED or SPED Electives *Credits: 6 (See advisor or ECE program coordinator for most appropriate elective choice)*

Total Credits: 24

General Studies, AS (GNST-AS)

General Studies is a program for students who are adult learners, veterans, students who transfer to CT State, students who are exploring career and academic options, and lifelong learners. The General Studies Program is designed for students who seek a two-year degree for personal or career advancement. The breadth of the curriculum allows students to explore disciplines in all of our Schools of Study; their chosen program code reflects an affiliation with one School to ensure that they receive advising that most closely aligns with their interests (GNST-AS-AH, GNST-AS-BH, GNST-AS-ET, GNST-AS-NH, GNST-AS-SM, or GNST-AS-SB).

The General Studies Program provides students flexibility in degree completion and maximizes the number of credits that are transferred to CT State. This program is designed to ensure that students develop strong communication skills, increase literacy and math skills, develop critical thinking and problem solving skills in the sciences, social sciences, and the arts and humanities. General Studies students gain foundational knowledge in a variety of academic disciplines. The degree program is designed to give students the opportunity to explore knowledge from multiple perspectives. Students are challenged to become intellectually curious, aesthetically aware, and critically perceptive. The program gives students the flexibility to adapt to the changing needs of the workplace and the foundation necessary for lifelong learning and personal growth.

The general education curriculum and career education are dynamic and interactive components. They enrich each other by helping students to make career choices in keeping with their understanding of themselves and their world. Together, they provide the skills and perspectives that make possible the dignity of work and social contribution. They cultivate a framework of meaning, value, ethical purpose, and commitment that enrich every aspect of life. They foster an attitude of critical inquiry, curiosity, openness and wonder that enables a spirit of lifelong learning.

Learning Outcomes:

- Apply skills necessary to think critically, write clearly, argue persuasively, and problem-solve effectively
- Demonstrate competence with current computer software applications used in the workforce.
- Demonstrate college level writing, oral communication, and critical thinking
- Recognize broader historical, cultural, global, and scientific perspectives
- Collaborate with culturally and intellectually diverse peoples
- Apply traditional research skills and digital technology to access, evaluate, and apply information ethically
- Define and analyze both personal and social ethical issues; understand the consequences of a decision or a course of action.

The General Studies program also offers flexibility as a basis for further study or career paths, however, its primary purpose is not for transfer. Students planning to transfer to a bachelor's degree-granting program should consider one of the Associate Degrees in Liberal Arts and Science, which is carefully designed to satisfy transfer requirements while offering students flexibility and variety in course work.

General Education Courses (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or above *Credits: 3-4 (MATH 1100 recommended)*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39-42 credits)

General Studies students must complete 6 credits at the 2000 course level.

- Elective WRIX - Written Communication II Course *Credits: 3*
 - Art & Humanities - Choose any 2 courses 1000 level or above *Credits: 6-8*
 - Social / Behavioral Science - Choose any 2 courses 1000 level or above *Credits: 6*
 - Elective SCI - Science Elective *Credits: 3-4*
 - PHIL 1101 - Ethics *Credits: 3*
 - **OR** PHIL 1012 - Bioethics *Credits: 3*
 - CIS 1001 - Introduction to Computers *Credits: 3*
 - **OR** CSA 1110 - Introduction to Software Applications *Credits: 3*
 - **OR** CSA 2113 - Advanced Applications *Credits: 3*
 - Open Electives - Course 1000 or above *Credits: 15*
- No more than fifteen credit hours may be completed from any one subject area. Courses taken to satisfy the general education core requirements will not be counted in the calculation of the fifteen hours.*

Total Credits: 60-66

Geography - CSCU Transfer Degree, AA (GEOG-AA-TAP)

Students interested in careers in geography, urban planning, earth and environmental studies, tourism, international relations, digital data and mapping, and any form of global studies should consider this program. The Geography Studies, Associate in Arts degree provides flexibility and will allow a student to pursue a career requiring an associate degree or transfer to a four-year institution to pursue a bachelor's degree in geography, geography-related fields, or almost any other liberal arts program.

Learning Outcomes:

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

- Demonstrate an understanding of the basic concepts of physical and human geography and the methods of critical analysis geographer's use.
- Comprehend how geographers use spatial tools (maps, statistics, etc.) to help analyze and assess global activities.
- Demonstrate an understanding of the importance of spatial analysis, and how different fields within geography illustrate the *interdependence of global systems*.
- Apply basic knowledge and research skills that are sufficient to allow one to pursue a Bachelor's degree in geography or an associated field, and/or find employment in a geography-related field that requires an Associate degree.

This program is transfer focused. It is designed to prepare students with an interest in geography, urban planning, earth and environmental issues, tourism, international relations, digital data and mapping, and any form of global studies to transfer to a four-year college or university in pursuit of a bachelor's degree.

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

At Central Connecticut State University:

Geography with Specialization in Environmental Geography, B.A.
Geography with Specialization in General/Regional Geography, B.A.
Geography with Specialization in Geographic Information Science, B.A.
Geography with Specialization in Planning, B.A.
Geography with Specialization in Tourism, B.A.

At Southern Connecticut State University:

Geography, B.A.
Geography - Concentration: Geographic Information Science and Technology, B.S.

Framework Courses (30-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30 credits)

- Elective CRTY - Creativity Course *Credits: 3*
- GEOG 1000 - Introduction to Geography *Credits: 3*
- GEOG 1010 - World Regional Geography *Credits: 3*
- GEOG 1020 - Introduction to Human Geography *Credits: 3*
- GEOG 2900 - Geography and Tourism Development *Credits: 3 (is strongly recommended if you are planning to pursue Specialization in Tourism at CCSU, otherwise an Unrestricted Elective may be substituted for this requirement).*
- Electives
- It is recommended students select up to 9 credits of Unrestricted Electives in a single discipline/subject based upon your field of interest in geography. These courses can be used to complete 50% of the minor requirement for all CCSU Geography degrees or can be used to begin a minor or second major at SCSU. Some suggested disciplines include ANTH, EARTH, ECO, ENVS, GEOG, GEOL, HIST, MATH, POLS, CSA, CSC, CST. 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. CCSU allows you to major *and* minor in Geography as long as your minor is in a different specialization from the major.
- For students planning on attending ECSU or WCSU, choose any 9 credits of unrestricted electives.
- Students are encouraged to meet with Guided Pathways Advisor to determine which courses to select.
 - *Credits: 9*
- Remaining Unrestricted Electives
- Students are free to choose any courses at or above 1000-level to complete unrestricted electives, although they may need to use these credits to take courses that prepare for required courses in the degree program. They should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern and Western Connecticut State Universities. They can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC-but not ECSU. Students are encouraged to meet with their Guided Pathways Advisor to determine which courses to select.
- *Credits: 6-9*

Total Credits: 60-64

History Studies - CSCU Transfer Degree, AA (HIST-AA-TAP)

This program is designed to provide you with a foundation in the area of History Studies. Upon completion of the CSCU Pathway Transfer, A.A. Degree: History Studies program, you will be able to transfer seamlessly within the Connecticut State College and University system, being guaranteed full junior status in your pursuit of a bachelor's degree in the same discipline, without losing any credits or being required to take extra credits upon transfer.

Learning Outcomes:

Students who complete the CSCU Pathway Transfer, A.A. Degree: History Studies program will demonstrate familiarity with historical methods of inquiry and analysis and will be able to

- Define and interpret primary and secondary historical sources.
- Explain and evaluate the influence of historical agency (race, class, gender, region/location, and/or belief system) in the context of defined periods.

Framework Courses (30-35 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3 (Must not be HIST 1015 - US History to 1877 nor HIST 1016 - US History from Reconstruction)*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30 credits)

- Elective CRTY - Creativity Course *Credits: 3*
- Elective GLKY - Global Knowledge Course *Credits: 3*
- HIST 1016 - US History from Reconstruction *Credits: 3*
- HIST 1015 - US History to 1877 *Credits: 3*
- HIST Electives: 2 courses 2000-level *Credits: 6*

4 Unrestricted Electives (12 credits)

Students should consider beginning or completing work on foreign language requirements (at CCSU, ECSU and WCSU) not already met in high school and beginning work on a minor (required at CCSU - up to 9 credits can be completed at the community college). They may also complete other General Education requirements for CCSU, WCSU, SCSU, and CO-but NOT ECSU. Students who do not use open electives to complete at least 6 credits of additional history courses, minor courses or remaining foreign language requirements will not complete the baccalaureate in under 120 credits at CCSU.

Students can elect to take up to 6 credits of additional history courses as electives. The guidelines for HIST electives are as follows:

1. They must all be at the 1000- or 2000- level
2. No more than 6 credits can be at the 2000-level and no more than 6 can be at the 1000-level
3. No methodology or capstone courses will be accepted into the major
4. These additional history courses will be accepted as specifically designated or history elective courses in the major at all CSUs and CO.

5. HIST 1001 - Western History to the 1500s and HIST 1002 - Western History from the 1500s: WCSU will receive only one or the other in the major.
6. HIST 1021 - World History to the 1400s and HIST 1022 - World History since 1500s: WCSU will receive neither in the major.

Total Credits: 60-65

Human Services, AS (HUMS-AS-HS)

The Human Services program is designed to provide education and training for individuals seeking employment in various human service settings. The program is also designed to provide a basis for those who choose to continue their education in social work, early intervention and prevention, gerontology, mental health, home visitation, early childhood programming, addiction counseling, advocacy, social justice, and other related fields.

Opportunities in human services include working in group homes, social service agencies, youth recreational centers, educational settings, senior centers and assisted living programs. Human services is a broad field and students learn in courses which areas they would like to focus on for their careers.

This career program is designed to prepare students for diverse employment opportunities and competent performance in a variety of entry-level community, counseling-related, and social service minded organizations. Instruction is cross-disciplinary and designed for maximum transferability for those wishing to continue their studies to psychology, social work, education, or other helping professions. Emphasis is on the empirical and theoretical aspects of the social sciences and application through experiential learning including a practicum. This degree is interdisciplinary in nature and embraces the holistic approach. All majors must complete a minimum of three credits in an Human Services Field Work I. Finally, students may be required to complete a background check, drug screening, and proof of health (e.g., vaccinations) for field work and field work may involve travel which is at the student's own expense, coordination, and planning.

In addition to the Human Services general degree, students can choose one of these options:

- Human Services: Child, Family, and Community Studies, AS (CFCS-AS-HS)
- Human Services: Gerontology, AS (GRTL-AS-HS)
- Human Services: Mental Health, AS (MNHL-AS-HS)
- Human Services: Human Services Management, AS (HSMG-AS-HS)

Learning Outcomes:

- Explain and compare the theories pertaining to adjustment, learning theories, and development theories; and explain and compare treatment methods and intervention modalities theories.
- Explain and compare the etiological factors in psychopathology, including the biological, sociological, environmental, and psychological factors.
- Demonstrate the use of methods of research and reporting, using psychological, sociological, educational, therapeutic, and clinical terminology.
- Demonstrate an understanding of the personality and behavioral factors, both integrative (adaptive) and disintegrative (maladaptive) which contribute to individuals/clients' coping skills dealing with stress, conflict, and hardship.
- Demonstrate an understanding of the normative developmental patterns and how this understanding impacts our understanding of abnormal behavior and clinical/treatment interventions.
- Integrate knowledge and skill in achieving competency in functional and responsive therapeutic abilities.
- Demonstrate skills in client needs assessment and in the provision of information and referral for client access to resources; and use appropriate human service practice skills within the context of providing human services.
- Demonstrate an awareness of self as a change agent.
- Analyze the impact of collaborative social service systems.
- Explain the history and development of human services in the United States.
- Demonstrate knowledge of social welfare as a system designed to serve people, groups, community and society.
- Demonstrate knowledge of the language, terminology, theories, models, techniques, interventions, and strategies applicable to human services.
- Explain interventions, techniques, and strategies for assisting individuals, families, groups, organizations, and communities.
- Demonstrate an understanding of the impact of discrimination, racism, micro/macroaggressions, inequities, and oppression on individuals and society.

- Demonstrate a basic knowledge of results-based accountability in a disciplined way of thinking and acting to improve entrenched, complex, and current social problems.

Human Services General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
(*BIO 1100 AND BIO 1100L recommended*)
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Human Services Program Core (27 credits)

- SOC 1001 - Principles of Sociology *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 2441 - Human Services Agencies and Organizations *Credits: 3*
- HSER 2242 - Human Services Skills and Methods *Credits: 3*
- **OR** HSER 2247 - Change Theory and Strategies in Behavioral Health Care *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- HSER 2106 - Professional, Legal, and Ethical Issues in Human Services *Credits: 3*
- HSER 2696 - Human Services Field Work I *Credits: 3*
- **OR** HSER 2543 - Social and Contemporary Issues in Human Services *Credits: 3*
- HSER 2351 - Working with Individuals and Families *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*

Program Courses (12 credits)

- PSY 2001 - Lifespan Development *Credits: 3*
- **OR** PSY 2004 - Child and Adolescent Development *Credits: 3*
- Elective - SOC or ANTH *Credits: 3*
- Open Electives (2 courses) *Credits: 6*

Total Credits: 61-62

Human Services: Behavioral Healthcare Specialist Certificate (BHCS-CC-HS)

Health encompasses more than just physical health. Behavioral healthcare refers to the treatment of mental illnesses and substance abuse disorders; and is an important component of an effective healthcare delivery system. This program will prepare individuals for employment in entry-level professional positions in public and private agencies serving mentally ill and substance abusing patients. Instruction is also provided to allow for the continuation of studies at two- and four-year programs in the areas of substance abuse and mental health.

Learning Outcomes:

Students will understand and/or acquire knowledge in:

- Skills, strategies and techniques necessary for entry-level professional positions in substance abuse and mental health treatment facilities.
- Professional competencies in report writing, assessment, case management, treatment planning and other professional functions within the Behavioral Health Care field.
- Models of research and theory for diagnosing and treating individuals with mental health and addiction issues.
- Professional competencies in working with clients individually and in groups within diverse populations.
- Direct client engagement and supervision in a clinical setting within the Behavioral Health Care field.
- Preparation for continued studies at 2- and 4-year educational institutions in the area of addiction and mental health.

This certificate includes 120 hours of supervised field placement work in HSE 287. Students may be required to complete a background check, proof of health (e.g., vaccinations), and drug screening for field work.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- HSER 1040 - Introduction to Behavioral Healthcare *Credits: 3*
- HSER 2247 - Change Theory and Strategies in Behavioral Health Care *Credits: 3*
- HSER 2002 - Introduction to Counseling and Interviewing *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- PSY 1040 - The Psychology of Addiction *Credits: 3*
- PSY 2045 - Abnormal Psychology *Credits: 3*
- HSER 2690 - Behavioral Healthcare Fieldwork *Credits: 3*

Total Credits: 30

Human Services: Child, Family, and Community Studies, AS (CFCS-AS-HS)

The Human Services program is designed to provide education and training for individuals seeking employment in various human service settings. The program is also designed to provide a basis for those who choose to continue their education in social work, early intervention and prevention, gerontology, mental health, home visitation, early childhood programming, addiction counseling, advocacy, social justice, and other related fields.

Opportunities in human services include working in group homes, social service agencies, youth recreational centers, educational settings, senior centers and assisted living programs. Human services is a broad field and students learn in courses which areas they would like to focus on for their careers.

This career program is designed to prepare students for diverse employment opportunities and competent performance in a variety of entry-level community, counseling-related, and social service minded organizations. Instruction is cross-disciplinary and designed for maximum transferability for those wishing to continue their studies to psychology, social work, education, or other helping professions. Emphasis is on the empirical and theoretical aspects of the social sciences and application through experiential learning including a practicum. This degree is interdisciplinary in nature and embraces the holistic approach. All majors must complete a minimum of three credits in an Human Services Field Work I. Finally, students may be required to complete a background check, drug screening, and proof of health (e.g., vaccinations) for field work and field work may involve travel which is at the student's own expense, coordination, and planning.

Learning Outcomes:

- Explain and compare the theories pertaining to adjustment, learning theories, and development theories; and explain and compare treatment methods and intervention modalities theories.
- Explain and compare the etiological factors in psychopathology, including the biological, sociological, environmental, and psychological factors.
- Demonstrate the use of methods of research and reporting, using psychological, sociological, educational, therapeutic, and clinical terminology.
- Demonstrate an understanding of the personality and behavioral factors, both integrative (adaptive) and disintegrative (maladaptive) which contribute to individuals/clients' coping skills dealing with stress, conflict, and hardship.
- Demonstrate an understanding of the normative developmental patterns and how this understanding impacts our understanding of abnormal behavior and clinical/treatment interventions.
- Integrate knowledge and skill in achieving competency in functional and responsive therapeutic abilities.
- Demonstrate skills in client needs assessment and in the provision of information and referral for client access to resources; and use appropriate human service practice skills within the context of providing human services.
- Demonstrate an awareness of self as a change agent.
- Analyze the impact of collaborative social service systems.
- Explain the history and development of human services in the United States.
- Demonstrate knowledge of social welfare as a system designed to serve people, groups, community and society.
- Demonstrate knowledge of the language, terminology, theories, models, techniques, interventions, and strategies applicable to human services.
- Explain interventions, techniques, and strategies for assisting individuals, families, groups, organizations, and communities.
- Demonstrate an understanding of the impact of discrimination, racism, micro/macroaggressions, inequities, and oppression on individuals and society.
- Demonstrate a basic knowledge of results-based accountability in a disciplined way of thinking and acting to improve entrenched, complex, and current social problems.

Human Services General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*

- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- *(BIO 1100 AND BIO 1100L recommended)*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Human Services Program Core (27 credits)

- SOC 1001 - Principles of Sociology *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 2441 - Human Services Agencies and Organizations *Credits: 3*
- HSER 2242 - Human Services Skills and Methods *Credits: 3*
- **OR** HSER 2247 - Change Theory and Strategies in Behavioral Health Care *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- HSER 2106 - Professional, Legal, and Ethical Issues in Human Services *Credits: 3*
- HSER 2696 - Human Services Field Work I *Credits: 3*
- **OR** HSER 2543 - Social and Contemporary Issues in Human Services *Credits: 3*
- HSER 2351 - Working with Individuals and Families *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*

Child, Family, and Community Studies Courses (12 credits)

- ECED 1376 - Health and Wellness *Credits: 3*
- ECED 2515 - Exceptional Learners *Credits: 3*
- ECED 2875 - Children, Families, and Communities *Credits: 3*
- ECED 1001 - Introduction to Early Childhood Care and Education *Credits: 3*
- **OR** ECED 1377 - Guiding and Understanding Children's Behavior *Credits: 3*
- **OR** ECED 2825 - Anti-Bias, Equity, and Diversity in Education *Credits: 3*
- **OR** HSER 2435 - Family Violence Across the Lifespan *Credits: 3*

Total Credits: 61-62

Human Services: Gerontology Certificate (GRTL-CC-HS)

The Human Services Gerontology certificate is designed to provide education and training for individuals seeking entry employment in various settings that cater to and focus on the gerontology population. Gerontology is the study of aging - a very complex and fascinating process which we all experience. It is complex because it encompasses the physiological, social, emotional, cognitive, and economic aspects of growing old. By completing the one-year certificate program, students may find immediate opportunity for employment in professional and paraprofessional entry-level positions at human service agencies, senior centers, residential communities, health care facilities, and other agencies that provide much needed services for the elderly. For others, this certificate will allow them to further enhance their knowledge of gerontology.

This career certificate is designed to prepare students for diverse employment opportunities and competent performance in a variety of entry-level community, care-related, and social services minded organizations. Instruction is cross-disciplinary and designed for transferability for those wishing to continue their studies to psychology, social work, health care, or other helping professions. This degree is interdisciplinary in nature and embraces the holistic approach.

Learning Outcomes:

Upon successful completion of the Gerontology certificate program requirements, graduates will

- Describe physiological, psychological, and socio-economic factors relating to the aging process.
- Identify sources of assistance to meet those needs and demonstrate the ability to comprehend the needs of an elderly person.
- Identify the need for advocacy for the elderly and sources of assistance and demonstrate the ability to deliver services.
- Identify and examine the factors necessary for successful aging.
- Identify (and demonstrate) interpersonal and communication skills necessary to work in environments serving an elderly population.
- Assess the social policies that affect the aging population and their families.
- Examine ethical principles to guide work with and on behalf of older adults.
- Examine and utilize gerontological frameworks to research the physical, psychological, economic, and social factors underlying the aging process.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 2242 - Human Services Skills and Methods *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*
- HSER 1070 - Introduction to Gerontology *Credits: 3*
- PSY 2010 - Death and Dying *Credits: 3*
- **OR** SOC 2025 - Death and Dying *Credits: 3*
- PSY 2053 - Multicultural Psychology *Credits: 3*
- **OR** SOC 2020 - Racial and Ethnic Diversity *Credits: 3*

Total Credits: 24

Human Services: Gerontology, AS (GRTL-AS-HS)

The Human Services program is designed to provide education and training for individuals seeking employment in various human service settings. The program is also designed to provide a basis for those who choose to continue their education in social work, early intervention and prevention, gerontology, mental health, home visitation, early childhood programming, addiction counseling, advocacy, social justice, and other related fields.

Opportunities in human services include working in group homes, social service agencies, youth recreational centers, educational settings, senior centers and assisted living programs. Human services is a broad field and students learn in courses which areas they would like to focus on for their careers.

This career program is designed to prepare students for diverse employment opportunities and competent performance in a variety of entry-level community, counseling-related, and social service minded organizations. Instruction is cross-disciplinary and designed for maximum transferability for those wishing to continue their studies to psychology, social work, education, or other helping professions. Emphasis is on the empirical and theoretical aspects of the social sciences and application through experiential learning including a practicum. This degree is interdisciplinary in nature and embraces the holistic approach. All majors must complete a minimum of three credits in an Human Services Field Work I. Finally, students may be required to complete a background check, drug screening, and proof of health (e.g., vaccinations) for field work and field work may involve travel which is at the student's own expense, coordination, and planning.

Learning Outcomes:

- Explain and compare the theories pertaining to adjustment, learning theories, and development theories; and explain and compare treatment methods and intervention modalities theories.
- Explain and compare the etiological factors in psychopathology, including the biological, sociological, environmental, and psychological factors.
- Demonstrate the use of methods of research and reporting, using psychological, sociological, educational, therapeutic, and clinical terminology.
- Demonstrate an understanding of the personality and behavioral factors, both integrative (adaptive) and disintegrative (maladaptive) which contribute to individuals/clients' coping skills dealing with stress, conflict, and hardship.
- Demonstrate an understanding of the normative developmental patterns and how this understanding impacts our understanding of abnormal behavior and clinical/treatment interventions.
- Integrate knowledge and skill in achieving competency in functional and responsive therapeutic abilities.
- Demonstrate skills in client needs assessment and in the provision of information and referral for client access to resources; and use appropriate human service practice skills within the context of providing human services.
- Demonstrate an awareness of self as a change agent.
- Analyze the impact of collaborative social service systems.
- Explain the history and development of human services in the United States.
- Demonstrate knowledge of social welfare as a system designed to serve people, groups, community and society.
- Demonstrate knowledge of the language, terminology, theories, models, techniques, interventions, and strategies applicable to human services.
- Explain interventions, techniques, and strategies for assisting individuals, families, groups, organizations, and communities.
- Demonstrate an understanding of the impact of discrimination, racism, micro/macroaggressions, inequities, and oppression on individuals and society.
- Demonstrate a basic knowledge of results-based accountability in a disciplined way of thinking and acting to improve entrenched, complex, and current social problems.

Human Services General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*

- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- *(BIO 1100 AND BIO 1100L recommended)*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Human Services Program Core (27 credits)

- SOC 1001 - Principles of Sociology *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 2441 - Human Services Agencies and Organizations *Credits: 3*
- HSER 2242 - Human Services Skills and Methods *Credits: 3*
- **OR** HSER 2247 - Change Theory and Strategies in Behavioral Health Care *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- HSER 2106 - Professional, Legal, and Ethical Issues in Human Services *Credits: 3*
- HSER 2696 - Human Services Field Work I *Credits: 3*
- **OR** HSER 2543 - Social and Contemporary Issues in Human Services *Credits: 3*
- HSER 2351 - Working with Individuals and Families *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*

Gerontology Courses (12 credits)

- PSY 2010 - Death and Dying *Credits: 3*
- **OR** SOC 2025 - Death and Dying *Credits: 3*
- HSER 1034 - Introduction to the Mental Health System *Credits: 3*
- PSY 2001 - Lifespan Development *Credits: 3*
- HSER 1070 - Introduction to Gerontology *Credits: 3*

Total Credits: 61-62

Human Services: Human Services Management, AS (HSMG-AS-HS)

The Human Services program is designed to provide education and training for individuals seeking employment in various human service settings. The program is also designed to provide a basis for those who choose to continue their education in social work, early intervention and prevention, gerontology, mental health, home visitation, early childhood programming, addiction counseling, advocacy, social justice, and other related fields.

Opportunities in human services include working in group homes, social service agencies, youth recreational centers, educational settings, senior centers and assisted living programs. Human services is a broad field and students learn in courses which areas they would like to focus on for their careers.

This career program is designed to prepare students for diverse employment opportunities and competent performance in a variety of entry-level community, counseling-related, and social service minded organizations. Instruction is cross-disciplinary and designed for maximum transferability for those wishing to continue their studies to psychology, social work, education, or other helping professions. Emphasis is on the empirical and theoretical aspects of the social sciences and application through experiential learning including a practicum. This degree is interdisciplinary in nature and embraces the holistic approach. All majors must complete a minimum of three credits in an Human Services Field Work I. Finally, students may be required to complete a background check, drug screening, and proof of health (e.g., vaccinations) for field work and field work may involve travel which is at the student's own expense, coordination, and planning.

Learning Outcomes:

- Explain and compare the theories pertaining to adjustment, learning theories, and development theories; and explain and compare treatment methods and intervention modalities theories.
- Explain and compare the etiological factors in psychopathology, including the biological, sociological, environmental, and psychological factors.
- Demonstrate the use of methods of research and reporting, using psychological, sociological, educational, therapeutic, and clinical terminology.
- Demonstrate an understanding of the personality and behavioral factors, both integrative (adaptive) and disintegrative (maladaptive) which contribute to individuals/clients' coping skills dealing with stress, conflict, and hardship.
- Demonstrate an understanding of the normative developmental patterns and how this understanding impacts our understanding of abnormal behavior and clinical/treatment interventions.
- Integrate knowledge and skill in achieving competency in functional and responsive therapeutic abilities.
- Demonstrate skills in client needs assessment and in the provision of information and referral for client access to resources; and use appropriate human service practice skills within the context of providing human services.
- Demonstrate an awareness of self as a change agent.
- Analyze the impact of collaborative social service systems.
- Explain the history and development of human services in the United States.
- Demonstrate knowledge of social welfare as a system designed to serve people, groups, community and society.
- Demonstrate knowledge of the language, terminology, theories, models, techniques, interventions, and strategies applicable to human services.
- Explain interventions, techniques, and strategies for assisting individuals, families, groups, organizations, and communities.
- Demonstrate an understanding of the impact of discrimination, racism, micro/macroaggressions, inequities, and oppression on individuals and society.
- Demonstrate a basic knowledge of results-based accountability in a disciplined way of thinking and acting to improve entrenched, complex, and current social problems.

Human Services General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*

- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- *(BIO 1100 AND BIO 1100L recommended)*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Human Services Program Core (27 credits)

- SOC 1001 - Principles of Sociology *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 2441 - Human Services Agencies and Organizations *Credits: 3*
- HSER 2242 - Human Services Skills and Methods *Credits: 3*
- **OR** HSER 2247 - Change Theory and Strategies in Behavioral Health Care *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- HSER 2106 - Professional, Legal, and Ethical Issues in Human Services *Credits: 3*
- HSER 2696 - Human Services Field Work I *Credits: 3*
- **OR** HSER 2543 - Social and Contemporary Issues in Human Services *Credits: 3*
- HSER 2351 - Working with Individuals and Families *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*

HS Management Courses (12 credits)

- BUSN 2100 - Business Communications *Credits: 3*
- **OR** PSY 2047 - Industrial & Organizational Psychology *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- HSER 2600 - Supervision and Management in Human Services *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- **OR** BMGT 2040 - Managerial Communications *Credits: 3*

Total Credits: 61-62

Human Services: Management Certificate (HSMG-CC-HS)

The Human Services Management certificate is designed to provide education and training for individuals seeking entry level employment in various human service settings. Human services include a broad field and students learn in courses which areas they would like to focus on for their careers. It is also designed to provide a basis for those who choose to continue their education in community services, early intervention and prevention, gerontology, mental health, home visitation, educational programming, addiction counseling, advocacy, social justice, and other related fields.

This career certificate is designed to prepare students for diverse employment opportunities and competent performance in a variety of entry-level positions in management or human resources. Instruction is cross-disciplinary and designed for transferability for those wishing to continue their studies. Emphasis is on application of skills. This certificate is interdisciplinary in nature and embraces an integrated and holistic educational approach. Students may be required to complete a background check, drug screening, and proof of health (e.g., vaccinations) for field work. Field work may be required which may include travel at the student's expense, coordination, and planning.

Learning Outcomes:

- Students will demonstrate basic knowledge of, and an understanding of the core management functions such as planning, organizing, leading, and controlling.
- Examine the theoretical and practical understanding and management of service delivery/Examine and demonstrate a thorough understanding of theories such as management and behavioral and be able to apply that theory to real-world situations.
- Identify the needs and strengths inherent in individuals, families, and communities, and work to develop program services that address needs.
- Practice management skills, including effective communication, human relations, teamwork, and negotiation skills.
- Identify best practices (techniques and strategies) for creating work environments that foster corporate social responsibility, sustainability, and long-term growth.
- Examine current laws applicable to human service and business operations such as hiring and training personnel.
- Identify ethical and legal expectations, and current challenges/issues.
- Examine the theoretical and practical understanding and management of service delivery.
- Analyzing complex managerial and organizational situations, considering the larger context, strategy, policy, ethics, and justice.
- Describe skills needed to work with, supervise, train, mentor, and motivate employees.
- Utilize human services, knowledge, skills, and resources to enhance career prospects and performance.

Required Courses

- BMGT 2100 - Organizational Behavior *Credits: 3*
- **OR** PSY 2047 - Industrial & Organizational Psychology *Credits: 3*
- **OR** BMGT 2200 - Human Resource Management *Credits: 3*
- BMGT 2020 - Principles of Management *Credits: 3*
- HSER 2600 - Supervision and Management in Human Services *Credits: 3*
- BUSN 2100 - Business Communications *Credits: 3*
- **OR** BMGT 2040 - Managerial Communications *Credits: 3*
- ENG 1010 - Composition *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 2441 - Human Services Agencies and Organizations *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*
- **OR** PSY 1011 - General Psychology I *Credits: 3*
- PSY 2053 - Multicultural Psychology *Credits: 3*
- **OR** SOC 2020 - Racial and Ethnic Diversity *Credits: 3*

Total Credits: 27

Human Services: Mental Health Certificate (MNHL-CC-HS)

The Human Services Mental Health Certificate prepares students for entry level positions as mental health aids, work in rehabilitation agencies, or at other mental health agencies. Students who complete this certificate are assigned to work under the supervision of other licensed and/or credential professionals such as social workers, case managers, counselors, addiction specialists, and psychologists and handle a wide range of entry level job responsibilities.

The certificate is designed to provide education and training for individuals seeking entry employment in various human service settings. It is also designed to provide a basis for those who choose to continue their education in social work, early intervention and prevention, gerontology, mental health, home visitation, early childhood and education programming, addiction, advocacy, social justice, and other related fields.

This 30-credit career certificate is designed to prepare students for diverse employment opportunities and competent performance in a variety of entry-level community, care related, and social service minded organizations. Instruction is cross-disciplinary and designed for maximum transferability for those wishing to continue their studies to psychology, social work, education, or other helping professions. Emphasis is on the empirical and theoretical aspects of the social sciences and application through experiential learning including a practicum. This degree is interdisciplinary in nature and embraces the holistic approach. Students may be required to complete a background check, drug screening, and proof of health (e.g., vaccinations) for field work. Field work may be required which may include travel at the student's expense, coordination, and planning.

Learning Outcomes:

Student will understand and/or acquire knowledge:

- The history and foundation of the human services profession.
- Entry-level skills of appropriate strategies, techniques, and intervention for best practices.
- Working collaboratively in and with groups of diverse sizes and demographics.
- Skills and methods appropriate for use and application with diverse populations.
- Entry-level competency in the performance of case management needs assessment, group work, interviewing process, and client engagement.

See program advisor/coordinator or an academic counselor to discuss practicum (HSER 2690 and HSER 2696) requirements during your first semester at the CT State Community College. Both HSER 2690 and HSER 2696 require 120 hours of field work. Finally, students may be required to complete a background check, proof of health (e.g., vaccinations), and drug screening for field work.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- PSY 2045 - Abnormal Psychology *Credits: 3*
- PSY 2053 - Multicultural Psychology *Credits: 3*
- **OR** SOC 2020 - Racial and Ethnic Diversity *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 1034 - Introduction to the Mental Health System *Credits: 3*
- PSY 2001 - Lifespan Development *Credits: 3*
- HSER 2242 - Human Services Skills and Methods *Credits: 3*
- HSER 2690 - Behavioral Healthcare Fieldwork *Credits: 3*
- **OR** HSER 2696 - Human Services Field Work I *Credits: 3*

Total Credits: 30

Human Services: Mental Health, AS (MNHL-AS-HS)

The Human Services program is designed to provide education and training for individuals seeking employment in various human service settings. The program is also designed to provide a basis for those who choose to continue their education in social work, early intervention and prevention, gerontology, mental health, home visitation, early childhood programming, addiction counseling, advocacy, social justice, and other related fields.

Opportunities in human services include working in group homes, social service agencies, youth recreational centers, educational settings, senior centers and assisted living programs. Human services is a broad field and students learn in courses which areas they would like to focus on for their careers.

This career program is designed to prepare students for diverse employment opportunities and competent performance in a variety of entry-level community, counseling-related, and social service minded organizations. Instruction is cross-disciplinary and designed for maximum transferability for those wishing to continue their studies to psychology, social work, education, or other helping professions. Emphasis is on the empirical and theoretical aspects of the social sciences and application through experiential learning including a practicum. This degree is interdisciplinary in nature and embraces the holistic approach. All majors must complete a minimum of three credits in an Human Services Field Work I. Finally, students may be required to complete a background check, drug screening, and proof of health (e.g., vaccinations) for field work and field work may involve travel which is at the student's own expense, coordination, and planning.

Program Learning Outcomes:

- Explain and compare the theories pertaining to adjustment, learning theories, and development theories; and explain and compare treatment methods and intervention modalities theories.
- Explain and compare the etiological factors in psychopathology, including the biological, sociological, environmental, and psychological factors.
- Demonstrate the use of methods of research and reporting, using psychological, sociological, educational, therapeutic, and clinical terminology.
- Demonstrate an understanding of the personality and behavioral factors, both integrative (adaptive) and disintegrative (maladaptive) which contribute to individuals/clients' coping skills dealing with stress, conflict, and hardship.
- Demonstrate an understanding of the normative developmental patterns and how this understanding impacts our understanding of abnormal behavior and clinical/treatment interventions.
- Integrate knowledge and skill in achieving competency in functional and responsive therapeutic abilities.
- Demonstrate skills in client needs assessment and in the provision of information and referral for client access to resources; and use appropriate human service practice skills within the context of providing human services.
- Demonstrate an awareness of self as a change agent.
- Analyze the impact of collaborative social service systems.
- Explain the history and development of human services in the United States.
- Demonstrate knowledge of social welfare as a system designed to serve people, groups, community and society.
- Demonstrate knowledge of the language, terminology, theories, models, techniques, interventions, and strategies applicable to human services.
- Explain interventions, techniques, and strategies for assisting individuals, families, groups, organizations, and communities.
- Demonstrate an understanding of the impact of discrimination, racism, micro/macroaggressions, inequities, and oppression on individuals and society.
- Demonstrate a basic knowledge of results-based accountability in a disciplined way of thinking and acting to improve entrenched, complex, and current social problems.

Human Services General Education Core (21-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*

- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- *(BIO 1100 AND BIO 1100L recommended)*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Human Services Program Core (27 credits)

- SOC 1001 - Principles of Sociology *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- HSER 2441 - Human Services Agencies and Organizations *Credits: 3*
- HSER 2242 - Human Services Skills and Methods *Credits: 3*
- **OR** HSER 2247 - Change Theory and Strategies in Behavioral Health Care *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- HSER 2106 - Professional, Legal, and Ethical Issues in Human Services *Credits: 3*
- HSER 2696 - Human Services Field Work I *Credits: 3*
- **OR** HSER 2543 - Social and Contemporary Issues in Human Services *Credits: 3*
- HSER 2351 - Working with Individuals and Families *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*

Mental Health Courses (12 credits)

- ANTH 1018 - Health, Healing, and Culture *Credits: 3*
- HSER 1034 - Introduction to the Mental Health System *Credits: 3*
- HSER 2800 - Foundations of Research Methods in Human Services and Education *Credits: 3*
- PSY 2045 - Abnormal Psychology *Credits: 3*

Total Credits: 61-62

Human Services: Social Work Studies - CSCU Transfer Degree, AA (HSSW-AA-TAP)

Admission to CSU Social Work programs is highly competitive. This A.A. degree does NOT guarantee admission to any CSU Social Work degree program. With this degree, you will be able to transfer to any CSU and apply to the following majors at the following campuses:

Central Connecticut State University Social Work, B.A.
Eastern Connecticut State University Social Work, B.A.
Southern Connecticut State University Social Work, B.S.
Western Connecticut State University Social Work, B.A.

The Social Work Studies A.A. degree is the first degree towards becoming a State of CT certified social worker.

Learning Outcomes:

- Students who complete this degree are prepared to transfer to a four-year CSU university with junior status.
- Students who complete this degree are prepared to apply for admission to a CSU Social Work B.A. degree program.

In addition to the above, students who complete this program of study should be able to:

- Identify the historical and philosophical foundations of social welfare
- Apply the ecological system perspective to micro-, meso-, and macro- client systems
- Demonstrate basic assessment and problem-solving skills to a range of micro-, meso-, and macrosystems problems
- Identify and resolve ethical dilemmas
- Develop and sustain professional relationships with diverse populations
- Demonstrate active listening, verbal, non-verbal, and written communication skills with diverse populations 7. Self-evaluate thoughts, feelings and behaviors to ensure professional conduct.

How to apply to a CSU Social Work Program:

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 1003, HSER 1001/SOC 235, SOC 1001, BIO 115, POLS 1002, & MATH 1200/MAT 201/MATH 1201/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 HSER 1001/SOC 235 and SW 227.
5. Minimum scores of 3 on the Professional Social Work Disposition Rubric for SW 225, HSER 1001/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.

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).

You should prepare the following documents to be uploaded with your application:

1. Application Essay
2. Resume (optional)
3. Supplemental information regarding community standards (if relevant)
4. Transcripts from all higher education institutions attended (see instructions)
5. Professional Reference

For admission to SCSU's Social Work program

Students interested in majoring in social work must complete a two-step admission process. Initially, students must be accepted into the University by the Admissions Office. Then, application is made for admission to the Bachelor of Social Work Program in the spring semester prior to the fall semester in which students anticipate enrolling in 300-level social work courses. Applications are available on the Department of Social Work website. The Department of Social Work admissions application deadline is the 1st of March. Students who plan to apply to both SCSU and the BSW Program for a Fall semester date may need to complete both admission processes simultaneously. For optimal consideration for acceptance into the program, you must express your intent to apply prior to the March 1 admissions application deadline by emailing the BSW Coordinator.

For admission to WCSU's Social Work program

Social work majors must earn at least a "C+" in all designated major courses to have the course credit apply to the degree program. Students must apply for junior and senior program status following a group advisement session (for potential Juniors in late fall preceding the registration period for spring semester; for potential Seniors in spring semester of the junior year). Transfer students are required to interview with the department chair, the student must arrange the meeting and meet the above criteria. The Junior standing class is limited to 45 Social Work majors. If applications that meet minimum requirements exceed 45 majors, the 45 students with the top GPAs in Social Work Major Requirements will be given first preference, with university GPA serving as Social Work GPA tiebreaker.

Framework Courses (31-33 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- **OR** BIO 1100 - Principles of the Human Body *Credits: 3*
 - **AND** BIO 1100L - Principles of the Human Body Lab *Credits: 1*
- SOC 1001 - Principles of Sociology *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30 credits)

- Elective GLKY - Global Knowledge Course *Credits: 3*
- Elective CRTY - Creativity Course *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- SOC 1003 - Social Problems *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- ANTH 1005 - Introduction to Cultural Anthropology *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*
- **OR** SOC 1035 - The History of Social Welfare *Credits: 3*
- Unrestricted Elective *Credits: 3 (Recommended course SOC 2010)*

Directed Electives: Choose 1 or 2 courses

- POLS 1022 - Politics of Social Welfare *Credits: 3*
- PSY 2012 - Health Psychology *Credits: 3*
- PSY 2045 - Abnormal Psychology *Credits: 3*
- SOC 2010 - Sociology of the Family *Credits: 3*
- SOC 2020 - Racial and Ethnic Diversity *Credits: 3*
- SOC 2025 - Death and Dying *Credits: 3*
- SOC 2085 - Community Organization *Credits: 3*
- HSER 1535 - Child Advocacy in Human Services *Credits: 3*
- HSER 1643 - Disabilities and Mental Health *Credits: 3*
- HSER 1034 - Introduction to the Mental Health System *Credits: 3*
- HSER 1040 - Introduction to Behavioral Healthcare *Credits: 3*
- HSER 1070 - Introduction to Gerontology *Credits: 3*
- HSER 2247 - Change Theory and Strategies in Behavioral Health Care *Credits: 3*
- HSER 2543 - Social and Contemporary Issues in Human Services *Credits: 3*
- HSER 2002 - Introduction to Counseling and Interviewing *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- HSER 2106 - Professional, Legal, and Ethical Issues in Human Services *Credits: 3*
- HSER 2441 - Human Services Agencies and Organizations *Credits: 3*
- HSER 2242 - Human Services Skills and Methods *Credits: 3*
- HSER 2600 - Supervision and Management in Human Services *Credits: 3*
- HSER 2351 - Working with Individuals and Families *Credits: 3*
- HSER 2696 - Human Services Field Work I *Credits: 3*
- HSER 2690 - Behavioral Healthcare Fieldwork *Credits: 3*

Total Credits 61-63

Liberal Arts & Sciences, Associate of Arts (LASC-AA)

The Liberal Arts and Science Associate of Arts degree program provides students with a broad background that prepares them for transfer to a bachelor's degree program at a four-year college or university. Students will take a wide range of courses with an emphasis on fulfilling general education or similar requirements at four-year colleges and universities. The Associate of Arts (A.A.) emphasizes courses in the humanities, arts, and social sciences.

Program Learning Outcomes:

- Communicate clearly and persuasively both in written and oral forms, including in ways that involve and document outside sources.
- Analyze literary, artistic, or philosophical works of world cultures.
- Analyze changes and developments in history, including their causes and effects.
- Apply social scientific theories to understand human behavior and world events.
- Use mathematical tools and technology to create mathematical models.
- Describe scientific principles and apply them to understand the physical world.
- Identify the various ways in which diversity exists in our world, such as through analyzing artistic and literary works, historical examples, statistical information, or present-day cases.

General Education Courses (30-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRXX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (30-32 credits)

All courses must be at the 1000 level or above.

- **Choose one additional course in Arts:** ART, ARTH, MUS, or THR *Credits: 3*
- **Choose one additional course in Social/Behavioral Science:** *Credits: 3*
ANTH, ECON, GEOG, POLS, PSYC, SOC, WGS
- **Choose one additional course in Humanities:** *Credits: 3*
ENG, HIST, PHIL, HUM, COMM
- **Choose two additional Liberal Arts courses at the 1000 level or above:**
ANTH, ART, ARTH, ASTR, BIO, CHEM, COMM, DGA, EARTH, ECON, ENG, ENV, GEOG, GEOL, GRA, HIST, HUM, INDS, MATH, METR, MUS, OCEN, PHIL, PHYS, POLS, PSY, SOC, THTR, ARAB, CHNS, FREN, GERM, ITAL, JAPN, LATN, RUSN, SPAN, ASL
- **Choose 6-8 credits of ARAB, CHNS, FREN, GERM, ITAL, JAPN, LATN, RUSN, SPAN, ASL, or the two upper-level courses of ESO**
The completion of three years of study up to the third level in a single language at the high school level waives the language requirement for the Liberal Arts and Science, A.A. Degree. If a student can waive the required 6-8 credits of a language, they must substitute 6-8 credits of free elective courses.
Transfer institutions can vary widely in their foreign language requirements. Additionally, sign language courses do not transfer in this requirement at all schools. For example, sign language courses fulfill this requirement at CCSU, but not ECSU. Before selecting a language sequence, students should be aware of the specific transfer requirements for the colleges and universities to intended for transfer and/or consult an advisor.
- **Choose 9 Credits of 1000-level or Above Free Electives** *Credits: 9*

Total Credits: 60-66

Diversity Requirement Students must take two courses totaling 6 credits or more designated to meet the CT State Diversity requirements. This requirement can be met with General Education courses and/or with Liberal Arts & Science program or elective courses.

Liberal Arts & Sciences, Associate of Science (LASC-AS)

The Liberal Arts and Science Associate in Science degree program provides students with a broad background that prepares them for transfer to a bachelor's degree program at four-year college or university. Students will take a wide range of courses with an emphasis on fulfilling general education or similar requirements at four-year colleges and universities. The Associate of Science (A.S.) emphasizes courses in the sciences and mathematics.

Program Learning Outcomes:

- Communicate clearly and persuasively both in written and oral forms, including in ways that involve and document outside sources.
- Analyze literary, artistic or philosophical works of world cultures.
- Analyze changes and developments in history, including their causes and effects.
- Apply social scientific theories to understand human behavior and world events.
- Use mathematical tools and technology to create mathematical models.
- Describe scientific principles and apply them to understand the physical world.
- Identify the various ways in which diversity exists in our world, such as through analyzing artistic and literary works, historical examples, statistical information, or present-day cases.

General Education Courses (32-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*
- **OR** MATH 1600 - Pathway to Calculus: College Algebra *Credits: 3*
- **OR** MATH 1610 - Precalculus *Credits: 4*
- **OR** MATH 2600 - Calculus I *Credits: 4*
- **OR** MATH 2610 - Calculus II *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Choose One Science Sequence

- BIO 1210 - General Biology I *Credits: 4* **AND** BIO 1220 - General Biology II *Credits: 4*
- CHEM 1210 - General Chemistry I *Credits: 4* **AND** CHEM 1220 - General Chemistry II *Credits: 4*
- PHYS 1201 - General Physics I *Credits: 4* **AND** PHYS 1202 - General Physics II *Credits: 4*
- PHYS 2201 - Calculus-Based Physics I *Credits: 4* **AND** PHYS 2202 - Calculus-Based Physics II *Credits: 4*

Program Courses (30-33 credits)

All courses must be at the 1000 level or above.

- Choose one additional course in Arts: ART, ARTH, MUS, or THR *Credits: 3*
- Choose one additional course in Social/Behavioral Science: *Credits: 3*
ANTH, ECON, GEOG, POLS, PSYC, SOC, WMS
- Choose one additional course in Humanities: *Credits: 3*
ENG, HIST, PHIL, HUM, COMM, INDS, ARAB, CHNS, FREN, GERM, ITAL, JAPN, LATN, RUSN, SPAN, SGN, ASL

- Choose TWO additional courses in Science, Mathematics, or Computer Science: *Credits: 6-8*
ASTR, BIO, CHEM, CSC, EARTH, ENV, GEOL, MATH, OCEN, PHYS, SCI
- Choose one additional course in MATH at level 1600 or higher: *Credits: 3-4*
MATH 1600, MATH 1610, MATH 2600, MATH 2610 sequence *STRONGLY* suggested
- **Choose 12 Credits of 1000-level or Above Electives** *Credits: 12*
Remaining Unrestricted Electives- Students should use these credits to take courses to prepare for requirements of intended transfer degree program. **Students should also consider using unrestricted electives to meet foreign language requirements at the transfer institution.**

Total Credits: 62-67

Diversity Requirement

Students must take two courses totaling 6 credits or more designated to meet the CT State Diversity requirements. This requirement can be met with General Education courses and/or with Liberal Arts & Science program courses and electives.

Library Technology Certificate (LBTC-CC)

This one-of-a-kind certificate is 27- credit, fully online, recognized by the American Library Association, and is the only one of its kind in New England. This program of study is an approved provider of library technology courses for the certification awarded by The American Library Association (ALA). The program of study ensures that students gain the knowledge required for successful employment in 21st century libraries. With 100% of its courses online, scheduling is flexible. The library technology certificate is a perfect program for anyone who wants to start a career as library staff involved in library support and operations or broadening their library technology knowledge and skills. While it does not prepare individuals for all levels of employment that require a library science graduate degree, our graduates are well prepared to perform a wide range of library skills and services and the certificate is highly regarded in the library community.

Learning Outcomes:

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

- explain the mission of libraries, departments and services of libraries, and basic library policies.
- demonstrate good customer service and communication skills.
- recognize and explain common library terminology.
- apply knowledge of basic technology skills (including online computer automation systems; word processing, email, Internet and other productivity software; and internet and database searching techniques) to assist patrons in a rapidly changing technological environment.
- explain basic reference and information resources and referral procedures.
- explain basic library classification systems and use them to catalog and retrieve materials.
- demonstrate appropriate methods and techniques for material processing, storage, and preservation.

Certification

The Library Support Staff Certification Program (LSSC) from the American Library Association - Allied Professional Association (ALA-APA) recognizes Three Rivers Community College as one of the few national academic providers of approved Library Technology courses for support staff. Three Rivers Community College will continue to hold this recognition up until the point of the merger. At the time of the merger, the recognition will be transferred over to CT State Community College.

Required Courses

- ENG 1010 - Composition *Credits: 3*
- LIBR 1001 - Introduction to Library Public Services *Credits: 3*
- LIBR 1004 - Introduction to Reference Services *Credits: 3*
- LIBR 1016 - Cataloging and Classification *Credits: 3*
- LIBR 1023 - Introduction to Library Tech Services *Credits: 3*
- LIBR 1025 - Digital Media *Credits: 3*
- LIBR 1027 - Management and Teamwork *Credits: 3*
- LIBR 2001 - Digital Information and Technology *Credits: 3*
- LIBR 1020 - Library Youth Services *Credits: 3*
- **OR** LIBR 2095 - Supervised Field Placement *Credits: 3* (LIBR 2095 required for students without library employment experience)

Total Credits: 27

Pathway to Teaching Careers, AA (PTCH-AA)

This program is designed for students who wish to transfer to a Connecticut State University to pursue teacher certification in elementary and/or secondary education. This program also prepares students for teacher preparation programs at many private institutions. The courses will prepare students to fulfill general education requirements, begin foundational work in education theory and practice, and develop greater expertise in their fields of study. Upon successful completion of the program, students will be eligible to transfer their credits to a CSU, where they can apply for acceptance into the teacher certification program. Students are advised to review the requirements of the transfer institution with their academic advisor prior to course selection.

Learning Outcomes:

In addition to meeting the general education outcomes, graduates will:

- Work creatively with others, including culturally and intellectually diverse peoples; think critically; and demonstrate an appreciation for learning.
- Describe the role of the teacher in the classroom.
- Identify the requirements for teaching based on academic program requirements and state certification requirements.
- Recognize broader historical, cultural, global and scientific perspectives as they relate to education.
- Demonstrate a respect for others, coupled with an understanding of ethical behavior and civic responsibility.

General Education Courses (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH Requirement *Credits: 3-4*
- MATH 1004 - Math for Elementary Education: Algebra/Number Systems (Pre-Elem Ed)
- MATH 1100 - Quantitative Reasoning (Pre-Secondary Ed Non-STEM)
- MATH 1600 - Pathway to Calculus: College Algebra (Pre-Secondary Ed STEM)
 OR MATH 2600 - Calculus I (Pre-Secondary Ed STEM)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4* **See advisor for recommendations.**
- HIST 1015 - US History to 1877 *Credits: 3*
- **OR** HIST 1016 - US History from Reconstruction *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39-45 credits)

- EDUC 2010 - Foundations of U.S. Education *Credits: 3*
- EDUC 2020 - Normal and Exceptional Childhood and Adolescent Development *Credits: 3*
- **OR** ECED 2515 - Exceptional Learners *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*
- **For Elementary Education Emphasis Credits: 3**
 ECED 1002, PSY 2001, or PSY 2004
- **OR For Secondary Education Emphasis Credits: 3**
 PSY 2001 or PSY 2004
 Recommended Courses: See advisor based on transfer institution and endorsement level.
- **For Elementary Education Emphasis Credits: 3-4**
 MATH 1004 Math for Elementary Education: Algebra/Number Systems
- **OR For Secondary Education Emphasis Credits: 3-4**
 MATH 1100 Math for the Liberal Arts or higher
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- COMM 1301 - Public Speaking *Credits: 3*

- **OR** COMM 1010 - Introduction to Mass Communication *Credits: 3*
- World Language *Credits: 0-8*
Choose 0-8 credits of a Foreign Language, ASL, or the two upper-level courses of ESL
If exempt from all or some of world language requirement through placement, choose appropriate number of content area electives to meet total credit requirement for the degree (minimum 60).
- Content Area Electives *Credits: 7-23*
Choose appropriate number of content area electives to meet total credit requirement for the degree (minimum 60).

Total Credits: 60-66

Political Science Studies - CSCU Transfer Degree, AA (POLS-AA-TAP)

CSCU Pathway Transfer, A.A. degree programs are for Connecticut Community College students who wish to transfer to one of the Connecticut State Universities or Charter Oak without either losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline. Community College students can complete associate degree programs that transfer without hassle to all Connecticut State Universities and Charter Oak State College offering their major. Upon transfer, students are guaranteed full junior status and can complete a bachelor's degree in their major without losing any credits or be required to take any extra credits.

Learning Outcomes:

Upon successful completion of the CSCU Pathway Transfer: Political Science Studies degree program, students will have met the following competency outcomes and goals:

- Aesthetic Dimensions
- Continuing Learning/Information Literacy
- Critical Analysis/Logical Thinking
- Ethics
- Quantitative Reasoning
- Historical Knowledge and Understanding
- Oral Communications
- Scientific Reasoning
- Scientific Knowledge and Understanding
- Social Phenomena
- Written Communication

With this degree students 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.

Framework Courses (31-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1100 or higher *Credits: 3-4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30 credits)

- Elective CRTY - Creativity Course *Credits: 3*
- Elective GLKY - Global Knowledge Course *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- One additional POLS course *Credits: 3*

- One additional POLS course *Credits: 3*
- Unrestricted Electives *Credits: 15*

You are free to choose any courses at or above 1000-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 Credits: 61-64

Psychology Studies - CSCU Transfer Degree, AA (PSYC-AA-TAP)

Students must declare the Transfer Ticket CSCU Pathway Transfer Degree: Psychology Studies. A.A. major as their intended path of study. With this degree, students will be able to transfer to the following majors at a State University or Charter Oak State College:

- Central Connecticut State University Psychological Science, B.A.
- Eastern Connecticut State University Psychology, B.S. Once you transfer to Eastern, you will have the opportunity, with the permission of an advisor, to select one of the following concentrations: Behavior Analysis Developmental Psychology, Industrial-Organizational Psychology, Mental Health Counseling
- Southern Connecticut State University Psychology, B.A.
- Western Connecticut State University Psychology, B.A.
- Charter Oak State College Psychology, B.S.

Learning Outcomes:

- Students can transfer to one of the four state universities in the CSCU System including Charter Oak State College.
- Understand and use terminology appropriate to Psychology Studies.
- Understand theories and research methods used in Psychology Studies.
- Apply critical thinking and problem-solving skills in Psychology Studies.
- Recognize the need to engage in life-long learning.

There is a recommended course of study for the CSCU Pathway Transfer Degree: Psychology Studies, A.A. 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 from provided lists of the courses in the required categories. Students are strongly encouraged to take PSY 112 General Psychology II, which can fulfill the Social/Behavioral Science (SBSX) General Education Requirement. Students can also take one or two additional PSY courses, with advisement.

For Unrestricted Electives, students are free to choose any courses at or above 1000-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.

To graduate and be guaranteed admission to a State University or Charter Oak State College, the student must have an overall 2.0 grade point average.

Framework Courses (31-33 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30-33 credits)

- PSY 1011 - General Psychology I *Credits: 3*
- PSY 2001 - Lifespan Development *Credits: 3*
- **OR** PSY 2004 - Child and Adolescent Development *Credits: 3*
- **OR** PSY 2008 - Psychology of Adult Development and Aging *Credits: 3*
- *(For students considering transferring to CCSU, PSY 2001 is the recommended choice. For students considering transferring to WCSU, any course in this list other than PSY 2001 is recommended.)*
- PSY 2045 - Abnormal Psychology *Credits: 3*
- Elective GLKY - Global Knowledge Course *Credits: 3*
- Elective CRTY - Creativity Course *Credits: 3*
- THE ELECTIVES CHOSEN FROM THE BELOW TWO CATEGORIES MUST COMBINE FOR 15 CREDITS
- Choose one or two of the three courses below
- PSY 2040 - Social Psychology *Credits: 3*
- **OR** PSY 2043 - Theories of Personality *Credits: 3*
- **OR** PSY 2047 - Industrial & Organizational Psychology *Credits: 3*
- Unrestricted Electives *Credits: 9-12*
(Students are strongly encouraged to take PSY 1012 General Psychology II . Students can also take one or two additional PSY courses, with advisement.)

Total Credits: 61-63

Sociology Studies - CSCU Transfer Degree, AA (SOCI-AA-TAP)

This program is a **CSCU Pathway Transfer Degree in Sociology, A.A.** that is intended for Connecticut Community College students to transfer to Connecticut State Universities (Southern CT State University, Central CT State University, Eastern State University, Western State University) and Charter Oak State College without either losing any credits or being required to take extra credits in order to complete a bachelor's degree in that same discipline.

Program Learning Outcomes:

- Complete an Associate of Arts degree in Sociology.
- Transfer seamlessly into a Bachelor of Arts or Science Degree in Sociology with junior-level status in the receiving CSCU institution as part of the CSCU Transfer Tickets program.

Framework Courses (30-34 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1200 - Statistics I *Credits: 3*
- **OR** MATH 1201 - Statistics I with Computer Applications *Credits: 4*
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCR X - Scientific Reasoning Course *Credits: 4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective WRIX - Written Communication II Course *Credits: 3*
- Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective HISX - Historical Knowledge Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Pathway Courses (30-credits)

- Elective CRTY - Creativity Course *Credits: 3*
- Elective GLKY - Global Knowledge Course *Credits: 3*
- SOC 1001 - Principles of Sociology *Credits: 3*
- Sociology Electives - 6 credits must be at the 2000 level *Credits: 9*
- Open Electives *Credits: 12*

Total Credits: 60-64

Speech-Language Pathology Assistant, AS (SLPA-AS)

The Speech-Language Pathology Assistant (SLPA) program is designed to prepare graduates for careers working in elementary and secondary schools with children who have communication disorders. SLPAs work under the supervision of a licensed, certified Speech-Language Pathologist. The SLPA program provides students with a specialized career path as a paraprofessional.

The array of courses and programs offered will help to ensure learner success in the program and will meet local and state workforce demands in a field where there is a great need for qualified staff at the assistant level.

The program is designed for individuals currently working as paraprofessionals who wish to become Speech- Language Pathology Assistants, people seeking a career change, and all students interested in a career as an SLPA. The SLPA is guided by the program philosophy and mission statement of the Disability Specialist program. Students will receive specific skill instruction to prepare them to become effective SLPAs coupled with a positive value base that will prepare them to assist individuals with disabilities toward the goals of community inclusion and participation and the attainment of their potential.

Learning Outcomes:

Upon successful completion of all Speech-Language Pathology Assistant program degree requirements, graduates will

- Describe the process of communication and the characteristics of effective communication.
- Define the differences between communication disorders and communication differences.
- Describe the stages of language and literacy development and distinguish among language delays, language disorders and culturally-based language differences.
- Explain and differentiate among the characteristics, etiologies, and impact of phonology, voice, fluency and language disorders.
- Explain the effect of hearing loss on the development of communication skills.
- Describe the role of the speech language pathology assistant in supporting therapy plans for students in educational settings.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

General Education Courses (21-22 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1201 Recommended) (Pending Spring 2023 Shared Governance Approval)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- Elective SCRX - Scientific Reasoning Course *Credits: 4*
- **OR** Elective SCKX - Scientific Knowledge Course *Credits: 3-4*
- Elective SBSX - Social / Behavioral Science Course *Credits: 3*
- Elective ORAX - Oral Communication Course *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (39 credits)

- SLP 1011 - Speech-Language Pathology I *Credits: 3*
- SLP 1012 - Speech and Language Development: Birth-to-Five *Credits: 3*
- SLP 1020 - Language Disorders & Treatment in School-Age Children *Credits: 3*
- SLP 1021 - Phonetics for Speech-Language Pathologists *Credits: 3*
- SLP 1025 - Speech Sound Disorders and Treatment in Children *Credits: 3*
- PSY 1163 - Children with Disabilities *Credits: 3*
- PSY 1183 - Learning Process and Disability *Credits: 3*
- PSY 1184 - Assistive Technology Across the Lifespan *Credits: 3*

- PSY 1185 - Issues and Trends in Disabilities *Credits: 3*
- SOSC 2094 - Cooperative Education/Work Experience *Credits: 3*
- POLS 1002 - American Government *Credits: 3*
- **OR** POLS 1003 - State and Local Government *Credits: 3*
- ECED 2331 - Language Development and Emergent Literacy in Young Children *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3*

Total Credits: 60-61

Therapeutic Recreation Certificate (THER-CC)

The Therapeutic Recreation (TREC) Certificate program is designed to prepare individuals for employment in the workplace as a Therapeutic Recreation Director (TRD) in the State of Connecticut. Students in the certificate program meet the standards established in the Public Health Code of the State of Connecticut which emphasizes that quality patient care will be provided by graduates to individuals in chronic, long term care facilities such as assisted living facilities, convalescent nursing homes, other care facilities with nursing supervision, and community settings.

Learning Outcomes:

The Therapeutic Recreation Certificate is dedicated to educating and training students to become competent professionals in the field. Graduates will:

- Meet the state health code requirements to hold the position of therapeutic recreation director (TRD) in the State of Connecticut.
- Demonstrate the ability to comprehend and apply the necessary skills required of a therapeutic recreation director.
- Demonstrate the ability to comprehend the needs of individuals with special needs and the positive outcomes of therapeutic recreation intervention.
- Demonstrate the ability to successfully assess, plan, implement, and evaluate therapeutic recreation programs for individuals with special needs both in a clinical and community setting.
- Demonstrate leadership, interpersonal, and communication skills necessary to work in a health care or community-based setting.

Required Courses

- ENG 1010 - Composition *Credits: 3 3* Composition
- HSER 1001 - Introduction to Human Services *Credits: 3*
- PSY 1011 - General Psychology I *Credits: 3 3* General Psychology
- TREC 1001 - Introduction to Therapeutic Recreation *Credits: 3*
- TREC 1002 - Processes and Techniques in Therapeutic Recreation *Credits: 3*
- TREC 2001 - Therapeutic Recreation Program Planning *Credits: 3*
- TREC 2023 - Therapeutic Recreation Leisure and Aging *Credits: 3*
- SOSC 2094 - Cooperative Education/Work Experience *Credits: 3*
- **OR** HSER 2696 - Human Services Field Work I *Credits: 3*
- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- **OR** PSY 1005 - The Psychology of Group Dynamics *Credits: 3*
- TREC 2015 - Therapeutic Recreation Leadership & Supervision *Credits: 3*
- **OR** HSER 2600 - Supervision and Management in Human Services *Credits: 3*

Total Credits: 30

Therapeutic Recreation, AS (THER-AS)

Therapeutic Recreation is a specialized allied health field within the recreation profession. According to the American Therapeutic Recreation Association (ATRA) "Recreational therapy, also known as therapeutic recreation, is a systematic process that utilizes recreation and other activity-based interventions to address the assessed needs of individuals with illness/and or disabling conditions, as a means to psychological health, recovery and well- being."

The Therapeutic Recreation associate degree is designed to address the need for a degree beyond the Therapeutic Recreation certificate. In addition to earning the Therapeutic Recreation Director (TRD) certification within the associate degree, a graduate from the associate degree in Therapeutic Recreation will have potential advancement opportunities in the field. This could include supervisory opportunities within the Therapeutic Recreation department in a long-term care setting or other health care settings working with an older population.

The associate degree in Therapeutic Recreation will also prepare students to work in a variety of therapeutic recreation settings such as rehabilitation facilities, correctional centers, group homes, community-based programs serving individuals with special needs and facilities for individuals with disabilities.

Students can expect to find employment upon completion of this degree program in a variety of Therapeutic Recreation settings or transfer to a baccalaureate institution in Therapeutic Recreation.

Learning Outcomes:

Upon successful completion of all Therapeutic Recreation associate degree program requirements the graduate will:

- Demonstrate the ability to understand and apply the necessary skills required of a Therapeutic Recreation professional in a variety of therapeutic recreation settings.
- Demonstrate knowledge of the varied needs of individuals identified as having special needs and the positive outcomes of the therapeutic recreation interventions by utilizing evidence-based practice modalities.
- Demonstrate the ability to assess, plan, implement, document, and evaluate therapeutic programs for individuals with special needs within both a therapeutic and community setting.
- Demonstrate the ability to conduct a variety of therapeutic modalities, interventions, and facilitation techniques to meet the varied needs of individuals within the therapeutic recreation setting.
- Demonstrate leadership, interpersonal and communication skills within the classroom setting and through work experience within a therapeutic recreation setting.
- Demonstrate professional behavior consistent with the therapeutic recreation code of ethics while participating in supervised internship experiences within the program.

In addition, the graduate will complete the comprehensive learning outcomes identified with the General Education Core.

Admission requirements: Open enrollment. Students may enroll in this program full -time or part-time and can attend day or evening classes.

Background checks may be required at internship setting.

Medical immunizations (Flu vaccine & Covid vaccine) may be required

National exams: There is no national exam for this level of education (associate degree in Therapeutic Recreation). Students may continue their education at a baccalaureate institution in Therapeutic Recreation and become qualified to sit for the national exam offered by the National Council for Therapeutic Recreation Certification (NCTRC) to become certified as a certified therapeutic recreation specialist (CTRS).

General Education Courses (22-24 credits)

- ENG 1010 - Composition *Credits: 3*
- MATH 1000 or higher *Credits: 3-4* (MATH 1100 recommended)
- Elective ARHX - Arts & Humanities Course *Credits: 3-4*
- BIO 1111 - Cell Biology with Organ Systems *Credits: 4*
- **OR** BIO 1100 - Principles of the Human Body *Credits: 3* **AND** BIO 1100L - Principles of the Human Body Lab *Credits: 1*
- PSY 1011 - General Psychology I *Credits: 3*

- COMM 1301 - Public Speaking *Credits: 3*
- CCS 1001 - College & Career Success *Credits: 3*

Program Courses (40 credits)

- HSER 2420 - Group and Interpersonal Relations *Credits: 3*
- **OR** PSY 1005 - The Psychology of Group Dynamics *Credits: 3*
- TREC 1001 - Introduction to Therapeutic Recreation *Credits: 3*
- TREC 1002 - Processes and Techniques in Therapeutic Recreation *Credits: 3*
- TREC 2001 - Therapeutic Recreation Program Planning *Credits: 3*
- TREC 2023 - Therapeutic Recreation Leisure and Aging *Credits: 3*
- TREC 2015 - Therapeutic Recreation Leadership & Supervision *Credits: 3*
- **OR** HSER 2600 - Supervision and Management in Human Services *Credits: 3*
- SOSC 2094 - Cooperative Education/Work Experience *Credits: 3*
- **OR** HSER 2696 - Human Services Field Work I *Credits: 3*
- PSY 2001 - Lifespan Development *Credits: 3*
- PSY 2045 - Abnormal Psychology *Credits: 3*
- TREC 2095 - Professional Practicum in Therapeutic Recreation *Credits: 4*
- PSY 1163 - Children with Disabilities *Credits: 3*
- PSY 1173 - Adults with Disabilities *Credits: 3*
- HSER 1001 - Introduction to Human Services *Credits: 3*

Total Credits: 62-64

COURSE DESCRIPTIONS

ACCT 1098 - Special Topics in Accounting

Credits: 3

This course provides a study of important trends and current issues in the field of accounting. Topics may include, auditing, financial accounting, managerial accounting, accounting systems, or taxation. Students should check the class schedule for listing of actual topics.

Prerequisite: ACCT 1130 and ACCT 1170 or permission of instructor.

Previous ACC* 198

ACCT 1130 - Principles of Financial Accounting

Credits: 3

A study of basic accounting principles and procedures, from the initial recording of transactions to the preparation and analysis of financial statements, with emphasis on theory as well as practice.

Prerequisite: MATH 0988/MATH 0989 with a grade of D- or higher OR placement using multiple measures

Previous ACC*113, ACC*115

ACCT 1170 - Principles of Managerial Accounting

Credits: 3

Basic concepts and practice of accounting's role in providing information to managers to assist in their planning, control and decision-making activities. Topics include cost accounting, cost behavior relationships, analyses for managerial decisions and the budget process.

Prerequisite: Completion of ACCT 1130 with a C or higher

Previous ACC*117, ACC*118

ACCT 1230 - Accounting Software Applications

Credits: 3

This course demonstrates the use of accounting information utilizing spreadsheet software. The following applications and techniques will be covered: spreadsheet basics, what-if analysis, financial statement analysis, inventory, payroll, fixed assets, amortization, and managerial accounting topics.

Prerequisite: ACCT 1170

Previous ACC* 123

ACCT 1234 - Certified Bookkeeper Review Course

Credits: 3

This course will review basic accounting principles related to maintaining accurate financial records for large and small businesses and nonprofit organizations. This course is a review for students preparing to take the Certified Bookkeeper Exam for the CB credential. Students will use American Institute of Professional Bookkeepers (AIPB)

materials for this course to cover all of the topics included on the exam.

Prerequisite: ACCT 1130 with a C or higher

ACCT 1250 - Accounting Applications I

Credits: 3

This course is designed to teach students to build a company's accounting system using QuickBooks or the latest accounting software. Students will learn to operate the software by entering realistic accounting transactions for a variety of business applications and by generating financial statements and spreadsheets. Topics include general ledger, accounts receivable, accounts payable, banking, payroll and advanced topics.

Prerequisite: Completion of ACCT 1130 with a C or higher

Previous ACC* 125

ACCT 1700 - Forensic Accounting & Fraud Examination

Credits: 3

A study of the basic principles and skills of Fraud Examination and Forensic Accounting. Emphasis is placed on financial forensic, prevention, deterrence, and detection of fraud.

Prerequisite: Completion of ACCT 1130 with a C or higher

Previous ACC* 170

ACCT 2095 - Coop Ed/Work Experience

Credits: 3

This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study including corporations, small businesses and state offices. Students planning to enroll in this course should meet with the Program Coordinator or Course Instructor to learn of existing Internship opportunities, or to define the elements of a meaningful internship experience either at their current employer or a new internship position. Students are responsible for attaining their own internship. The classroom component involves several seminars or workshops, meeting in the classroom and/or online during the semester to discuss the students' internship experience, as well as their academic, professional, and career development.

Prerequisite: 15 completed credit hours in the Accounting program/certificate including ACCT 1130, ACCT 1170, in the ACCT 2710

Previous ACC* 290

ACCT 2330 - Cost Accounting*Credits: 3*

This course provides opportunities for examining optional methods for handling accounting issues and will be interpretive in nature. Material, Labor, and Overhead costs are defined and their relationships are examined. This course presents the principles involved in determining the cost of manufacturing an article. Other topics covered include, but are not limited to, variable and fixed costs; break even analysis; process and job order costing; the master budget; alternative cost methods; cost allocation of joint products and by products; and the treatment of scrap, waste, and spoiled goods. Management decisions that are based on cost accounting information are studied through discussions and review of cost analysis.

Prerequisite: ACCT 1170 with a grade of C or higher.**Previous ACC* 233****ACCT 2410 - Federal Taxes I***Credits: 3*

An introduction to and survey of federal tax laws as they apply to the individual taxpayer. Topics include calculation of income, adjustments, exclusions, deductions, exemptions, credits, and computations.

Prerequisite: Completion of ACCT 1130 with a C or higher**Previous ACC* 241****ACCT 2710 - Intermediate Accounting I***Credits: 3*

An examination of generally accepted accounting principles related to preparation of the financial statements, including the cash flow statement. Valuation and disclosure of current assets including cash, accounts receivables, and inventory are studied in detail. Particular emphasis is given to balance sheet valuations and their relationship to income determination.

Prerequisite: ACCT 1170 with a C or higher**Previous ACC* 271, ACC* 275****ACCT 2720 - Intermediate Accounting II***Credits: 3*

This course is designed to further develop understanding of U.S. GAAP and how it is applied in practice. Financial reporting topics examined include the recognition and measurement of assets, liabilities and owners' equity. Student will prepare financial statements and external reports. The aim is to identify complex business transactions and their impact on financial statements. This course is a continuation of Intermediate Accounting I.

Prerequisite: ACCT 2710 with a C or higher**Previous ACC* 272, ACC* 276****ANTH 1001 - Introduction to Anthropology***Credits: 3*

This course introduces students to the core concepts, methods, and applications of anthropology and its four major fields (biological, archaeological, linguistic, and cultural). It examines the diversity and commonality of humans across time and place, ranging from the evolution of the human species through contemporary global challenges.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** BHEL, GLKY, LART**Previous ANT* 101****ANTH 1005 - Introduction to Cultural Anthropology***Credits: 3*

This course introduces students to the cross-cultural study of contemporary human communities through the tools and perspectives of cultural anthropology. Under examination will be the beliefs, values, rituals, customs, and material culture that inform and explain any society's world view. A variety of world cultures will be explored, including their cultural responses to change in this age of globalization.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** GLKY, LART, SSCI**Previous ANT* 105, ANT* 205****ANTH 1006 - Introduction to Biological Anthropology***Credits: 3*

This course introduces students to the field of biological anthropology, which studies human biological variation across time and place. Students will trace the evolution of the human species, drawing on evidence from the primate fossil record, comparative analysis with non-human primates, and the science of genetics. The course will also explore contemporary human biological variation and adaptations, resulting from the interaction of physical, environmental, and cultural factors.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** LART, SSCI**Previous ANT* 106****ANTH 1007 - Introduction to Forensic Anthropology***Credits: 3*

This course provides an introduction to forensic anthropology, a field of study that involves applying methods and theories about skeletal and other human remains to answering medical, legal and human rights questions. Forensic anthropologists often work closely with medical examiners, police officers, lawyers, human rights experts, native groups, and other specialists to identify human remains.

and assess the context of those deaths. Students will examine the techniques for the analysis of human remains and the ethical issues surrounding the treatment of human remains and the utilization of evidence gathered.

Prerequisite: Eligibility for ENG 1010

Elective Code(s): LART, SSCI

Previous ANT* 107

ANTH 1016 - Introduction to Japanese Culture

Credits: 3

An introduction to the contemporary culture of Japan through lectures, films, and readings. Using various examples of Japanese customs, social norms, and material culture, the course will explore how historical, religious, economic, geographic, and cultural characteristics influence the development of cultural behavior and expression.

Prerequisite: Placement in ENG 1010

Elective Code(s): LART, SSCI

Previous ANT* 116

ANTH 1018 - Health, Healing, and Culture

Credits: 3

This course investigates concepts of health, healing, illness, and pain across global cultures, including the United States and other societies. Using anthropological tools and perspectives, students will examine the interconnected biological, ecological, psychological, social, and cultural factors that shape human well-being and approaches to health care. The course explores applications of health anthropology to intercultural efforts for health and equity at the local and global levels.

Prerequisite: Placement in ENG 1010

Elective Code(s): LART, SSCI

Previous ANT* 118

ANTH 1201 - Introduction to Archaeology

Credits: 3

This course introduces students to the anthropological field of archaeology, the study of past and present cultures through the material objects that humans create and utilize. Utilizing texts and experiential learning activities, the course explores the research methods, ethics, and theoretical concepts that archaeologists use to investigate, interpret, and conserve these material artifacts. Students learn the broad story of the human past and its relevance to contemporary human communities, drawing on examples from the archaeological record.

Prerequisite: Eligibility for ENG 1010

General Education Code: Social and Behavioral Science (SBSX)

Elective Code(s): LART, SSCI

Previous ANT* 121

ANTH 1301 - World Prehistory

Credits: 3

This course provides the foundation for understanding the human story, from fossil evidence of the earliest humans to the development of complex societies. It introduces some of the most important achievements of our human species before written history. From the Early Man discoveries in Africa to the appearance of modern peoples who created the cave paintings during the Upper Paleolithic and from the builders of Stonehenge to the great civilizations of the Near East, Egypt and Mesoamerica, this course surveys those cultural developments that are the legacy of all peoples everywhere.

Prerequisite: Eligibility for ENG 1010

Elective Code(s): LART, SSCI

Previous ANT* 131

ANTH 1303 - Peoples of the World

Credits: 3

This course focuses on non-western societies to provide a broad understanding of social change and development in a global context, from an anthropological perspective.

Prerequisite: (ANTH 1001 OR ANTH 1005) AND Eligibility for ENG 1010

Elective Code(s): LART, SSCI

Previous ANT* 133

ANTH 1306 - Music Cultures of the World

Credits: 3

This course offers an opportunity to study a variety of ethnic music from around the world within the context of the societies that create it. While the primary focus will be limited to certain selected regions and traditions, the overall scope will be broad in that these regions represent many different countries. The approach to the course material is interdisciplinary as it incorporates aspects of the arts, humanities, and social sciences.

Prerequisite: Eligibility for ENG 1010

Elective Code(s): LART, SSCI

Previous ANT* 136

ANTH 1402 - Navajo Indians

Credits: 3

This course surveys the past and present experiences of the Navajo peoples of North America. It includes a multi-faceted examination of Navajo culture, including religion and religious ceremonies, history, psychology, life ways, linguistic patterns, social structure, art forms, and health care.

Elective Code(s): LART, SSCI

Previous ANT* 142

ANTH 1405 - Pueblo Indians*Credits: 3*

The course surveys the past and present experiences of the twenty Pueblo tribes of North America, with particular focus on the tribes of the US Southwest: the Hopi, Zuni, Acoma, Laguna, and Taos. It includes a multi-faceted study of Pueblo cultures, including religion and religious ceremonies, psychology, history, language and literature, daily life, health care, and artistic expression.

Elective Code(s): LART, SSCI**Previous ANT*** 145**ANTH 1500 - Sports and Culture***Credits: 3*

This course will explore the intersection of sports (professional and amateur) with culture from various perspectives including participating athletes, spectators, and the broader community. Issues of race, ethnic identity, gender equity, spiritualism, regionalism, and nationalism will be discussed. In addition to the major professional sports, athletics related to particular cultures will be examined (ie. Native American Lacrosse, Asian martial arts, and Gaelic Games). Course content will be presented through a variety of readings, films, lectures, and class discussions. Students will be assessed through a combination of short response papers, written exams, class participation, and an academic research presentation.

Prerequisite: Completion or eligible for ENG 1010**Elective Code(s):** LART, SSCI**Previous new****ANTH 2203 - Advanced Techniques in Archeology***Credits: 4*

Students will be trained to function in the field with some degree of independence through the participation in individual archaeological site survey research. Students will learn techniques for the analysis and interpretation of prehistoric artifacts, soils, floral and faunal remains. Three hours of class and field work. Three hours of laboratory to be arranged with the instructor.

Prerequisite: ANTH 1201**Elective Code(s):** LART, SSCI**Previous ANT*** 223**ANTH 2209 - Historical Archeology***Credits: 3*

Not a field course, this study seeks to present, in a classroom setting, the methods used by researchers in investigating sites of the 18th and 19th centuries and to illustrate the kinds of questions which historical archaeology is uniquely qualified to answer. Topics include approaches to documentary research; building materials and architectural styles; field strategies; identifying archaeologically recovered materials such as ceramics, metal and glass; curating ant the

archaeological collection. The hands-on approach includes sessions with materials from a notable site in Fairfield County. Completion of ANTH 1201 and HIST 1015 suggested. Each student undertakes an independent research project focusing on a structure or site in his/her own community. Two field trips are planned.

Prerequisite: Eligible for ENG 1010**Elective Code(s):** LART, SSCI**Previous ANT*** 229**ANTH 2400 - Native Cultures of the Americas***Credits: 3*

This course provides an anthropological study of the cultures of Native American peoples throughout the Americas, from the earlier indigenous settlements through the present day. Students will examine the beliefs, rituals, and ways of life of diverse native groups in the hemisphere using ethnographic and culture area studies. The course will also examine the impact of colonization, current political, social, and economic realities, and contemporary efforts to preserve native languages, cultures, and rights.

Prerequisite: none**Elective Code(s):** LART, SSCI**Previous ANT*** 240**ARAB 1011 - Elementary Arabic I***Credits: 4*

An introduction to the Arabic language and Arabic-speaking cultures with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the Instructor.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** FLNG, LACU**Previous ARA*** 111**ARAB 1012 - Elementary Arabic II***Credits: 4*

A continuation of Elementary Arabic I, this course builds upon previous introduction to the Arabic language and Arabic-speaking cultures with a continued emphasis on the development of the four basic skills: listening, speaking, reading and writing. This is the second part to the beginning sequence for students who have had some prior study of this language either in high school, Elementary Arabic I or life experience. This is a four-credit course with an embedded language lab component.

Prerequisite: Students must have earned a grade of C- or higher in ARAB 1011, complete a Language and Culture

placement test, or obtain permission of the Instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous ARA* 112

ARCH 1002 - Architecture of the World

Credits: 3

This course offers a global perspective of buildings, their settings, and the dissemination of ideas about architecture from the late Neolithic period to the present. Particular attention is given to the relationships of architectural expression, meaning, and building technology and to issues arising when architectural traditions of one culture are imposed upon or otherwise adapted by another. Students will explore the impact of climate, economy, philosophy, social structure and technology on architecture by becoming familiar with some of the World's major monuments in architectural history. The course also integrates the history of technology and visual arts that paralleled each era, exploring the fundamental elements of each "movement" as illustrated through aesthetic expression.

Corequisite: none

General Education Code: ARHX

Elective Code(s): ARTH, CRTY, LART

Cross-listed: ARTH 1013

Previous ARC* 102, ART* 105

ARCH 1005 - Architecture Fundamentals I

Credits: 4

This course introduces students to graphic communication systems used as tools for architectural visualization.

Beginning with basic freehand sketches and progressing to more complex "hard line" drawings, students practice and develop sketching and drafting techniques, line-projection and descriptive geometries, perspective drawing, basics of color rendering, and presentation tools and techniques.

Concepts in light, shadow and composition are explored.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): CRTY

Course Fees: Supplemental Fee Level 2

Previous ARC* 105, ARC* 135

ARCH 1008 - Construction Materials & Methods

Credits: 3

This course introduces students to the source, use and limitations of materials used in building construction. While the historical use of materials as function and design expression is a focus, emphasis is placed on contemporary and sustainable building construction, how codes impact design, and the articulation of a systems-approach through the understanding of assembly and attachment. Practical

working knowledge is attained through a series of projects requiring students to design and detail mock assemblies.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous ARC*106, ARC* 108

ARCH 1010 - Introduction to Building Physics & Sustainability

Credits: 3

This course covers mathematical applications for design (trigonometry, analytic geometry, systems of equations, and vectors), fundamental physics required for understanding buildings (force, reactions, thermodynamics, energy, and material properties), and the principles of sustainability (ecology, economics, and equity). These topics are implemented in ARCH 2040, and throughout the design studio progression.

Prerequisite: Placement in MATH 1010 or higher

Previous new

ARCH 1011 - Building Codes & Ordinances

Credits: 3

This course introduces students to the origins, scope, and administration of local, state, and federal building codes and ordinances. Students will develop an understanding of code elements, sequencing of the code manuals, and the impacts they have on the design, construction, and occupancy of a project. Working knowledge of the codes is demonstrated as students implement code applications on various projects throughout the course.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous ARC* 227

ARCH 1012 - Introduction to Geographic Information Systems*Credits: 3*

This course introduces students to the basic principles, techniques, and applications of GIS (Geographic Information Systems), as a computer-based tool that utilizes spatial (geographic) data to analyze and solve multi-disciplinary problems. Students will understand methods of data capture and sources of data, characteristics of spatial data and objects, and demonstrate application through executing typical operations. The lab component will emphasize GIS data collection, entry, storage, analysis, and output using the industry standard application, ESRI ArcGIS. Students will become familiar with products/applications, various database models, and raster and vector systems.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous** new**ARCH 1014 - Visual Representation***Credits: 3*

This studio focuses on techniques of visualization and representation (freehand drawing skills and model making) as they pertain to the architectural environment. Students develop fundamental observation and representation skills through perspective drawing, diagramming, vignette sketching, and physical modeling.

In parallel to the lab portion of this course is a lecture -based introduction to architectural history and theory focused on using precedents and examples from Eastern and Middle Eastern history and tectonic examples of architecture.

Previous ARC* G103 and ARC* G103L**ARCH 1129 - Fundamentals of Construction Management***Credits: 3*

This course introduces the fundamental aspects of construction management to students in a broad format, covering topics that include understanding the design vision, establishing project expectations, project planning, scheduling, estimating, organizational forms, contracts, and risk management.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CTC* 120**ARCH 2005 - Architecture Fundamentals II***Credits: 4*

This course expands upon architectural graphic systems, visualization tools, and introduces the systems-approach to sustainable design. Topics explored include advanced drafting, digital drawing environments, and building information modeling (BIM) for analyzing building performance.

Prerequisite: ARCH 1005**Course Fees:** Supplemental Fee Level 2**Previous** ARC*115, ARC* 203**ARCH 2010 - Site Design***Credits: 3*

This course introduces students to the climatic, cultural, and geographical systems and elements that are encountered in the analysis of site conditions, understanding their interrelationship and what procedures are required to maintain or improve the quality of the site environment. Through a series of exercises and projects, students will explore the relationship between land use and architectural design and gain hands on experience by applying aspects of site context, orientation, natural and cultural features, topography and grading, and regulatory issues, all leading to site selection and an ecological approach to site design.

Prerequisite: ARCH 1005**Previous** new**ARCH 2015 - Construction Documents***Credits: 3*

This course introduces the student to construction industry documents including project working drawings and the project manual which contains bidding documents, contract documents, contract conditions and the specifications. Additional documents include cut sheets, shop drawings, manufacturer's specs. and various AIA (American Institute of Architects) documents used in contract administration. Working knowledge is attained through actual execution of the documents.

Prerequisite: ARCH 2005**Previous** ARC* 215**ARCH 2020 - Architectural Design I***Credits: 4*

This course introduces the architecture student to the principles and methodologies of an architect's design process including precedent analysis, variable exploration, decision-making, and solution implementation. Students will apply their studies to date while designing an assigned project that explores the form, space and ordering systems used in design. Emphasis in Design I is placed more upon the path of design and the decision-making process, than on a "polished" solution.

Prerequisite: ARCH 1002 and ARCH 2005**Course Fees:** Supplemental Fee Level 2**Previous** ARC* 201, ARC* 211, ARC* 205/205L

ARCH 2025 - Architectural Design II*Credits: 4*

This course expands upon the skills learned in Design I. Designing projects that consider both interior and exterior building elements along with site, students will explore performance aspects of sustainable design. Theories focusing on form and natural light, energy efficiency, and operation & maintenance are explored while considering site aspects of "smart growth", walkable communities, parking, drainage, and water management.

Prerequisite: ARCH 2020**Elective Code(s):** CRTY**Course Fees:** Supplemental Fee Level 2**Previous** ARC* 202, ARC* 213, ARC* 207/207L**ARCH 2029 - Structures***Credits: 3*

This course explores the principles of structural mechanics in the design and function of various statically determined wood, steel, and concrete members and systems. Load behavior is investigated (compression, tension, bending, shear, stress/strain, equilibrium), as applied to the design and analysis of footings, columns, beams, slabs, trusses, and connections. Students will apply formulas in solving designs for bending, shear, deflection, and axial loading, through analytic methods using appropriate design techniques, manuals, and theory, and practice graphical detailing of designs according to current practice.

Prerequisite: ARCH 1008 and MATH 1600**Corequisite:** PHYS 1201**Previous** ARC* 229**ARCH 2030 - CAD 3D Architectural Parametric***Credits: 3*

This course introduces students to a 3D parametric computer aided design platform where students gain operational and productivity knowledge using industry-common parametric software.

Prerequisite: ARCH 1005 and ARCH 1008**Course Fees:** Supplemental Fee Level 1**Previous** CAD* 118, CAD* 204**ARCH 2040 - Environmental Systems***Credits: 3*

Environmental Systems introduces students to the interior environment of structures (both residential & commercial), and the interrelationship of energy, climate, site and architectural design. Covering a systems-approach to heating, ventilation, cooling, electrical, plumbing, and fire protection systems, students gain an understanding of building performance and energy conservation through benchmarking, studying metrics for operations and maintenance, and running simulations on life cycle costs.

Prerequisite: ARCH 1008**Prerequisite/Corequisite:** None**Corequisite:** None**Previous** ARC* 240, ARC* 214**ARCH 2229 - Construction Estimating***Credits: 3*

The course examines the roles and responsibilities of a construction estimator. Using both traditional and industry standard digital methods, the course will cover the cost of labor, material, and equipment by unit and by square foot; the fundamentals and effects of scheduling, including critical path, bar and Gantt charts; and the effect of the global economy on overall construction costs and supply chains.

Prerequisite: MATH 1010 or higher**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CTC* 229**ART 1000 - Art Appreciation***Credits: 3*

This course explores the constantly changing world of visual art, focusing on how this form of expression is defined and the varied ways in which it can be appreciated. Elements and principles of art are studied from a variety of identities, cultures, and historical periods. A visit to an instructor approved museum is an integral part of the course.

Prerequisite: Eligibility for ENG 1010 or permission of instructor or advisor.**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Previous** ART* 100**ART 1060 - Film Study & Appreciation***Credits: 3*

This course is an introduction to the art, history, and influence of film. Students will trace the history of cinema through both technical advancements and aesthetic developments enabling them to understand the aesthetics of films as well as the cultural and historical context in which the films were made.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Cross-listed:** COMM 1201 - Film Study and Appreciation**Previous** ART* 206**ART 1070 - Introduction to Studio Art***Credits: 3*

This is a course covering the fundamentals of visual art through hands-on experience. This course includes basic design and composition, color theory, study of three-dimensional form, and a broad exploration of the creative

process through the use of a wide variety of media and techniques, including drawing, painting, collage and sculpture. Not recommended for art majors.

Course Fees: Supplemental Fee Level 2 and Materials Fee
Previous ART* 107

ART 1110 - Drawing I

Credits: 3

This course is an introduction to the fundamental elements and language of drawing. Perceptual skills will be developed through observational drawing. Emphasis on the representation of three dimensional form on the two dimensional picture plane, spatial relationships, perspective and composition. Students will create a portfolio of expressive drawings including still life, perspective studies and a self-portrait.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, CPTY, LART

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 111

ART 1120 - Drawing II

Credits: 3

This course serves as a continuation of the visual language of drawing emphasizing the selection and use of a variety of drawing materials, experimental issues, contemporary concepts of space and the drawing process of visual investigation and personal focus. Topics include further development of formal drawing skills, creative problem-solving, collaboration, studio work process, sequence and series, abstraction and color drawing media.

Prerequisite: Grade of C or higher in ART 1110

Elective Code(s): ARTS, CPTY, LART

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 112

ART 1130 - Figure Drawing I

Credits: 3

An introduction to life drawing, encompassing both traditional techniques and a contemporary approach to the representation of the figure. Includes the nude figure, the clothed figure, portraiture and the figure in a still-life environment. This course is based in both anatomical and expressive approaches to human figure drawing. A variety of media will be explored, including color and wet media, along with instruction in composition, proportion and foreshortening principles. Students will work extensively from the live model. Studio: 6 hours per week.

Prerequisite: ART 1110 or permission of Instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, CPTY, LART

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 113

ART 1210 - Two-Dimensional Design

Credits: 3

An exploration of the concepts underlying visual organization in two-dimensional art and design. Students will undertake a series of studio projects aimed at uncovering basic design elements (line, shape, value, texture, space), properties, and principles (balance, unity, emphasis, repetition, rhythm, etc.). Emphasis placed on visual and creative thinking and problem solving.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, CPTY, LART

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 121, GRA* 101

ART 1220 - Three-Dimensional Design

Credits: 3

An exploration of the concepts of three-dimensional art and design. Students will undertake a series of studio projects aimed at uncovering basic design elements, properties, and principles. Development of personal content using a variety of three-dimensional tools, materials and processes. Emphasis placed on visual and creative thinking and problem solving.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): CPTY, LART

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 122

ART 1250 - Color Theory

Credits: 3

An examination of color theory and terminology. This course is designed for Fine Art, Photography, and Graphic Design majors. It is an exploration and study of color relationships as they apply to diverse media. Studio projects will allow students to develop sensitivity to color interactions and explore the visual, psychological, and emotional effect color has in our world. Painting and a variety of media may be used to formulate presentations ranging from fundamental problem solving to individual expression.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, CPTY, LART

Additional Info: This fundamental course will provide an introduction to the principles of color and an exploration of color theory as it relates to design. Students investigate color schemes and properties and their relationship to composition in making appropriate design decisions. The psychological, cultural and symbolic aspects of color will also be examined in relationship to visual communication. **Course Fees:**

Supplemental Fee Level 2 and Materials Fee

Previous ART* 109

ART 1310 - Sculpture I*Credits: 3*

Through studio experience, lecture, and class discussion, students will explore design principles, techniques, materials and tools relevant to creating sculptural forms. Instruction in additive and subtractive methods. Emphasis placed on the creative process and analysis of sculptural works.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 131****ART 1350 - Metal & Jewelry Design I***Credits: 3*

An introduction to basic jewelry techniques such as metal forming, sawing, soldering, and working with hand tools. Students work in base metals such as copper and brass, or in sterling silver. Design will be heavily emphasized.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 165****ART 1410 - Darkroom Photography I***Credits: 3*

An introduction to black and white film/darkroom photography, including camera operation, composition, film processing, printing and print finishing techniques. Through demonstrations, assignments, critiques, supervised and independent darkroom work and a final portfolio, students will develop technical skills and explore the creative/expressive side of photography. Students will also develop an appreciation of the many vocational and creative applications of the medium and an understanding of its cultural, historical and contemporary context.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 141****ART 1420 - Darkroom Photography II***Credits: 3*

Through demonstrations, assignments, critiques and work on a final themed portfolio, students will review techniques, develop new skills and further explore the creative/expressive side of photography. Students will review camera settings and operations, and darkroom-based film and print processing. Students will be introduced to medium or large format cameras and studio or on-location lighting techniques. Students will also look at and talk about a broad range of photographic imagery while exploring the history of photography and photography's place in culture and society. Students will be encouraged to develop a personal, expressive style in addition to mastering a range of practical

photographic techniques while they assemble a cohesive, thematic, exhibition-quality portfolio. Students should have access to a SLR or similar camera. A complete materials list is available from the instructor.

Prerequisite: ART 1410**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 142****ART 1450 - Digital Photography I***Credits: 3*

An introduction to digital photography including camera operation, file formats and management and image editing using Adobe Photoshop. Through demonstrations, assignments, critiques, a survey of imagery and a final portfolio, students will be introduced to the basic vocabulary, concepts, tools and expressive possibilities of digital photography. Students should have access to a digital single lens reflex camera with manual, aperture and shutter priority exposure modes or a similar mirrorless digital camera. Basic computer and photographic experience preferred.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 141, ART* 144, ART* 250, GRA* 131****ART 1460 - Digital Photography II***Credits: 3*

Through demonstrations, assignments, critiques and work on a final themed portfolio, students will review techniques, develop new skills and further explore the creative/expressive side of photography. Students will review DSLR camera settings and operations, file management using Adobe Bridge and/or Lightroom, RAW image processing, and a non-destructive post-processing workflow with Adobe Photoshop. Local edits using Photoshop masks will be emphasized. Students will also look at and talk about a broad range of photographic imagery while exploring the history of photography and photography's place in culture and society. Students will be encouraged to develop a personal, expressive style in addition to mastering a range of practical photographic techniques while they assemble a cohesive, thematic, exhibition-quality portfolio. Students should have access to a DSLR or similar mirrorless digital camera. A complete materials list is available from the instructor.

Prerequisite: ART 1450**Elective Code(s):** ARTS, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 281**

ART 1510 - Painting I*Credits: 3*

A course in the technical and aesthetic fundamentals of painting, covering construction of a canvas, selection and use of materials, basic color theory, and realistic and expressive paint handling. Students will work in both traditional and experimental painting styles. Drawing I is recommended but not required.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 151****ART 1520 - Painting II***Credits: 3*

A course building on the skills learned in Painting I and expanding into concerns of abstract and non-objective forms of painting. Continued emphasis on materials, processes and experimentation at an intermediate level towards a personal expression with the medium.

Prerequisite: ART 1510**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 152****ART 1550 - Watercolor I***Credits: 3*

An introduction to the technical and aesthetic principles of painting with watercolor. This course will cover the selection and use of watercolor materials, introduce a full range of traditional and contemporary watercolor techniques, and deal with varied subject matter from still life to landscape. Design principles and compositional elements are also introduced.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 155****ART 1610 - Ceramics I***Credits: 3*

An introductory course with an emphasis on hand building and an introduction to basic throwing. In hand building the focus will be on pinch, coil and slab methods. In throwing, cylindrical forms will be explored. Instruction in glaze application and composition will be covered.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 161****ART 1620 - Ceramics II***Credits: 3*

A continuation of Ceramics I. Continued development of handbuilding, wheel throwing and glazing techniques. Students use clay as an artistic medium and develop skills and imagery through continued experimentation. The class focuses on the creation of both functional and sculptural works. Historical and contemporary approaches will be emphasized.

Prerequisite: C or higher in ART 1610**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 162****ART 1630 - Ceramic Handbuilding***Credits: 3*

An introduction to the basic methods of handbuilt ceramics - pinch, coil, slab, modeling - and the fundamental processes of surface decoration. Students use clay as an artistic medium and develop skills and imagery through experimentation. The class focuses on the creation of both functional and sculptural works. Historical and contemporary approaches will be emphasized.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 163****ART 1770 - Printmaking I***Credits: 3*

A course in the materials, design and techniques of printmaking: mono printing, intaglio, relief, planographic, and serigraph.

Prerequisite: Eligibility for ENG 0960**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 167**

ART 1810 - Digital Video Art I*Credits: 3*

An introductory course investigating digital video as an extension of the fine arts and digital media. Formal attributes, which make up the language of video, including time-lines, 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. Historical and contemporary video art will be referenced, and critical analyses will be applied to student productions. Projects include client interaction and the practical use of time-based medium for the internet and social media.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 176****ART 1880 - Animation Fundamentals***Credits: 3*

This course is an introduction to the principles of animation. Traditional and contemporary technology will be used to complete exercises and projects. Students are responsible for purchasing supplies.

Prerequisite: ART 1110 or permission of Instructor**Elective Code(s):** ARTS, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 189****ART 1940 - Teaching Children Art***Credits: 3*

An art workshop designed for those who will be teaching or working with children in schools, day care centers, hospitals, community centers, etc. Students will examine various methods of teaching art while working with a wide variety of materials.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous ART* 184****ART 2090 - Portfolio Preparation I***Credits: 1-3*

Under the supervision of an art faculty advisor, students will prepare a portfolio demonstrating skills in a variety of media and concept development, while also expressing a creative vision in the visual arts. The portfolio may be used for transfer, career or personal purposes.

Prerequisite: Second-year status, matriculation in an art curriculum and permission of the Art Program Coordinator.**Elective Code(s):** ARTS, LART**Course Fees:** Supplemental Fee Level 2**Previous ART* 288, ART* 290****ART 2094 - Cooperative Education***Credits: 3*

The Cooperative Education Internship affords students the opportunity to build on their classroom studies in an environment that focuses on professional development. Students select an internship host company that offers the opportunity to develop skills in a field related to their study in studio art/graphic design, including corporate in-house design, publishing, freelance design, newspapers and design agencies as well as related positions in other industry. Students will attend a preparatory class for the first week of the term and meet on-line each week. Students are required to work a total of 120 hours during the term at a host company.

Prerequisite: To be eligible for the internship course a student must be in the final term of his/her art degree program having completed 15 credits in their field and have a GPA of 3.0 or greater. Permission to take this course must be granted by the program coordinator.**Elective Code(s):** ARTS, LART**Previous ART* 292****ART 2095 - Art Internship***Credits: 3*

This course provides practical experience through an internship in a supervised setting related to a visual arts and/or design profession such as an art museum, gallery, art center or artist studio. Such an opportunity can be within a public or private setting related to the visual arts. Permission of the Art Program Coordinator is required.

Prerequisite: Second-year status and permission of the Art Program Coordinator.**Elective Code(s):** ARTS, LART**Previous ART* 293****ART 2098 - Special Topics in Art***Credits: 3*

A faculty-developed studio or traditional art course that focuses on exploring a media or creative process that is outside the current courses that are offered in the art program. This course is designed to provide our students with an opportunity to pursue an area of study that is of interest to a large group. The program coordinator and department chairperson will approve the area of study.

Prerequisite: ENG 1010**Elective Code(s):** ARTS, LART**Course Fees:** Supplemental Fee Level 2**Previous ART* 298**

ART 2099 - Independent Study*Credits: 1-3*

Art majors who have completed a range of program requirements and are nearing graduation may study a topic or set of topics with the permission of /under the supervision of a full-time art faculty member. Student's written objectives, procedures and credit hours must be approved by the supervising faculty. The faculty member determines if the student is qualified to undertake the project and provides guidance to the student.

Prerequisite: Permission of the Supervising faculty required.

All independent projects must be arranged in the semester prior to registration, with advance approval and with the supervision of one of the full-time Art faculty members.

Elective Code(s): ARTS, LART

Previous ART* 299

ART 2110 - Drawing III*Credits: 3*

This course will provide students who have taken Drawing I & II the opportunity to continue to develop their drawing skills. Students will evolve their own style of drawing while continuing to strengthen their observational and perceptual skills. Students will begin to place conceptual importance on their drawings through intensive group and individual critiques.

Prerequisite: ART 1110 - Drawing I and ART 1120 - Drawing II with grade of C or higher

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 211

ART 2190 - Portfolio Preparation II*Credits: 1-3*

Under the supervision of an art faculty advisor, students who have completed Portfolio Preparation I will continue to build upon a portfolio demonstrating skills in a variety of media and concept development, while also expressing a creative vision in the visual arts. The portfolio may be used for transfer, career or a personal purposes.

Prerequisite: ART 2090 - Portfolio Preparation I, second-year status, matriculation in an art curriculum and permission of the Art Program Coordinator.

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 291

ART 2420 - Darkroom Photography III*Credits: 3*

Students can expand into more advanced, experimental and individual work in analog and digital photography. Exploring the creative potential of the medium, students will explore various processes and techniques including advanced printing and image alterations. Demonstrations will take place throughout the course but ultimately the student's choice of focus is self-directed.

Prerequisite: C- or higher in ART 1420

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 242

ART 2430 - Studio Photography I*Credits: 3*

An introduction to lighting techniques and the vast possibilities of working within the photographic studio environment. Through demonstrations, lectures and hands-on assignments, students will learn how to control lighting through the use of strobes and continuous light sources. Standard studio practice and creative problem solving are both emphasized throughout this course.

Prerequisite: C- or higher in ART 1410

Elective Code(s): ARTS, LART

Additional Info: Class capacity of 20 students or less

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 243

ART 2470 - Commercial Photography*Credits: 3*

An advanced photographic lighting course focusing on lighting techniques used by professional photographers in the studio and on location. Emphasis on controlled lighting conditions and visual styling techniques. Technical understanding and personal style are primary concerns in creating visual images in the photographic medium.

Prerequisite: C- or higher in ART 1410 and ART 2430

Elective Code(s): ARTS, LART

Previous ART* 257

ART 2510 - Painting III*Credits: 3*

Building on the foundations of Painting I & II, this course continues to emphasize an understanding of materials, processes and creative problem-solving skills. Assignments are open-ended to encourage personal exploration and expression.

Prerequisite: ART 1510, ART 1520

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 251

ART 2520 - Painting IV*Credits: 3*

Building on the previous three levels of painting, this course works toward building a strong personal portfolio.

Coursework is self-guided following personal interests with instructor guidance. Professional practices are a component of this course.

Prerequisite: ART 1510, ART 1520, ART 2510

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 252

ART 2810 - Digital Painting & Drawing*Credits: 3*

Designed for either Fine Art, Photography and Graphic Design majors. Exploration of Corel Painter and other industry standard digital drawing and painting applications on the computer and/or tablets. Projects cover a broad range of subject matter from the representational to creative abstraction to altered photographs. Emphasis is on compositional arrangement, elements and principles of design, creative use of program tools and features. Completed projects are printed for a final portfolio.

Prerequisite: None

Elective Code(s): ARTS, CRTY, LART

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous ART* 220

ARTH 1001 - Global Art History Prehistory to 1500 CE*Credits: 3*

The development and historical context of visual art from the prehistoric period through the inception of the early modern period (c.1500). Exploration of artifacts and historic sites as documents of past economic, political, religious and social developments and well as of cultural exchange. Museum visits strongly encouraged.

Prerequisite: Eligibility for ENG 1010 or co-requisite of ESOL 1502.

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): LART

Previous ART*101

ARTH 1002 - Global Art History 1500 CE to present*Credits: 3*

The development and historical context of visual art from the beginnings of the trans-Atlantic slave trade (c.1500) to the 21st century. Exploration of artifacts and historic sites as documents of past economic, political, religious and social developments and well as of cultural exchange. Museum visits strongly encouraged.

Prerequisite: Eligibility for ENG 1010 or co-requisite of ESOL 1502.

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): LART

Previous ART*102

ARTH 1003 - Global Modern Art History 1850 to Present*Credits: 3*

The cultural and historical development of global modernism from the late 19th century to the 21st century. Examination of broad themes applied to diverse regions and analysis of works within their specific contexts. Museum visits required.

Prerequisite: Eligibility for ENG 1010 or co-requisite of ESOL 1502.

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): LART

Previous ART*103

ARTH 1005 - History of Art in the United States, c. 1500 - 1960*Credits: 3*

The development and historical context of visual art and material culture from precolonial contact (c. 1500) to the Cold War (c. 1960). Exploration of artifacts, physical structures, and historic sites as documents of past economic, political, religious, and social developments as well as of cultural exchange. Museum visits strongly encouraged.

Prerequisite: Eligibility for ENG 1010 or co-requisite of ESOL 1502.

Prerequisite/Corequisite: none

Corequisite: non

Elective Code(s): LART

Previous new

ARTH 1007 - Caribbean Art and Culture*Credits: 3*

An exploration of Caribbean art and cultural history through the lens of contemporary Caribbean art exhibitions. This course introduces students to the arts and culture of the Caribbean through an investigation of the lives and styles of Caribbean artists, artworks, curatorial approaches, and viewer reception. Emphasis will be placed upon Caribbean-born artists and their respective geographical heritages.

Prerequisite: Eligibility for ENG 1010 or co-requisite of ESOL 1502.

Elective Code(s): LART

Previous new

ARTH 1008 - Black Art History*Credits: 3*

This course will focus on the history of art produced from the beginning of the European slave trade in the 15th century to the 21st century, focusing on images of Black people and/or work by Black artists. Topics will include the creation of power dynamics and stereotypes of Black people in the early modern era and move towards the creation of identity and expression by Black artists in the modern era. All museum trips are mandatory.

Prerequisite: Eligibility for ENG 1010 or co-requisite of ESOL 1502.

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): LART

Previous new

ARTH 1011 - History of Photography*Credits: 3*

This course provides a chronological overview of photographic production beginning with early optical devices, such as the camera obscura, and continuing to contemporary digital practices. Students will become familiar with various processes and techniques, styles, movements, individual practitioners, as well as various theories of photographic analysis. We'll also explore how and why the history of photography has only recently been integrated into the larger history of art by studying the broad societal, scientific, and technological contexts of early photography. Museum visits strongly encouraged.

Prerequisite: Eligibility for ENG 1010 or co-requisite of ESOL 1502.

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): LART

Previous ART* 205

ARTH 1012 - History of Graphic Design*Credits: 3*

Students will study Graphic Design as a component of visual language within historical context, identifying graphic arts within the history of art and articulating its aesthetic import and contributions to cultural development. Links between socio-political phenomena, the development of advertising and propaganda art, visual literacy, perception, type design and design practice will be examined. Course modules focus on a survey of graphic design from the invention of writing to the present, from Pre-historic cave imagery to the current digital age, the achievements that laid the groundwork for the contemporary practices of graphic design will be introduced to the student through the works of leading graphic designers, art directors, illustrators, photographers, and typographers. Major styles will be analyzed and compared, and influences identified.

Prerequisite: Eligibility for ENG 1010 OR permission of the graphic design coordinator

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): LART

Previous ART* 207

ARTH 1013 - Architecture of the World*Credits: 3*

The course offers a global perspective of buildings, their settings, and the dissemination of ideas about architecture from the late Neolithic period to the present. Particular attention is given to the relationships of architectural expression, meaning, and building technology and to issues arising when architectural traditions of one culture are imposed upon or otherwise adapted by another. Students will explore the impact of climate, economy, philosophy, social structure and technology on architecture by becoming familiar with some of the World's major monuments in architectural history. The course also integrates the history of technology and visual arts that paralleled each era, exploring the fundamental elements of each "movement" as illustrated through aesthetic expression.

General Education Code: ARHX

Elective Code(s): CRTY, LART, ARTH

Cross-listed: ARCH 1002

Previous ARC*102

ARTH 2001 - Focused Perspectives in Art History*Credits: 3*

This course gives an overview about current methods and innovative approaches in art history. In recent years, art history has abandoned the traditional concept of the timeless/placeless masterpiece and its focus on western art. Scholars increasingly rely on interdisciplinary working methods and global perspectives. This course identifies and critically engages with a number of prevalent tendencies by discussing theoretical concepts and applying them to specific case studies.

Prerequisite: ARTH 1001 or ARTH 1002 or ARTH 1003

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): LART

Previous new

ARTH 2002 - Museum Studies*Credits: 3*

An introduction to the art museum with an overview of the major activities, challenges, and responsibilities encountered by museum directors and staff. With an in depth look at collections and curating, community engagement, fundraising, and visitor services, students will consider everyday operations along with current debates regarding the decolonization of collections. This course is a pre-requisite for the Museum Studies Internship ARTH 2095.

Prerequisite: ARTH 1001 or ARTH 1002 or ARTH 1003 , AND ENG 1010

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): LART

Previous new

ARTH 2095 - Museum Studies Internship*Credits: 3*

The Museum Studies Internship involves direct engagement in a museum or cultural institution under the supervision of a staff mentor. This 3-credit experience allows the student first-hand experience to shadow a variety of museum professionals across departments within the museum and then to work directly with their mentor on a significant project or series of smaller projects. They will also regularly meet with the Internship Coordinator and communicate with their fellow interns virtually.

Prerequisite: 2 Art History (ARTH) courses AND ARTH 2002

Elective Code(s): LART

ASL 1001 - American Sign Language I*Credits: 3*

This first course of study of American Sign Language (ASL) (used by the Deaf Community in the United States) is designed for students who have little or no previous knowledge of ASL. Visual-gestural communication techniques promote learning to think in pictures and concepts. Students learn the fundamentals of sign production and vocabulary, fingerspelling/numbers, basic structure of ASL grammar for simple conversation, and information related to Deaf Culture.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous ASL* 101

ASL 1002 - American Sign Language II*Credits: 3*

This course is designed to continue the study of American Sign Language (ASL) and the culture of Deafhood. Students

refine receptive and expressive skills necessary to understand and utilize the language in its structure and format. Emphasis will be on accuracy of sign production/vocabulary (using the correct parameters as introduced in ASL 1001). This course will also emphasize ASL sentence types and correct ASL grammatical structure, and conversational skills.

Prerequisite: ASL 1001 with a 'C' or higher.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous ASL* 102

ASL 2001 - American Sign Language III*Credits: 3*

Building on American Sign Language (ASL) II, this course covers more complex ASL grammatical features and vocabulary, short stories, narratives, and dialogues. Students recognize the difference between present, past and future events in a range of signed material that includes familiar language in less familiar contexts. Students learn the application of complex sentence structures with appropriate non-manual markers (facial morphemes/grammar), classifiers, timeline referents (tense markers, temporal aspect) and the grammar used to convey sequence of events. Students whom have completed ASL courses at locations other than Northwestern Campus of CT State Community College must be evaluated before registering for this course.

Prerequisite: ASL 1001 and ASL 1002, both with a 'B' or higher AND permission of the Program Coordinator.

Elective Code(s): FLNG, LACU, LART

Previous ASL* 201

ASL 2002 - American Sign Language IV*Credits: 3*

The primary goal with this course is for students to achieve a level of competency in American Sign Language (ASL). Building on ASL III, this course expands on the development of American Sign Language vocabulary and grammar, step-by-step processes, cause and effect, and the use of two- to three-character role shifts. Students engage in narration, description, argument, and hypothesis with complex topics in paragraph-length discourse related to employment, current events, matters of public and community interest, and culturally significant topics relating to the Deaf Community. Students also develop expressive and receptive skills in storytelling and dialogue and processing that is required for higher-level thinking in the field of interpreting and working with the Deaf.

Prerequisite: ASL 2001 with a 'B' or higher

Elective Code(s): FLNG, LACU, LART

Previous ASL* 202

ASL 2005 - Linguistics of American Sign Language*Credits: 3*

Surveys theory, methods and findings of linguistic research and how it relates to American Sign Language (ASL). A review of the historical views of ASL and the prominent people who have contributed to the acceptance of ASL as a modern language. Focus is on the comparison of English with ASL rules including but not limited to phonetics/parameters, syntax, grammatical structure and semantics.

Prerequisite: ASL 1001 and ASL 1002, both with a 'B' or higher, AND eligibility for ENG 1010

Corequisite: ASL 2001

Elective Code(s): LACU, LART

Previous ASL* 205

ASL 2006 - Advanced ASL for Interpreters*Credits: 4*

Semantics and culture impact sign/word choice and syntactic structures when interpreting between English and American Sign Language (ASL). In order to accurately convey the message, interpreters must understand semantic and cultural influences on both the target and source languages. By analyzing semantic accuracy/cultural nuances and by employing discourse strategies, students will expand their expressive and receptive skills for both ASL and English. Students will employ these expanded skills to accurately interpret prepared texts between English and ASL.

Prerequisite: ASL 2002, ASL 2005, AND INTR 1001, all with a 'B' or higher, AND permission of the Program Coordinator.

Elective Code(s): FLNG, LACU, LART

Previous ASL* 206

ASTR 1001 - Principles of Astronomy*Credits: 3*

An introductory survey course in Astronomy intended for non-science/science majors. Topics include history of astronomy, the solar system, light and spectra, the formation and evolution of stars, galaxies, and the universe. Properties, interrelationships, and the scientific process are emphasized throughout the course. Students who have taken ASTR 1011 will not receive credit for this course.

Prerequisite: C or higher in MATH 0989 OR eligibility for MATH 1010

General Education Code: SCKX

Previous AST* 101

ASTR 1011 - Introduction to Astronomy*Credits: 4*

An introductory survey course in Astronomy with laboratory intended for non-science/science majors. Topics include history of astronomy, the solar system, light and spectra, the formation and evolution of stars, galaxies, and the universe. The laboratory portion of the course consists of activities in

designed to reinforce and extend knowledge of selected topics covered in the lecture portion of the course. Students who have taken ASTR 1001 will not receive credit for this course.

Prerequisite: C or higher in MATH 0989 OR eligibility for MATH 1010

General Education Code: SCRX

Course Fees: Supplemental Fee Level 1

Previous AST* 111

AUTO 1010 - Introduction to General Motors Automotive Systems*Credits: 2*

This introductory course prepares General Motors Automotive Service Education Program (ASEP) students for their first internship experience by introducing the student to safe shop practices and tool usage, General Motors service information, vehicle identification, maintenance requirements and basic service procedures.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2

Previous AUT* 112

AUTO 1012 - General Motors Braking Systems*Credits: 3*

Introduces General Motors (GM) Automotive Service Education Program (ASEP) program students to automotive braking system theory and repair in accordance with Automotive Service Excellence (ASE) accreditation standards. Presents content specified in the current GM dealership brakes curriculum. Includes content covered in ASE exam A5 Brakes.

Prerequisite/Corequisite: AUTO 1010

Corequisite: None

Course Fees: Supplemental Fee Level 2

Previous AUT* 118

AUTO 1014 - General Motors Steering & Suspension Systems*Credits: 3*

This course introduces students to General Motors steering and suspension systems with emphasis on identification of steering and suspension type, mechanical component removal and installation, and diagnosis of steering and suspension system concerns. Wheel alignment procedures will be included in the course.

Prerequisite/Corequisite: AUTO 1010

Corequisite: None

Course Fees: Supplemental Fee Level 2

Previous AUT* 116

AUTO 1016 - General Motors Electrical Systems*Credits: 3*

Introduces General Motors (GM) Automotive Service Education Program (ASEP) program students to automotive electrical theory and repair in accordance with Automotive Service Excellence (ASE) standards. Presents content specified in the current GM dealership electrical curriculum. Includes content covered in ASE exam A6 Electrical/Electronic Systems.

Prerequisite/Corequisite: AUTO 1010**Corequisite:** None**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 114**AUTO 1018 - General Motors Engine Propulsion Systems***Credits: 3*

This course focuses on basic design and construction of General Motors engines. Emphasis will be on engine disassembly and measurement procedures; engine mechanical diagnosis and repair; engine removal and installation.

Prerequisite/Corequisite: AUTO 1010**Corequisite:** None**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 110**AUTO 1030 - Automotive Maintenance and Light Repair***Credits: 3*

This is an introductory course for the Automotive Technician providing the theory for a foundation in the field. Emphasis will be on basic automotive service procedures and the inter-relationship of the various automotive systems. Additional emphasis will be on the lube maintenance and vehicle inspection process. Shop safety, proper care and use of tools are included. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) G1.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 132, ATP* 100**AUTO 1031 - Engine Repair***Credits: 3*

Diagnosis of automotive engines and their lubrication and cooling systems. Included is engine construction, operation along with disassembly and assembly techniques. Covers in both theory and practice, of 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. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) A1 exam.

Prerequisite: None**Prerequisite/Corequisite:** AUTO 1030 or with the permission of the coordinator.**Corequisite:** None**Course Fees:** Supplemental Fee Level 2**Previous** ATP* 120, AUT* 130**AUTO 1033 - Electrical/Electronics Systems***Credits: 3*

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. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) A6 exam.

Prerequisite: None**Prerequisite/Corequisite:** AUTO 1030 and MATH 0989 or successful completion of college placement test or with permission of the coordinator**Corequisite:** None**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 134, ATP* 110**AUTO 1036 - Suspension and Steering***Credits: 3*

The diagnosis and repair of steering and suspension systems and their inter-relationship to wheel alignment. The course includes a thorough knowledge of wheel and tire maintenance. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) A4 exam.

Prerequisite: None**Prerequisite/Corequisite:** AUTO 1030 or with permission of the coordinator.**Corequisite:** None**Course Fees:** Supplemental Fee Level 2**Previous** AUT*136, ATP*150

AUTO 1037 - Engine Performance*Credits: 3*

Fuel theory and nomenclature necessary to service and repair computerized automotive fuel systems. This includes but is not limited to computer controls, ignition and fuel systems, exhaust and emission systems and their maintenance, diagnosis, and repair procedures. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) A8 exam.

Prerequisite: AUTO 1033 or with permission of the coordinator.

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2

Previous ATP* 210, AUT* 231

AUTO 1038 - Brake Systems*Credits: 3*

Covers the maintenance, diagnosis, and repair procedures of disc and/or drum brake systems including ABS (antilock brakes) along with their mechanical, hydraulic, and electrical components. Modern traction control and stability control systems will be explored. Theory, operation, diagnosis, and repair procedures will be covered. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) A5 exam.

Prerequisite: None

Prerequisite/Corequisite: AUTO 1030 and AUTO 1033 or with permission of the coordinator.

Corequisite: None

Course Fees: Supplemental Fee Level 2

Previous AUT*138, ATP*130

AUTO 1041 - Honda Express Service and Shop Practices Theory*Credits: 1*

This theory introductory course prepares Honda Professional Automotive Career Training Program (PACT) students for their first internship experience by introducing the student to safe shop practices and tool usage, Honda Interactive Network (IN) service information, vehicle identification, maintenance requirements, basic service procedures, and resume-building and job interviewing skills.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: AUTO 1042

Course Fees: Supplemental Fee Level 1

Previous AUT* 141

AUTO 1042 - Honda Express Service and Shop Practices Lab*Credits: 2*

This introductory laboratory course prepares Honda Professional Automotive Career Training Program (PACT)

students for their first internship experience by introducing the student to safe shop practices and tool usage, Honda Interactive Network (IN) service information, vehicle identification, maintenance requirements and basic service procedures.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: AUTO 1041

Course Fees: Supplemental Fee Level 2

Previous AUT* 141A

AUTO 1055 - Honda Power Plant Systems Theory*Credits: 2*

This theory course focuses on basic design and construction of American Honda Motor Co, Inc. (AHM) Power Plant systems. Emphasis will be on engine disassembly and measurement procedures; engine mechanical diagnosis and repair; engine removal and installation.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: AUTO 1056

Course Fees: Supplemental Fee Level 2

Previous AUT* 155

AUTO 1056 - Honda Power Plant Systems Lab*Credits: 2*

This laboratory course focuses on basic design and construction of American Honda Motor Co, Inc. (AHM) Power Plant systems. Emphasis will be on engine disassembly and measurement procedures; engine mechanical diagnosis and repair; engine removal and installation.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: AUTO 1055

Course Fees: Supplemental Fee Level 2

Previous AUT* 156

AUTO 1057 - Honda Electrical Systems Theory*Credits: 2*

This theory course introduces Honda Professional Automotive Career Training Program (PACT) program students to automotive electrical theory and repair in accordance with Automotive Service Excellence (ASE) standards. Presents theory content specified in the current American Honda Motor Co, Inc. dealership electrical curriculum. Includes content covered in ASE exam A6 Electrical/Electronic Systems.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: AUTO 1058

Course Fees: Supplemental Fee Level 2

Previous AUT* 157

AUTO 1058 - Honda Electrical Systems Lab*Credits: 2*

This laboratory course introduces Honda Professional Automotive Career Training Program (PACT) program students to automotive electrical theory and repair in accordance with Automotive Service Excellence (ASE) standards. Presents laboratory content specified in the current American Honda Motor Co, Inc. (AHM) dealership electrical curriculum. Includes content covered in ASE exam A6 Electrical/Electronic Systems.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** AUTO 1057**Course Fees:** Supplemental Fee Level 2**Previous AUT*** 158**AUTO 1065 - Honda Steering & Suspension Systems Theory***Credits: 2*

This theory course introduces Honda Professional Automotive Career Training Program (PACT) students to American Honda Motor Co. Inc. steering and suspension systems with emphasis on identification of steering and suspension type, mechanical component removal and installation, and diagnosis of steering and suspension system concerns. Wheel alignment procedures will be included in the course.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** AUTO 1066**Course Fees:** Supplemental Fee Level 2**Previous AUT*** 146, AUT* 165**AUTO 1066 - Honda Steering & Suspension Systems Lab***Credits: 2*

This laboratory course introduces Honda Professional Automotive Career Training Program (PACT) students to American Honda Motor Co. Inc. (AHM) steering and suspension systems with emphasis on identification of steering and suspension type, mechanical component removal and installation, and diagnosis of steering and suspension system concerns. Wheel alignment procedures will be included in the course.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** AUTO 1065**Course Fees:** Supplemental Fee Level 2**Previous AUT*** 166**AUTO 1067 - Honda Braking Systems Theory***Credits: 2*

This theory course introduces Honda Professional Automotive Career Training Program (PACT) program

students to automotive braking system theory and repair in accordance with Automotive Service Excellence (ASE) accreditation standards. Presents theory content specified in the current American Honda Motor CO, Inc. dealership brakes curriculum. Includes content covered in ASE exam A5 Brakes.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** AUTO 1068**Course Fees:** Supplemental Fee Level 2**Previous AUT*** 148, AUT* 167**AUTO 1068 - Honda Braking Systems Lab***Credits: 2*

This laboratory course introduces Honda Professional Automotive Career Training Program (PACT) program students to automotive braking system theory and repair in accordance with Automotive Service Excellence (ASE) accreditation standards. Presents laboratory content specified in the current American Honda Motor CO, Inc. dealership brakes curriculum. Includes content covered in ASE exam A5 Brakes.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** AUTO 1067**Course Fees:** Supplemental Fee Level 2**Previous AUT*** 168**AUTO 1090 - Introduction to Welding***Credits: 3*

In the automotive field, the use of the oxyacetylene torch and the mig welder is commonplace. Automotive technicians need to be able to use the processes of welding and brazing, etc. safely and skillfully. This course offers both theory and a practical lab section so students will be both skilled and knowledgeable in all the welding technology covered.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Additional Info:** 1 lecture and 2 hours laboratory weekly**Course Fees:** Materials Fee**Previous ATP*** 190

AUTO 1194 - Co-op Work Experience I*Credits: 3*

Cooperative education is 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. (300 hours)

Prerequisite: None

Prerequisite/Corequisite: AUTO 1030, AUTO 1031, AUTO 1033, AUTO 1036, AUTO 1038, ENG 1010, minimum 30 credits of course work completed or in progress and a 2.0 GPA, or with permission of the coordinator.

Corequisite: None**Previous AUT* 170***Credits: 1*

Students participate in 100 hours of practical work experience at either a General Motors (GM) dealership or AC Delco repair facility during their freshman spring semester. Students will reinforce automotive skills and theory acquired during the freshman fall and spring semesters. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician. Students must have program coordinator permission to participate in this course.

Prerequisite: Program Coordinator permission is required for this course.

Prerequisite/Corequisite: None**Corequisite:** None**Course Fees:** Supplemental Fee Level 1**Previous AUT* 163****AUTO 1195A - General Motors Internship 1A***Credits: 1*

Students participate in 100 hours of practical work experience 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. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician. Students must have permission of Program Coordinator to participate in this course.

Prerequisite: Permission of General Motors (GM) Automotive Service Education Program (ASEP) Program Coordinator

Prerequisite/Corequisite: None**Corequisite:** None**Previous AUT* 161****AUTO 1295 - General Motors Internship 2***Credits: 3*

Students participate in 300 hours of practical work experience at either a General Motors (GM) dealership or AC Delco repair facility during their freshman summer semester. Students will reinforce automotive skills and theory acquired during the freshman fall and spring semesters. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician. Students must have program coordinator permission to participate in this course.

Prerequisite: Program Coordinator permission is required to participate in this course.

Prerequisite/Corequisite: None**Corequisite:** None**Previous AUT* 171****AUTO 1195B - General Motors Internship 1B***Credits: 1*

Students participate in 100 hours of practical work experience at either a GM dealership or AC Delco repair facility during their freshman winter semester. Students will reinforce automotive skills and theory acquired during the freshman fall semester. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician. Students must have program coordinator permission to participate in this course.

Prerequisite: Permission of General Motors (GM) Automotive Service Education Program (ASEP) Program Coordinator

Prerequisite/Corequisite: None**Corequisite:** None**Previous AUT* 162****AUTO 1595 - Honda Practicum 1***Credits: 1*

This is the first of five practicum courses. In this first course, students participate in 130 hours of practical work experience at either a Honda or Acura dealership to attain the program requirements of 650 hours. Students will reinforce automotive skills and theory acquired. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician.

Prerequisite: AUTO 1041 and AUTO 1042**Prerequisite/Corequisite:** None**Corequisite:** None**Previous AUT* 181****AUTO 1195C - General Motors Internship 1C**

AUTO 2001 - General Motors Powertrain Control System*Credits: 3*

Program (ASEP) program students to General Motors powertrain controls, fuel and emission system theory and repair in accordance with Automotive Service Excellence (ASE) accreditation standards. Presents content specified in the current GM dealership engine performance curriculum. Includes content covered in ASE exam A8 Engine Performance.

Prerequisite: AUTO 1010, AUTO 1016**Additional Info:** Lecture Hours: 2 Lab Hours: 3 **Course Fees:** Supplemental Fee Level 2**Previous AUT* 201****AUTO 2003 - General Motors Manual Drivetrain Systems***Credits: 3*

Introduces General Motors (GM) Automotive Service Education Program (ASEP) program students to manual drivetrain theory and repair in accordance with Automotive Service Excellence (ASE) standards. Presents content specified in the current GM dealership manual drivetrain curriculum. Includes content covered in ASE exam A3 Manual Drivetrain.

Prerequisite/Corequisite: AUTO 1010**Course Fees:** Supplemental Fee Level 2**Previous AUT* 203****AUTO 2005 - General Motors Automatic Drivetrain Systems***Credits: 3*

Program (ASEP) program students to automatic drivetrain theory and repair in accordance with Automotive Service Excellence (ASE) standards. Presents content specified in the current GM dealership automatic drivetrain curriculum. Includes content covered in ASE exam A2 Automatic Drivetrain.

Prerequisite: AUTO 2001**Course Fees:** Supplemental Fee Level 2**Previous AUT* 205****AUTO 2007 - General Motors Climate Control and Safety Systems***Credits: 3*

Introduces General Motors (GM) Automotive Service Education Program (ASEP) program students to climate control and safety system theory and repair in accordance with Automotive Service Excellence (ASE) standards. Environmental Protection Agency (EPA) section 609 regulations will be discussed. Presents content specified in the current GM dealership safety curriculum. Includes content covered in ASE exam A6 and A7.

Prerequisite: AUTO 1010, AUTO 1016**Course Fees:** Supplemental Fee Level 2**Previous AUT* 207****AUTO 2011 - Honda Engine Management Systems Theory***Credits: 2*

This theory course introduces Honda Professional Automotive Career Training Program (PACT) program students to American Honda Motor Co. powertrain controls, fuel and emission system theory and repair in accordance with Automotive Service Excellence (ASE) accreditation standards. Presents theory content specified in the current Honda Interactive Network (IN) fuel systems curriculum. Includes content covered in ASE exam A8 Engine Performance.

Prerequisite: AUTO 1058**Corequisite:** AUTO 2012**Additional Info:** Lecture Hours: 4 **Course Fees:** Supplemental Fee Level 2**Previous AUT* 211****AUTO 2012 - Honda Engine Management Systems Lab***Credits: 2*

This laboratory course introduces Honda Professional Automotive Career Training Program (PACT) program students to American Honda Motor Co. powertrain controls, fuel and emission system theory and repair in accordance with Automotive Service Excellence (ASE) accreditation standards. Presents laboratory content specified in the current Honda Interactive Network (IN) fuel systems curriculum. Includes content covered in ASE exam A8 Engine Performance.

Prerequisite: AUTO 1058**Corequisite:** AUTO 2011**Additional Info:** Laboratory Hours: 4 **Course Fees:** Supplemental Fee Level 2**Previous AUT* 212****AUTO 2013 - Honda Drivetrain Systems Theory***Credits: 2*

Introduces Honda Professional Automotive Career Training Program (PACT) program students to Manual & Automatic drivetrain theory and repair in accordance with Automotive Service Excellence (ASE) standards. Presents theory content specified in the current Honda drivetrain curriculum. Includes content covered in ASE exam A3 Manual Drivetrain and A4 Automatic Transmission.

Prerequisite: AUTO 1041**Corequisite:** AUTO 2014**Course Fees:** Supplemental Fee Level 2**Previous AUT* 213**

AUTO 2014 - Honda Drivetrain Systems Lab*Credits: 2*

Laboratory course that introduces Honda Professional Automotive Career Training Program (PACT) program students to Manual & Automatic drivetrain theory and repair in accordance with Automotive Service Excellence (ASE) standards. Presents content specified in the current Honda drivetrain curriculum. Includes content covered in ASE exam A3 Manual Drivetrain and A4 Automatic Transmission.

Prerequisite: AUTO 1041**Corequisite:** AUTO 2013**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 214**AUTO 2030 - Service and Parts Department Management***Credits: 3*

Presents the overall operation of the service and parts departments. Topics in this course include marketing techniques, financial analysis, personnel management, work scheduling and distribution, and use of pricing manuals. An in-depth study of parts numbering, storage, cataloging, retrieval, ordering, and stocking management techniques will be discussed. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) C1, P2 exam.

Prerequisite/Corequisite: AUTO 1030 or AUTO 1010 or with the permission of Coordinator**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 226, ATP*185**AUTO 2033 - Manual Drivetrain and Axles***Credits: 3*

The diagnosis and repair of manual drive transmissions and transaxles. This includes clutches, drive (half) shaft, and universal joints along with rear axle and four-wheel drive components. Theory, operation, diagnosis, and repair procedures will be covered. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) A3 exam.

Prerequisite/Corequisite: AUTO 1030 or with permission of the coordinator.**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 233, ATP*261**AUTO 2035 - Automotive Transmission/Transaxle***Credits: 3*

The operation, diagnosis and maintenance of automatic transmission and transaxles to include in-vehicle and off-vehicle adjustments and repair. Transmission/transaxle mechanical, hydraulic and electrical operation. Service, overhaul, mechanical/electrical diagnosis procedures will be covered. Use and application of diagnostic equipment. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) A2 exam.

Prerequisite/Corequisite: AUTO 1030 and AUTO 1033 or with permission of the coordinator.**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 235, ATP*262**AUTO 2037 - Heating and Air Conditioning***Credits: 3*

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. Emphasis is placed on basic refrigerant cycles, heat transfer, trouble shooting, and diagnosis of both refrigerant and electronic control systems. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) A7 exam.

Prerequisite/Corequisite: AUTO 1030 and AUTO 1033 or with permission of the coordinator.**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 237, ATP*140**AUTO 2038 - Advanced Engine Performance***Credits: 3*

This is a continuation Engine Performance, emphasizing practical application on the cause and effect of hydrocarbon(HC), carbon monoxide (CO), and nitrous oxide (NO)_x emissions. This includes various systems diagnosis, containing but not limited to, general powertrain, computerized powertrain controls, fuel and air induction, emissions control, and inspection and maintenance (I/M) failures. Covers advanced electrical theory, diagnosis, and repair. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) L1 exam.

Prerequisite: AUTO 1037 or with permission of the Coordinator.**Additional Info:** 2 lecture and 3 hours laboratory weekly.**Course Fees:** Supplemental Fee Level 2**Previous** AUT* 238, ATP* 220**AUTO 2039 - Light Vehicle Diesel Engines***Credits: 3*

The course introduces the diesel engine, its capabilities, operations, and its unique engine fuel delivery systems. Prepares students for the Automotive Service Excellence Education Foundation (A.S.E.) A9 exam.

Prerequisite/Corequisite: AUTO 1030 or with permission of the Coordinator**Additional Info:** 2 lecture and 3 hours laboratory weekly.**Course Fees:** Supplemental Fee Level 2**Previous** ATP* 270

AUTO 2055 - Honda Advanced Electrical Systems Theory*Credits: 2*

This theory course introduces Honda Professional Automotive Career Training Program (PACT) program students to automotive electrical theory and repair in accordance with Automotive Service Excellence (ASE) standards. Presents content specified in the current American Honda Motor Co, Inc. (AHM) dealership electrical curriculum. Includes content covered in ASE exam A6 Electrical/Electronic Systems.

Prerequisite: AUTO 1058**Corequisite:** AUTO 2056**Additional Info:** Lecture Hours: 4 **Course Fees:** Supplemental Fee Level 2**Previous AUT*** 255**AUTO 2056 - Honda Advanced Electrical Systems Lab***Credits: 2*

This laboratory course introduces Honda Professional Automotive Career Training Program (PACT) program students to automotive electrical theory and repair in accordance with Automotive Service Excellence (ASE) standards. Presents laboratory content specified in the current American Honda Motor Co, Inc. (AHM) dealership electrical curriculum. Includes content covered in ASE exam A6 Electrical/Electronic Systems.

Prerequisite: AUTO 1058**Corequisite:** AUTO 2055**Additional Info:** Laboratory Hours: 4 **Course Fees:** Supplemental Fee Level 2**Previous AUT*** 256**AUTO 2057 - Honda Climate Control & Safety Systems Theory***Credits: 2*

This theory course introduces Honda Professional Automotive Career Training Program (PACT) program students to climate control and safety system theory and repair in accordance with Automotive Service Excellence (ASE) standards. Environmental Protection Agency (EPA) section 609 regulations will be discussed. Presents theory content specified in the current Honda Interactive Network (IN) curriculum. Includes content covered in ASE exam A6 and A7.

Prerequisite: AUTO 1041**Corequisite:** AUTO 2058**Course Fees:** Supplemental Fee Level 2**Previous AUT*** 257**AUTO 2058 - Honda Climate Control & Safety Systems Lab***Credits: 2*

This laboratory course introduces Honda Professional Automotive Career Training Program (PACT) program students to climate control and safety system theory and repair in accordance with Automotive Service Excellence (ASE) standards. Environmental Protection Agency (EPA) section 609 regulations will be discussed. Presents content specified in the current Honda Interactive Network (IN) curriculum. Includes content covered in ASE exam A6 and A7.

Prerequisite: AUTO 1041**Corequisite:** AUTO 2057**Course Fees:** Supplemental Fee Level 2**Previous AUT*** 259**AUTO 2294 - Co-op Work Experience II***Credits: 3*

Cooperative education is 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. (300 hours)

Prerequisite: Co-op I and a minimum of 40 credits of course work completed or in progress and a 2.0 GPA, or with permission of Coordinator.**Previous AUT*** 270, ATP*291**AUTO 2394 - Co-op Work Experience III***Credits: 3*

Cooperative education is 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. (300 hours)

Prerequisite: Co-op II and a minimum of 40 credits of course work completed or in progress and a 2.0 GPA, or with permission of Coordinator.**Previous AUT*** 272**AUTO 2395A - General Motors Internship 3A***Credits: 1*

Students participate in 100 hours of practical work experience at either a General Motors (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. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician.

Prerequisite: Program Coordinator permission is required to participate in this course

Previous AUT* 261

AUTO 2395B - General Motors Internship 3B

Credits: 1

either a General Motors (GM) dealership or AC Delco repair facility during their sophomore winter semester. Students will reinforce automotive skills and theory acquired during the sophomore fall semester. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician.

Prerequisite: Program Coordinator permission is required to attend this course.

Previous AUT* 262

AUTO 2395C - General Motors Internship 3C

Credits: 1

Students participate in 100 hours of practical work experience at either a General Motors (GM) dealership or AC Delco repair facility during their sophomore spring semester. Students will reinforce automotive skills and theory acquired during the sophomore fall and spring semesters. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician.

Prerequisite: Program Coordinator permission is required to attend this course.

Course Fees: Supplemental Fee Level 1

Previous AUT* 263

AUTO 2495 - General Motors Internship 4

Credits: 3

Students participate in 300 hours of practical work experience at either a General Motors (GM) dealership or AC Delco repair facility during their sophomore summer semester. Students will reinforce automotive skills and theory acquired during the sophomore fall and spring semesters. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician.

Prerequisite: Program Coordinator permission is required to attend this course.

Previous AUT* 271

AUTO 2595 - Honda Practicum 2

Credits: 1

This is the second of five practicum courses. In this second course, students participate in 130 hours of practical work experience at either a Honda or Acura dealership to attain the program requirements of 650 hours. Students will reinforce automotive skills and theory acquired. Students will be

exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician.

Prerequisite: AUTO 1041, AUTO 1042

Previous AUT* 281

AUTO 2695 - Honda Practicum 3

Credits: 1

This is the third of five practicum courses. In this third course, students participate in 130 hours of practical work experience at either a Honda or Acura dealership to attain the program requirements of 650 hours. Students will reinforce automotive skills and theory acquired. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician.

Prerequisite: AUTO 1041, AUTO 1042

Previous AUT* 283

AUTO 2795 - Honda Practicum 4

Credits: 1

This is the fourth of five practicum courses. In this fourth course, students participate in 130 hours of practical work experience at either a Honda or Acura dealership to attain the program requirements of 650 hours. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician.

Prerequisite: AUTO 1041, AUTO 1042

Previous AUT* 284

AUTO 2895 - Honda Practicum 5

Credits: 1

This is the fifth of five practicum courses. In this fourth course, students participate in 130 hours of practical work experience at either a Honda or Acura dealership to attain the program requirements of 650 hours. Students will be exposed to a wide array of experiences and will become familiar with the responsibilities, workload and duties of a professional automotive technician.

Prerequisite: AUTO 1041, AUTO 1042

Previous AUT* 285

BENT 2098 - Launch a Business

Credits: 3

This course is designed for students who are ready to launch a business, have an established business, including a family-owned business. Students will execute pre-launch plans and build an MVP (Minimum Viable Product or Service) prepare and conduct a marketing campaign, file legal documents, obtain start-up funding, select a location, and be ready to operate the business part-time to discover a sustainable business model. The experience learning approach will be

used in this course where the students will create and operate their own businesses.

Prerequisite: BENT 2180 or permission of the instructor and ENG 1010 with a grade of C- or higher

Previous BES* 295

BENT 2170 - Small Business Management & Growth

Credits: 3

This course builds upon the knowledge and skills needed to manage and grow a small business. It emphasizes the fundamentals of management specific to a small business owner. The course will review the financial health of the business. It will explore strategic planning and growth. Case studies will be utilized for insight into both successful and unsuccessful businesses.

Prerequisite: None

Elective Code(s): BUS

Previous BES*218, BES* 219

BENT 2180 - Entrepreneurship

Credits: 3

This course introduces the student to the fundamentals of entrepreneurship. The students will gain the knowledge and skills necessary to research and begin a small business.

Explores opportunity analysis, startup-expenses, forms of business ownership, site selection, and sources of funding. Student's research and compare buying an existing business, starting a new business and franchising. Also review human resources, marketing, management, accounting and legal aspects of business.

Elective Code(s): BUS

Additional Info: *This course was edited to remove prerequisite per Curriculum Congress. 11/7/2023* **Previous** BES* 218

BENT 2300 - Business Plan

Credits: 3

This course will provide the students the skills and knowledge to develop a business plan. This course will draw on knowledge obtained from previous business courses. Students will individually or on a team bases, develop a compete business plan and learn how to pitch it.

Prerequisite: BENT 2180 and ENG 1010 with a grade of C- or higher

Prerequisite/Corequisite: ACCT 1130 and BMKT 2010

Elective Code(s): BUS

Previous BES* 239

BFIN 1100 - Personal Finance

Credits: 3

This course is an introduction to personal financial planning. It covers the foundations of personal financial planning, understanding the financial planning process, and

measurement of financial standing. To learn how to build a secure financial future, the course will explore methods of managing personal assets, insurance needs, credit, investments and retirement planning. This course is useful to all students with an interest in managing their own finances.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): BUS

Previous BFN* 110, BFN* 111

BFIN 1110 - Financial Literacy

Credits: 3

In this course, students will learn the essential decision-making skills they must apply and use to become wise and knowledgeable consumers, savers, investors, users of credit, managers of their money, citizens, and members of a global workforce and society. This course will use a "hands-on" instructional approach involving techniques such as problem solving, reasoning, simulation, and direct application of the included concepts to the world in which students live. The course is designed to incorporate concepts and skills from mathematics, language arts, social science, applied technology, and character education.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): BUS

Previous BFN* 111

BFIN 1250 - Principles of Banking

Credits: 3

An overview of the banking industry. Topics include the language and documents of banking, check processing, teller functions, deposit functions and the role of the bank in the community.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): BUS

Previous BFN* 125

BFIN 2100 - Principles of Finance*Credits: 3*

Principles of Finance serves as an introduction to financial management. Financial management is concerned with value and, when applied to firms, studies financial decision making and its impact on the value of the firm. It is an examination of how a business and investors plans their needs for funds, raise the necessary funds, and invests them to attain its goals. This course covers money and capital markets, financial analysis, working capital management, long term financing, the time value of money, risk, leverage, ratio analysis, portfolio theory, and cost of capital.

Prerequisite: A grade of C - or higher in all of the following courses: ACCT 1130, ECON 1002

Prerequisite/Corequisite: MATH 1200 may be taken concurrently

Elective Code(s): BUS

Previous BFN* 201

BFIN 2110 - Money & Banking*Credits: 3*

A study of the key concepts, theories and interrelationships that link money and banking to the U.S. economy. The topics covered will include principles of money and credit, basic banking regulations, determination of interest rates and foreign exchange rates, monetary policy and the role and tools of the Federal Reserve System. The structure and characteristics of financial markets are also covered.

Prerequisite: BFIN 2100 or ECON 1001, either course with a Grade of "C" or higher

Elective Code(s): BUS

Previous BFN* 211,ECN* 250

BFIN 2113 - Sports Finance*Credits: 3*

This course presents the financial issues that impact the sports and athletic industries. Through the application of principles and practices of financial management, students will develop the financial skills necessary to analyze the implications of various operating procedures, including obtaining revenue, spending, capital projects, and supply and demand. Other topics include budget development and economic impact within the sport industry.

Prerequisite: ECON 1001, ECON 1002, ACCT 1130 and ENG 1010 with a grade of C- or higher

Prerequisite/Corequisite: none

Corequisite: none

Previous new

BFIN 2300 - Investment Principles*Credits: 3*

A study of the fundamental principles and concepts of analysis and an evaluation of a variety of financial investments with emphasis on common stocks and bonds.

The working of capital markets and the determination of interest rates will also be covered.

Prerequisite: BFIN 2100 with a grade of "C" or higher or permission of instructor

Previous BFN* 203

BFIN 2350 - International Finance*Credits: 3*

The international dimensions of finance; Topics include the international monetary system, foreign exchange markets, management of foreign exchange exposure and political risk, the financing of international trade, international financial markets, and capital budgeting techniques. This course builds upon the valuation methods developed in the prerequisite course in Finance.

Prerequisite: BFIN 2100

Corequisite: BFIN 2100

Elective Code(s): BUS

Previous BFN* 235

BIO 1000 - Biology for Everyday Life*Credits: 3*

This lecture-only course is for students pursuing careers outside of science and healthcare (i.e. non-majors). We will explore the foundational concepts of biology to learn how life functions from the molecular level through how organisms interact with the environment. Relevant societal topics and current events will be incorporated to supplement class discussions and course materials.

Prerequisite: eligibility for ENG 1010

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Scientific Knowledge & Understanding (SCKX)

Elective Code(s): LART, SCI

Previous new

BIO 1005 - Introduction to Biology*Credits: 4*

This is a non-majors level lab science course that focuses on basic chemistry, pH, cell structure and function, metabolism, genetics, evolution, ecology and diversity of life. The use of computers and Blackboard are integral aspects of the course.

Prerequisite: Eligibility for ENG 1010 and MATH 1001 or higher

General Education Code: Scientific Reasoning (SCRX)

Elective Code(s): LART, SCI

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous BIO* 105

BIO 1011 - Introduction to Nutrition*Credits: 3*

A study of the science of nutrition including the chemical structure, function, digestion, absorption, and metabolism of nutrients. Class discussion will emphasize how poor dietary habits and decreased physical activity contribute to the formation of diseases associated with the Western lifestyle. Students critically analyze their own diets with respect to nutritional content and adequacy. This course will not meet program requirements for the Dietetic Technician program.

Prerequisite: Eligible for ENG 1010 or ENG 0910**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** LART, SCI**Previous** BIO* 111, NTR* 106**BIO 1023 - Biology of Disease***Credits: 3*

This course is designed for students entering into the health professions. This course will cover the essential fundamentals of major types of diseases, it will also cover the basics of diagnosis and treatment. Students will review the basic anatomy and physiology of each organ system while exploring the diseases of each system.

Prerequisite: Basic Skills Assessment placement at ENG 1010 level.**Elective Code(s):** LART, SCI**Previous** BIO* 123**BIO 1040 - Pestilence, Plagues, and People***Credits: 3*

This survey course selects diseases and studies their impacts and influences on societies and cultures, with an emphasis on the Western world.

Prerequisite: Placement into ENG 1010**Elective Code(s):** LART, SCI**Cross-listed:** (cross-list with History?)**Previous** BIO* 200**BIO 1098 - Topics of Interest in Biology***Credits: 3*

This course covers topics of special interest in biology at the introductory (100's) level. Topics vary by campus and semesters and are meant to address current and relevant biology topics.

Prerequisite: Eligibility for ENG 1010 and MATH 1001 or higher**Elective Code(s):** LART, SCI**Previous** BIO* 198**BIO 1100 - Principles of the Human Body***Credits: 3*

This non-STEM (Science, Technology, Engineering, and Math) majors natural science course is designed to introduce students to basic principles required to support human life. The cellular nature of life and organization and function of organs and organ systems is emphasized. Students use a variety of resources from readings to media to case studies to acquire and evaluate relevant scientific content. Select body systems and disease states are discussed. This course cannot be used as the prerequisite for BIO 2111 or BIO 2350.

Prerequisite: Eligibility for ENG 0910**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Scientific Knowledge (SCKX)**Elective Code(s):** LART, SCI

Additional Info: When taken with the lab (BIO 1100L) this course fulfills the Scientific Reasoning (SCRX) general education requirement. **Previous** BIO* 110

BIO 1100L - Principles of the Human Body Lab*Credits: 1*

This non-STEM (Science, Technology, Engineering, and Math) majors laboratory course compliments BIO 1100. It is designed to be an active introduction to the basic structure and function of a human body, including animal cells and tissues through human organ systems. This course cannot be used as the prerequisite for BIO 2111 or BIO 2350.

Prerequisite: Eligibility for ENG 0910**Prerequisite/Corequisite:** BIO 1100 with a grade of C or higher (if prerequisite)**Corequisite:** None**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** BIO* 110L**BIO 1111 - Cell Biology with Organ Systems***Credits: 4*

This one-semester laboratory science course covers principles of cell biology, including basic biological chemistry, cell structure and function, cell division, cellular respiration, deoxyribonucleic acid (DNA) replication and protein synthesis. These concepts are applied to a study of the structure and function of the major organ systems in the human body. This course can be used as a prerequisite for BIO 2111 and BIO 2350.

Prerequisite: Eligibility for ENG 1010; recent college preparatory biology recommended**General Education Code:** Scientific Reasoning (SCRX)**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** BIO* 115 or BIO* 127

BIO 1118 - Anatomy and Physiology of the Eye*Credits: 4*

This course is designed to introduce the most commonly used ophthalmic devices and their use. It will explore single vision, bifocal, trifocal and progressive lenses commonly used in ophthalmic practice. Special emphasis will be placed on the physical properties of lens materials including index of refraction, absorptive ability, lens coatings and special applications of lens materials. It will include the discussion of the lens surfacing process and the surfacing laboratory. Frame materials, design, selection, and dispensing will be discussed.

General Education Code: Scientific Reasoning (SCRX)**Elective Code(s):** LART, SCI**Additional Info:** Lecture: 3 hours per week. Laboratory: 3 hours per week **Previous BIO* 118****BIO 1210 - General Biology I***Credits: 4*

This is a Science, Technology, Engineering, and Mathematics (STEM) majors level lab science course that focuses on aspects of plant, animal and bacterial cell biology. Cellular biochemistry, including cellular respiration and photosynthesis, reproduction, genetics and evolution will be covered. The use of computers and Blackboard are integral aspects of the course. This course can be used as a prerequisite for BIO 2111 and BIO 2350.

Prerequisite: Eligibility for ENG 1010 and MATH 1010. *In addition, completion of High School or CHEM 1110 or higher is recommended.***General Education Code:** Scientific Reasoning (SCRX)**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous BIO* 121****BIO 1220 - General Biology II***Credits: 4*

This lab science course focuses on the biology of organisms including structure and function, nutrition, life cycles, and ecological relationships; and the origin and evolution of life. Topics to be covered include taxonomy, the diversity of life forms from the microbes to the animals, the structures and functions of fungal, plant, and animal systems, as well as ecology, ecosystems and evolution.

Prerequisite: Eligibility for ENG 1010 and MATH 1010**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous BIO* 122****BIO 1400 - Ornithology***Credits: 3*

An introduction to the biology of birds. Topics include the biology, behavior, migration, breeding, and population, ecology of birds. Field studies include the identification of birds, their behavior, and ecology. Three hours of lecture per week. Field trips are required.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** LART, SCI**Previous BIO* 140****BIO 1450 - Zoology***Credits: 4*

This lecture-laboratory course is a survey of the animal kingdom. Topics discussed include morphology, anatomy and physiology, life-cycles, reproduction, evolution, and ecological relationships of various animal forms.

Prerequisite: Eligible for MATH 1001 or higher and eligible for ENG 1010.**Elective Code(s):** LART, SCI**Additional Info:** Three hours of lecture and three hours of laboratory weekly. **Previous BIO* 145****BIO 1550 - Botany***Credits: 4*

For non-science AND science majors. This lab science course focuses on an introduction to the study of the structure, reproduction, and physiology of plants. The evolutionary development of the plant kingdom will be stressed, as will their ecological and economical significance. Laboratory classes will include fieldwork to provide hands-on experience in identification of plant species and the role of plants in nature. Projects in lab will emphasize the importance of plants in human society. The use of computers and Blackboard are integral aspects of the course.

Prerequisite: Eligible for ENG 0910**General Education Code:** SCR X**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous BIO* 155****BIO 1600 - Genetics and Society***Credits: 3*

This course will introduce the principles of genetics including inheritance, human genetics, and molecular genetics. The course will also focus on the role of deoxyribonucleic acid (DNA) in agriculture, medicine, and technology. The ethical implications of genetic technology will also be discussed. This course is not intended for science majors.

Prerequisite: ENG 1010**Elective Code(s):** LART, SCI**Previous BIO* 160**

BIO 1710 - Field Biology*Credits: 4*

Lecture-laboratory. This is an introduction to field ecology with special emphasis on identification of Connecticut plants and animals in the outdoors. A wide range of topics will be presented including map reading, edible wild foods, specimen collecting, herbarium preservation, and wildlife observations.

Prerequisite: Completion of MATH 0989 with a grade of C or higher or an appropriate score on a college placement exam, and eligibility for ENG 1010.

Elective Code(s): LART, SCI

Previous BIO* 171

BIO 1720 - General Ecology*Credits: 4*

Ecology is the study of interactions: between individuals of the same or different species and between living and non-living parts of the Earth. These interactions will be studied in the context of deep and recent evolutionary history and biodiversity. Students will explore ecological principles focusing on the factors that influence the distribution and abundance of organisms. Current biodiversity and environmental issues are linked to class topics. Lab data (including from locations in outdoor habitats of Connecticut) may include collecting information on population growth, competition, species interactions, trophic dynamics, habitat description, animal behavior, climate modeling, and biodiversity/community analysis, among others. The use of computers and Blackboard are integral aspects of this course. This course is suitable for environmental science/natural resources majors and non-science majors.

Prerequisite: Eligibility for ENG 1010

General Education Code: Scientific Reasoning (SCRX)

Elective Code(s): LART, SCI

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous BIO* 173, BIO* 178

BIO 1750 - Introduction to Marine Science*Credits: 3*

This course is an introduction to the world's oceans and explores both living and nonliving components. A major focus of the course is on groups of plants and animals in various marine environments, as well as their interactions with each other. In addition, the geological and chemical features of the oceans are examined as are the uses, and impacts, of humans in ocean systems.

Prerequisite: eligibility for ENG 1010 and MATH 1001 or higher

General Education Code: Scientific Reasoning (SCRX)

Elective Code(s): LART, SCI

Previous BIO* 175

BIO 1760 - Introduction to Marine Biology*Credits: 3*

This is an introductory course in marine biology. Major topics will include marine organisms and ecology with a specific focus on the intertidal zone. Additional topics include energy transfer, organismal biology, adaptations to seawater, and marine habitats. Plankton will be featured as will the geomorphology of the New England coast. Some fieldwork may be required.

Prerequisite: Eligibility for ENG 1010 and MATH 1001 or higher

Elective Code(s): LART, SCI

Previous BIO* 176

BIO 1770 - Evolution*Credits: 3*

Evolution is presented as a unifying concept in biology. Topics include evolutionary mechanisms, earth history, and cosmological theories. The history of major kingdoms of life are discussed as well as the reasons for the present distribution of organisms.

Prerequisite: Eligibility for ENG 1010

Elective Code(s): LART, SCI

Additional Info: Three hours of lecture per week. **Previous BIO*** 177

BIO 1809 - Principles of Biotechnology*Credits: 3*

Students will be introduced to key elements in the exciting and rapidly advancing field of biotechnology. This course will provide students with a brief historical context, the basic scientific knowledge needed to understand biotechnology, a survey of current and future applications of the technology and an examination of the legal and ethical limitations placed on the technology throughout the globe. This course is intended for students in the biotechnology program and students exploring career options in the field of science; therefore, résumé and cover letter writing skills will be emphasized.

Prerequisite: Eligible for ENG 1010

General Education Code: Scientific Knowledge & Understanding (SCKX)

Elective Code(s): GLKY, LART, SCI

Previous BIO* 109

BIO 1810 - Basic Techniques in Biotechnology*Credits: 4*

Through a combination of hands-on laboratory experimentation and lectures, students gain experience in molecular biology and biotechnology using state-of-the-art laboratory equipment. These skills include accurate pipetting, basic microscopy, preparation of solutions, aseptic technique and bacterial cultures, genomic DNA isolation, plasmid purification, DNA quantification, agarose gel electrophoresis,

and PCR amplification. Students are exposed to the field of bioinformatics and its applications in bioscience research, specifically the utility of the National Center for Biotechnology Information resources. Students explore the bioethics of biotechnology in the context of contemporary societal issues.

Prerequisite: Eligibility for ENG 1010 and MATH 1001 or higher

General Education Code: Scientific Knowledge & Understanding (SCKX)

Elective Code(s): LART, SCI

Previous BIO* 130

BIO 2010 - Nutrition and Human Development

Credits: 3

This course will examine nutrition throughout the human life cycle. Nutrition during periconception, pregnancy, lactation, childhood, adolescence and adulthood will be reviewed. The course will also examine nutrition in public health in both the developed and developing world.

Prerequisite: BIO 1011

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): LART, SCI

Previous BIO* 210

BIO 2020 - Biochemistry

Credits: 4

This intermediate level course focuses on the structure, function, and properties of biological molecules. The organization of amino acids, lipids, carbohydrates, and nucleic acids are addressed through a discussion of their hierarchical structure, their assembly into essential complexes in biological systems, and their relationship to human disease. 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.

Prerequisite: BIO 1210 and CHEM 1220 both with a "C-" or higher OR CHEM 2310 with a "C-" or higher OR Instructor's permission

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): LART, SCI

Cross-listed: CHEM 2410 - Biochemistry

Additional Info: 3 hours lecture/3 hours laboratory per week

Previous BIO* 220

BIO 2095 - Biotechnology Internship

Credits: 3

Student will work a minimum of 160 hours in an industrial or research biotechnology laboratory to learn new research skills and apply skills learned in laboratory courses.

Prerequisite: Permission of the Biotechnology Program Coordinator

Elective Code(s): LART, SCI

Previous BIO* 296

BIO 2098 - Special Topics in Biology

Credits: 3-4

This course covers topics of special interest in biology for biology majors. Topics vary by campus and semesters and are meant to address current and relevant biology topics.

Prerequisite: BIO 1210, and CHEM 1010 or ENG 1010, all with a C or higher

Elective Code(s): LART, SCI

Previous BIO* 298

BIO 2103 - Pathophysiology

Credits: 3

This course provides an introduction to the study of functional changes that accompany human diseases. The purpose of this course is to supply students with a basic understanding which will prepare them for the healthcare setting. This course places emphasis on the disease processes affecting the human body through an integrated approach to specific disease entities, including the study of causes, diagnosis and treatment of disease. The most common conditions along with new and emerging diseases will be included.

Prerequisite: BIO 1111 or BIO 2112

Elective Code(s): LART, SCI

Previous BIO* 203

BIO 2111 - Anatomy & Physiology I

Credits: 4

This course is the first semester of a two-semester sequence that provides a comprehensive study of the structure and function of the human body. Anatomy and Physiology I covers terminology, tissues, integumentary, skeletal, muscular, and nervous systems and their relationships to other systems. The physiology of movement is emphasized. Selected pathology examples are examined. Students study the relationship between structure and function using interactive physiology software, diagnostic imaging, dissection, and histology slides. The use of computers and Blackboard are integral aspects of this course.

Prerequisite: ENG 1010 AND BIO 1210 or BIO 1111 or (BIO 1005 AND CHEM 1110) - all with a "C" or higher

General Education Code: Scientific Reasoning (SCRX)

Elective Code(s): LART, SCI

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous BIO* 211

BIO 2112 - Anatomy & Physiology II*Credits: 4*

A study of the structure and function of the human body. Includes a detailed analysis of the endocrine, digestive, respiratory, cardiovascular, immune & lymphatic, urinary and reproductive systems. Pathology and disease applications are covered. Students examine the relationship between structure and function using interactive anatomy software, laboratory dissection, interactive physiology software, and histology slides. The use of computers and Blackboard are integral aspects of this course.

Prerequisite: BIO 2111 with a C or higher**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** BIO* 212**BIO 2121 - Human Cadaver Anatomy***Credits: 4*

Explores the human anatomy integrating online course work and human cadaver dissection.

Prerequisite: BIO 2111 and BIO 2112 with B+ or higher in both classes **OR** Permission from instructor**Additional Info:** This course is in conjunction with Yale Medical School Cadaver Lab. All laboratory time will be conducted on the Yale campus. **Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** BIO 213**BIO 2122 - Survey of the Human Cadaver***Credits: 1*

This course is a survey of a prosected human cadaver. All organ systems are studied with special reference to clinical significance.

Prerequisite: BIO 2111 with a grade of C or higher**Additional Info:** This course is in conjunction with Yale Medical School Cadaver Lab. All laboratory time will be conducted on the Yale campus. **Previous** BIO 217**BIO 2350 - Microbiology***Credits: 4*

This course is a comprehensive study of microorganisms. Topics covered will include the basic characteristics, morphology, physiology, growth, reproduction, and genetics of bacteria, as well as a brief taxonomical survey of the following microbial life forms: Archaea, Bacteria, Fungi, Protists and Viruses. Laboratory activities will include performing various techniques of microscopy, staining, culturing, and isolating bacteria. The morphology and metabolic processes of select microbial groups will be studied. Students will learn to apply various modern biological techniques that are used for controlling the growth

of microbes, and to identify unknowns. The use of computers and Blackboard are integral aspects of the course.

Prerequisite: BIO 1005 **OR** BIO 1210 **OR** BIO 1111, **AND** CHEM 1110 or higher, **AND** ENG 1010. All with a 'C' or higher.**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** BIO* 235**BIO 2600 - Principles of Genetics***Credits: 3*

This is an intermediate level course in genetics providing a broad view of the history, theory and application of classical and modern molecular genetics. Topics include Mendelian genetics, mitosis and meiosis, chromosomal theory, human genetics, and molecular genetics. The course will also emphasize ethical considerations for the use of gene therapy and reproductive technology.

Prerequisite: BIO 1210 with a "C" or higher**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** LART, SCI**Previous** BIO* 260**BIO 2630 - Molecular Genetics***Credits: 4*

This is an advanced course that covers the main concepts of genetics including the theory of chromosomal inheritance, classical Mendelian inheritance, principles of human genetics, the molecular basis of development, the role of nucleic acids in gene expression, genetic mutations, population genetics and topics in modern genetics in areas such as epigenetics, recombinant deoxyribonucleic acid (DNA), biotechnology, gene mapping, bioinformatics and diagnosis of human genetic diseases. The laboratory portion of this course will emphasize genetic crosses, molecular diagnostic techniques, and calculating genetic variation in populations.

Prerequisite: CHEM 1120 or BIO 1210 or BIO 2350 with a C or higher**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** BIO* 262 and BIO* 263**BIO 2700 - Ecology***Credits: 4*

This majors-level course serves as a deep inquiry of important ecological topics. Review, analyses, and discussion of primary scientific literature is a core of this course. Dynamic processes in populations, communities, and ecosystems are reviewed and investigated in both lab and lecture. Sub-topics include ecosystem characteristics and

adaptations, biodiversity, genetics, speciation, trophic interactions, biogeochemical cycling, community energetics, conservation biology, and local/global ecological issues. Outdoor field laboratory studies are required. Problem-solving, scientific communication, and exposure to fine-scale ecological research techniques and applied statistics are stressed. Field labs provide context on topics covered in lecture and may include: physical constraints, population dynamics, competition, species interactions, habitat classification, community structure analysis, animal behavior, and conservation biology. The use of computers and Blackboard are integral aspects of the course.

Prerequisite: BIO 1210 and ENG 1010, and MATH 1200 all with a C or higher.

Elective Code(s): LART, SCI

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous BIO* 270

BIO 2822 - Molecular Biotechniques

Credits: 4

A laboratory course designed to introduce molecular biology techniques such as plasmid and chromosomal Deoxyribonucleic Acid (DNA) isolation, restriction enzyme mapping, agarose gel electrophoresis, and manipulation of DNA fragments. Students will prepare independent research projects that will be presented as either scientific poster or oral research presentations.

Prerequisite: CHEM 1120 or higher AND BIO 2350

Elective Code(s): LART, SCI

Previous BIO* 222

BIO 2830 - Advanced Techniques in Biotechnology

Credits: 4

In this combined lecture-lab course, students gain hands-on experience with the expression, purification and characterization of recombinant proteins. Through a series of process-oriented guided inquiry learning labs students will gain working knowledge of bioinformatics, molecular cloning, purification of recombinant proteins, and enzymatic reaction rates. Students perform experiments involving ion-exchange and affinity chromatography, Bradford Assay, SDS-PAGE, immunoblotting, and enzymatic activity assays.

Prerequisite: Grade C or higher in BIO 1210 And CHEM 1210

Elective Code(s): LART, SCI

Previous BIO* 230

BIO 2865 - Principles of Synthetic Biology

Credits: 4

The study of synthetic biology combines principles of molecular biology, genetics, and biochemistry, to engineer bacteria to do useful things. Students will apply their knowledge of bacterial and eukaryotic regulatory process to manipulate biological parts to generate devices and complex

systems. Students will review the seminal findings in the field of synthetic biology, as well as examine the bioethical implications of the field.

Prerequisite: BIO 1210 and CHEM 1210 with a C or higher

Elective Code(s): LART, SCI

Previous BIO* 265

BMED 1010 - Biomedical Technology

Credits: 2

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.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous BME* 110

BMED 1016 - Physiological Systems

Credits: 4

Examines human anatomy & physiology, using chemical, mechanical, and electrical system models. Presents biopotential generation and regulatory control systems. Develops computer simulations of physiological events.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 1

Previous BME* 116

BMED 2010 - Biomedical Instrumentation

Credits: 4

Presents the principles, applications, and design of biomedical instrumentation. Includes discussion of measuring, monitoring, diagnostic, therapeutic, & clinical laboratory equipment. Presents imaging techniques & computer-based systems.

Prerequisite: EETA 1036

Course Fees: Supplemental Fee Level 1

Previous BME* 210

BMED 2012 - Biomedical Equipment Design

Credits: 4

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 & testing.

Prerequisite: BMED 2010

Previous BME* 212

BMED 2014 - Advanced Biomedical Instrumentation*Credits: 4*

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.

Prerequisite: BMED 2010**Previous BME*** 214**BMED 2020 - Biomedical Practicum***Credits: 3*

Applies safety, calibration and troubleshooting techniques to practical situations. Also provides onsite practical experience in a hospital.

Prerequisite: Approval of Program Coordinator**Previous BME*** 220**BMGT 1410 - Public Utility Management***Credits: 3*

Introduces areas of natural gas, electric, drinking water and wastewater management 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.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous BMG*** 110**BMGT 2020 - Principles of Management***Credits: 3*

This course integrates the management principles with the development of leadership and teamwork. Topics include the major functions of management: planning, organizing, controlling and leading as well as techniques for implementing these functions.

Prerequisite: ENG 1010 with a grade of C- or higher**Elective Code(s):** BUS, GLKY**Previous BMG*** 202**BMGT 2040 - Managerial Communications***Credits: 3*

This is a practical course in oral and written managerial communication skills, covering the writing of letters, memos and reports, editing techniques, and the preparation of resumes and cover letters.

Prerequisite: ENG 1010 with a grade of C- or higher**Elective Code(s):** BUS**Previous BMG*** 204**BMGT 2100 - Organizational Behavior***Credits: 3*

The study of individuals and groups processes in organizational context, organizational structure and design, organizational culture and management of organizational change. Topics include motivation, learning, group dynamics, communication, decision making, leadership, conflict, power, political behavior and organizational change and culture. Orientation is toward the development of personal effectiveness in dealing with others.

Prerequisite: ENG 1010 with a grade of C- or higher**Elective Code(s):** BUS**Cross-listed:** PSY 2047**Previous BMG*** 210**BMGT 2200 - Human Resource Management***Credits: 3*

HR management can be defined as the effective use of human capital in an organization through the management of people-related activities. It involves leadership, values, employment planning, recruiting and selecting employees, training and compensating them, and evaluating their performance. It also significantly influences the corporate culture and norms. The general purpose of this course is to familiarize students with the basic principles and techniques of human resource management. The course takes a practical view that integrates the contributions of the behavioral sciences with the technical aspects of implementing the HR function in the "real world". A key objective of this course is to show that HR management is more than just accepting employment applications and keeping records; it is a central and strategic organizational activity of increasing complexity and importance.

Prerequisite: ENG 1010, BMGT 2020**Elective Code(s):** BUS**Previous BMG*** 220**BMGT 2260 - Negotiation***Credits: 3*

An in-depth examination of the nature and importance of negotiation concepts and principles as applied to organizational effectiveness. Competent negotiation skills are required to meet organizational challenges in a rapidly changing, globally competitive world. Negotiations fundamentals, sub-processes, contexts, and remedies are emphasized in light of modern theories and applications.

Prerequisite: BMGT 2020**Elective Code(s):** BUS**Previous BMG*** 226

BMGT 2416 - Rates and Revenues*Credits: 3*

This course covers the legal basis, principles, and concepts of public utility regulation and provides an overview to students who are relatively new to the regulatory policy arena, including utility personnel and analysts. Determination of revenue, utility business models, and the ratemaking process are included.

Prerequisite: Completion of ENG 1010 with C- or higher**Prerequisite/Corequisite:** None**Corequisite:** None**Previous BMG*** 216**BMGT 2419 - Asset and Infrastructure Management***Credits: 3*

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 management program will be provided. Systematic and risk-based processes for making decisions concerning the management and renewal of the utilities physical assets including infrastructure, fixed plant and mobile equipment.

Prerequisite: Completion of ENG 1010 with C- or higher**Prerequisite/Corequisite:** None**Corequisite:** None**Previous BMG*** 219**BMGT 2421 - Customer Relations***Credits: 3*

This course introduces students to the fundamentals of developing best practices for internal customer service and the impact on external customer service. The concept that outstanding external customer service begins with exceptional internal customer service will be explained. Students will explore the basic elements of setting internal expectations for service delivery, hand-offs within the customer supply chain, and the five W's of a hand-off (who, what, when, where, and why).

Prerequisite: Completion of ENG 1010 with C- or higher**Prerequisite/Corequisite:** None**Corequisite:** None**Previous BMG*** 221**BMKT 1003 - Principles of Retailing***Credits: 3*

Explores the fundamentals of retailing and its scope and significance in our marketing system. Among the topics covered are the distinguishing characteristics of retailing and retailers, store classification, operations planning, retail buying and merchandising, store location analysis, store

layout and design, the retail price, future trends, and retailing careers.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous BMK*** 103**BMKT 1060 - Principles of Selling***Credits: 3*

This course is designed to prepare the student for professional selling of products, services, and ideas. It concentrates on the mutual satisfaction of buyers and sellers and the role of the salesperson. Topics studied include the communication process, customer service, sales territory management, and the seven steps in the selling process: prospecting, approach, presentation, demonstration, handling of objections, closing and follow-up. Practical application of these concepts in industrial sales, consumer sales, public service selling, and political campaigns are also studied through case studies, role-playing and student participation exercises.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BUS**Previous BMK*** 106**BMKT 1230 - Principles of Customer Service***Credits: 3*

This course is the study of the principles and practices involved in providing excellent customer service. Students learn effective verbal and nonverbal communication techniques, professional customer service behaviors, problem solving and the monitoring and measuring of customer service. Delivery of customer service by telephone, in person, by mail and via the Internet is studied.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BUS**Previous BMK*** 123

BMKT 2010 - Principles of Marketing*Credits: 3*

This is a foundational marketing course that introduces students to the concepts, analyses, and activities that comprise marketing management, and to provide practice in assessing and solving marketing problems. Students study markets, create and manage a marketing mix, develop marketing strategies and consider customer motivation, with emphasis on basic marketing research and marketing management. In addition, students analyze the various marketing functions and apply theories and techniques to problems and cases in the context of current marketing practice and market environment.

Elective Code(s): BUS, GLKY**Previous BMK* 201****BMKT 2015 - Principles of eBusiness***Credits: 3*

This course is designed to provide students with an understanding of the fundamentals of eBusiness. Emphasis will be placed on applications and analysis. This course will cover the concepts, tools, and strategies for exploring and understanding opportunities and challenges associated with eBusiness, with a focus on marketing.

Prerequisite/Corequisite: none**Corequisite:** none**Previous BMK* 215****BMKT 2042 - Retail Buying***Credits: 3*

Introduces the basic principles of buying merchandise for resale, sourcing merchandise, determining and selecting suitable merchandise, and negotiating for merchandise. Students will study the responsibilities of buyers in different types of retail firms. The fundamentals of merchandising math will be covered.

Prerequisite/Corequisite: BMKT 1003, BMKT 2055 and ENG 1010 with a grade of C- or higher**Previous BMK* 242****BMKT 2055 - Introduction to the Fashion Industry***Credits: 3*

Provides an overview of the fashion industry including the economic and social importance of the business of fashion. The materials of fashion, manufacturing, retailing and support services are studied. Current events in the industry, fashion careers and opportunities are discussed.

Prerequisite: None**Prerequisite/Corequisite:** none**Corequisite:** none**Previous BMK* 255****BMKT 2057 - Textiles***Credits: 3*

This course is an introduction to textiles commonly used in fashion and home furnishings. Fibers, yarns, fabrics, dyes, printing and finishing are analyzed for their performance characteristics. Students utilize a fabric swatch book to enable identification of fabrics and textile processes.

Prerequisite: None**Prerequisite/Corequisite:** none**Corequisite:** none**Previous BMK* 257****BMKT 2070 - Consumer Behavior***Credits: 3*

This course builds a useful conceptual framework that both enhances understanding and permits practical application of consumer behavior principles to marketing strategy.

Discussion focuses on the consumer as an individual, consumers in their social and cultural settings, the consumer decision-making process, and consumer behavior and society.

Prerequisite: BMKT 2010 with a grade of C- or higher**Elective Code(s):** BUS**Previous BMK* 207****BMKT 2080 - Social Media Marketing***Credits: 3*

New technologies have changed and challenged the marketing landscape. By analyzing case studies and examining current uses of social media marketing, students will learn how to harness the power of user-generated content to create buzz, position products, and raise brand awareness.

The course will emphasize strategies for measuring the effectiveness of social media marketing campaigns.

Prerequisite: ENG 1010 with a grade of C- or higher**Elective Code(s):** BUS**Previous BMK* 208****BMKT 2098 - Special Topics in Marketing***Credits: 3*

This course provides a study of important trends and current issues in the field of marketing. Focus is in solving marketing problems.

Prerequisite: 24 credits or permission of instructor**Previous BMK* 295****BMKT 2102 - Sports Marketing***Credits: 3*

This course presents an overview of the various techniques and strategies used in meeting the wants and needs of consumers in the sport industry as well as understanding how sport can be used to assist in the marketing of other companies and products. Areas to be addressed are the uniqueness of sport marketing in comparison with traditional

marketing, an overview of the segments of the sport industry, the importance of market research and segmentation in identifying the right sport consumer, the use of data-based marketing in reaching the sport consumer, an overview of the marketing mix as individual units and the relationship between those units, and the development of sponsorship and endorsement packages.

Prerequisite: ENG 1010 with a grade of C- or higher

Prerequisite/Corequisite: none

Corequisite: none

Previous BMK* 212

BMKT 2140 - International Marketing

Credits: 3

An analysis of the techniques, procedures, and strategies used by multinational firms. Emphasis on the economic, cultural, political/legal and technological factors that influence the marketing of consumer and business goods. Methods and sources of data for determining products to sell and countries in which to sell them are studied.

Prerequisite: BMKT 2010 with a grade of C- or higher

Elective Code(s): BUS

Previous BMK* 214

BMKT 2160 - Digital Marketing

Credits: 3

Students in this course will explore the development, production and implementation of digital-marketing delivery methods including, but not limited to, email marketing, web-based marketing, search-engine optimization (SEO), online advertising, and social media. The course will introduce tools to appropriately measure and evaluate the effectiveness of digital-marketing campaigns that are designed to improve the experience of the consumer. Computer skills are necessary.

Prerequisite: ENG 1010 with a grade of C- or higher

Elective Code(s): BUS

Previous BMK* 216

BMKT 2195 - Field Experience I

Credits: 3

Provides the opportunity for students to gain practical and professional experience in fashion or retail companies. Students will apply their theoretical concepts previously learned in class to real world experiences. Job sites can be on-site local or in other areas including New York City as well as e-commerce companies. Students will be required to spend at least 6 hours a week for a minimum of 90 hours at their work site (paid or unpaid) with times arranged by the students and employers. Students will also participate in weekly discussions in an online class format with their instructor and classmates.

Prerequisite: GPA 2.5 or above and instructor's permission

Prerequisite/Corequisite: none

Corequisite: none

Previous new

BMKT 2200 - Sales

Credits: 3

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 buyerseller relations, prospecting, sales call planning, communicating the message and closing the sale. The course also covers how to motivate, compensate and train sales people.

Prerequisite: ENG 1010 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BUS

Previous BMK* 220

BMKT 2210 - Sales Management

Credits: 3

Studies the persuasive techniques used in personal selling. Discussion focuses on the steps in the sales process, the management of that process, and the role of sales within the promotion element of the marketing mix.

Prerequisite: BMKT 2010 with a grade of C- or higher

Elective Code(s): BUS

Previous BMK* 221

BMKT 2295 - Field Experience II

Credits: 3

This course provides another opportunity for a new learning experience for students to gain practical and professional experience in fashion or retail companies. This experience can be with a new company or the same fieldwork site as BMK 2XX but with different job responsibilities. Students will enrich the theoretical concepts previously learned in the classroom to real-world experiences. Students will be required to spend at least 6 hours a week for a minimum of 90 hours at their work site (paid or unpaid) with times arranged by the student and employers. Students will also participate in weekly discussions in an online class format with their instructor and classmates.

Prerequisite: BMKT 2195, overall GPA of 2.5 or higher, or instructor's permission

Previous BMK*296

BMKT 2350 - Public Relations

Credits: 3

A study of the principles and practices of modern public relations as they apply to profit-making and not-for-profit organizations. Students study a practical approach to the methods of establishing and maintaining positive relationships between an organization and its stakeholders.

These stakeholders or "publics" include customers, employees, competitors, investors, vendors, government agencies, and society in general. Topics include special events planning, media relations planning and effective communications. Ethical and social responsibility and negative publicity are also discussed. Case studies are used to illustrate creative solutions to public relations problems. Students demonstrate their learning by developing a public relations campaign.

Prerequisite: ENG 1010 with a grade of C- or higher

Elective Code(s): BUS

Previous BMK* 235

BMKT 2410 - Principles of Advertising

Credits: 3

An exploration of the principles and application of advertising. Topics include advertising, research, planning, ad creation, media planning /campaign implementation. Student teams conceive, produce and integrate all the components necessary for an advertising campaign as a major part of the class coursework. Course covers traditional through digital and personal media including mobile.

Prerequisite: ENG 1010 with a grade of C- or higher

Elective Code(s): BUS

Previous BMK* 230, BMK* 241

BOT 1101 - Keyboarding and Document Production I

Credits: 3

This course covers keyboard mastery using computers with word processing software, including the development of speed and accuracy, introduction to the preparation of business correspondence, letters, and reports and the development of proofreading skills. File management skills are also covered.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous BOT* 111

BOT 1102 - Keyboarding and Document Production II

Credits: 3

Improves on the skills developed in the beginning course and introduces a variety of production problems, including correspondence, tabulations, business forms, and reports.

Prerequisite: BOT 1101

Additional Info: May not be taken concurrently with BOT 1101 **Previous BOT*** 112

BOT 1307 - Word Processing Applications

Credits: 3

This hands-on PC-based introductory course is designed for students to develop practical word processing application skills necessary for personal productivity at home, on the job, or in the classroom. Topics will include document organization, settings and properties, text and paragraph formatting, inserting and formatting objects, working with tables and mail merge, research paper basics, document tracking and collaboration, desktop publishing, templates, using multiple documents, themes, document automation, web page creation and enhancement, and blogs.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous BOT* 137

BOT 1604 - Office Accounting

Credits: 3

This course will provide students with knowledge of the accounting cycle and procedures for professional offices. Students will also be prepared for personal financial management.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous BOT* 164

BOT 1800 - Medical Terminology and Anatomy

Credits: 3

This course presents a study of basic medical terminology and anatomy. Emphasis is placed on spelling, definition, usage, pronunciation, and correct context in a medical setting. Body systems, structure and functions relating to pathology, diagnostic and treatment procedures are covered. This course uses a third-party application to increase knowledge and understanding through pronunciation, learning lab drills, and other reinforcement techniques to assist in student success.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous BOT* 180, MED* D125

BOT 1801 - Medical Coding I*Credits: 3*

This course provides students with an overview of ICD-10-CM (International Classification of Diseases, Tenth Revision, Clinical Modification), Particular emphasis is placed on the theory, principles, and concepts, and application needed to code for diagnoses using the ICD-10-CM classification system. Chapter specific guidelines are applied, and students are provided with the opportunity to practice diagnosis coding using a variety of medical scenarios.

Prerequisite: BOT 1800 or HIMT 1000**Previous BOT*** 181, MED* D112**BOT 1802 - Medical Coding II***Credits: 3*

This course provides students with an overview of Current Procedure Terminology (CPT-4), and Healthcare Common Procedure Coding System (HCPCS). Students will review and assign codes for outpatient procedures and services. A study of coding guidelines and conventions will be applied to outpatient medical patient scenarios.

Prerequisite: BOT 1800 or HIMT 1000**Previous BOT*** 182, MED* D217**BOT 2095 - Cooperative Work Experience***Credits: 3*

This course provides students with the opportunity to apply classroom theory in an actual work setting, in paid and unpaid supervised positions, related to their majors. Completion of approximately 15-20 hours per week of work (150 hours for unpaid placements, depending on major; 300 hours for paid placements) and participation in Cooperative Education Online are required. In addition to the work placement, students are required to attend and complete classroom work (online) to enhance their cooperative education work experiences.

Prerequisite: Permission of Program Coordinator**Previous BOT*** 296, MED* D296**BOT 2109 - Integrated Applications***Credits: 3*

Students will work independently to solve production problems of increasing complexity using Microsoft Office (Word, Excel, Access and PowerPoint).

Prerequisite: C or higher in BOT 1101**Previous BOT*** 219**BOT 2195 - Administrative Practicum***Credits: 4*

This course 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 addition to the 125 hours, in- class sessions 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. Note: Students must meet with instructor during the semester prior to taking this course and prepare a resume and cover letter. Instructor's permission required for registration.

Prerequisite: Permission of Program Coordinator**Previous BOT*** 279**BOT 2200 - Digital Workplace Technologies***Credits: 3*

This course will prepare today's office support professional to use personal information management software, such as Microsoft Outlook, and will provide students with the skills necessary to create and manage email, plan and schedule meetings, appointments, and events, and manage contacts and tasks. Students will also be exposed to other modern office communication tools such as presentation and voice recognition software and teleconferencing. Basic keyboarding ability recommended.

Prerequisite: Eligibility for ENG 0930**Previous BOT*** 220**BOT 2701 - Legal Document Production***Credits: 3*

This course provides students with the ability to accurately type legal documents efficiently and effectively. Includes keyboarding legal terminology, understanding the correct use of legal documents, formal legal correspondences, and legal office products.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous BOT*** 271**BOT 2702 - Legal Administrative Procedures***Credits: 3*

This course teaches application of keyboarding skills for preparation of legal papers and presents the court system and the sources of laws, law office ethics, and non-court documents.

Prerequisite: BOT 1101 and BOT 2701, or permission of instructor**Prerequisite/Corequisite:** None**Corequisite:** None**Previous BOT*** 272

BOT 2807 - Foundations/Management of Medical Insurance*Credits: 3*

Students will develop the abilities and skills to define and explain the major types of health insurance policies, contracts, and guideposts. Comparisons of private insurances, HMOs, state and federal programs will be covered in addition to the appropriate insurance forms and application information. Emphasis will be placed on legal and ethical health care issues pertinent to this industry. Patient information and confidentiality will also be reviewed.

Prerequisite: BOT 1800 or HIMT 1000**Previous BOT*** 287**BOT 2808 - Medical Practice Management Applications***Credits: 3*

This hands-on computer applications course prepares medical administrative professionals to efficiently use practice management software in managing the operational, patient and financial data in medical offices and hospital environments. Software skills covered will include: appointment scheduling, patient registration, procedure posting, electronic payment posting, patient billing and collections, report generation and file maintenance.

Prerequisite: BOT 1800**Previous BOT*** 288, HIM* D155**BOT 2810 - Electronic Health Records***Credits: 3*

This course 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. Additionally, this course emphasizes the need for strict adherence to patient confidentiality laws, authorized release of information, and data security. Skills acquired in this course are relevant and can be applied in today's medical office, clinic, or information services/medical records division(s) of a hospital. specialized EHR applications. Students will learn to review electronic health records for timeliness, completeness, accuracy, and appropriateness.

Prerequisite: BOT 2808 with C or Higher**Previous BOT*** 291**BUSN 1047 - Introduction to Sport Management***Credits: 3*

This survey course examines the principles and foundations of sport management and the variety of business functions within the various sectors of the sports industry. The course will focus on the application of business disciplines to the birth, organization and management of sport enterprises, ranging from sports teams to athletic arenas, health clubs to

rehabilitation facilities, officiating, sports recreation services, and more. Past and future trends, issues and opportunities in the broad sports industry will be covered.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous BBG*** 107**BUSN 1100 - Introduction to Business***Credits: 3*

A survey of the fundamental principles of business will be discussed including marketing, management, finance, accounting, and human resource development.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BUS**Previous BBG*** 101**BUSN 1150 - Business Software Applications***Credits: 3*

Using Microsoft Suite application software, students in this hands-on course will learn to use each of the software packages as they relate to the business environment. These software packages include an emphasis on Excel to build flexible spreadsheets used in business decision-making, supplemented with Word to produce professional-looking documents, Access to select and analyze data to produce valid results, and PowerPoint to effectively present and communicate. A basic course in business, designed to provide an overall view of essential operations of business organizations.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BUS**Previous BBG*** 115, BBG* D114

BUSN 2090 - Business Capstone*Credits: 3*

For students who are in their final semester of study in the Business Administration Degree and Option programs, but will not be taking a Practicum course. The Business Programs Capstone is designed to help students demonstrate competency in General Education Abilities and Program Learning Outcomes. Throughout their business program, students will have been compiling a portfolio of best work that demonstrates mastery of General Education Abilities, as well as Program Learning Outcomes. In this course, students will complete the development of their portfolio and, depending on the program, possibly sit for an exit exam or project. Students will also reflect on their learning experience at the college and in their program.

Prerequisite: Completion of 15 business credits and permission of instructor

Elective Code(s): BUS

Previous BBG* 290

BUSN 2095 - Business Practicum*Credits: 3*

Provides students the opportunity to apply and integrate knowledge and skills gained in the Business Administration program through an individualized capstone experience, which includes an internship or project component and a classroom component. Internship involves employment or volunteer engagement in a company, public agency, or non-profit organization. Alternatively, students may complete the internship component of the Practicum through directed independent project(s) involving advanced analysis, research, and writing. Both the internship experience and the directed projects are designed to assess the students' mastery of the program learning objectives, and to further develop their professional skills. Students planning to enroll in the Business Practicum should meet with the Program Coordinator or practicum instructor to learn of existing Internship opportunities, or to define the elements of a meaningful internship experience either at their current employer or a new internship position. Students are responsible for attaining their own internship. With permission of the Program Coordinator or Practicum instructor, the internship work hours may occur prior to the students registering for the Practicum. The classroom component involves several seminars or workshops, meetings in the classroom and/or online during the semester to discuss the students' internship experience, as well as their academic, professional, and career development. In addition, student mastery of general education abilities and program learning outcomes will be assessed. The assessment of these outcomes may include completing a directed project and/or developing an ePortfolio.

Prerequisite: Permission of the Program Coordinator. Prior to taking this course students must have completed 12

business core or program option credits with a grade of C -or higher AND have completed at least 40 credits towards their Associate degree.

Elective Code(s): BUS

Previous BBG* 292

BUSN 2098 - Business Special Topics*Credits: 3*

This course provides a study of important trends and current issues in the field of Business. Focus is in solving business problems. Students should check the Class Schedule for listing of actual topics.

Prerequisite: 24 credits or permission of instructor

Previous BBG* 295

BUSN 2100 - Business Communications*Credits: 3*

This course introduces the fundamentals of communication for personal, business and professional use. Students will practice how to prepare and deliver oral presentations according to current communication theories and business conventions. Instruction will include reinforcement of English/grammar skills, team and small group communication, oral presentations, nonverbal communications, resume preparation and interviewing skills.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Oral Communication (ORAX)

Elective Code(s): BUS

Previous BBG* 210, COM* 271

BUSN 2101 - Sports Media & Public Relations*Credits: 3*

This course presents an introduction to sports media and public relations and its role within the sporting industry. The course will address creating effective media pieces to promote sports and events. Topics will include improving writing skills, publications, crisis management, game management, current events, publicity campaigns and more.

Prerequisite: BUSN 2100 AND ENG 1010 with a C-or higher

Prerequisite/Corequisite: none

Corequisite: none

Previous BBG* 211

BUSN 2150 - Global Business*Credits: 3*

This course provides students with a foundation for conducting international business and a general understanding of international corporate and government operations. The course will undertake a comprehensive overview of international business designed to provide a

global perspective on international trade including topics in foreign investment, international marketing, the operations of multinational corporations, and government relations.

Prerequisite: Completion of ENG 1010 with a grade of C- or higher

Elective Code(s): BUS, GLKY

Previous BBG* 215

BUSN 2195 - Business Co-op Internship

Credits: 3

This course provides students the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study including corporations, small businesses, financial institutions and governmental agencies.

Prerequisite: 15 completed credit hours in Business Administration, Accounting, Computer Information Systems or Marketing programs, a GPA of over 2.5. and permission of instructor

Elective Code(s): BUS

Previous BBG* 299

BUSN 2250 - History of American Business

Credits: 3

The goal of the course is to provide students interested in management with an historical, philosophical and economic framework for dealing with a rapidly changing business environment.

Prerequisite: ENG 1010 with a C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BUS

Previous BBG* 260

BUSN 2310 - Business Law I

Credits: 3

A survey of the foundation and evolution of law in the U.S. and the application of fundamental legal principles to business transactions. The course examines administrative regulations, criminal law and torts, contracts, product liability, agency, consumer and environmental protection, the Uniform Commercial Code, and Federal and Connecticut court systems and procedure.

Prerequisite: ENG 1010 with a grade of C- or higher

Elective Code(s): BUS

Previous BBG* 231

BUSN 2320 - Business Law II

Credits: 3

This course reviews current developments concerning the Uniform Commercial Code as to proprietary interests, bailments, sales-business responsibilities, torts-product

liability, warranties, and commercial paper. Employment law, corporations and other business entities are examined.

Prerequisite: BUSN 2310

Elective Code(s): BUS

Previous BBG* 232

BUSN 2340 - Legal Environment of Business

Credits: 3

An in-depth study of business organizations including agency and securities regulation and antitrust regulations with emphasis on real and personal property including an in-depth study of secured transactions under Article 9 of UCC.

**a proposal to update this course description to align with outcomes is currently under consideration. 10/31/2024*

Prerequisite: ENG 1010 with a grade of C- or higher

Elective Code(s): BUS

Previous BBG* 234

BUSN 2400 - Business Ethics

Credits: 3

A critical examination (both practical and theoretical) of contemporary moral problems in business, such as 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. It is recommended that students take at least six (6) credits in Business & Economics, prior to taking this course.

Prerequisite: ENG 1010 with a grade of C- or higher

Elective Code(s): BUS

Previous BBG* 240

CAD 1010 - Introduction to CAD

Credits: 3

The class is an introductory course into the techniques of generating graphic images with computers. Topics include: overview of computer aided design (CAD) technology, computer technology, hardware / software descriptions and requirements, file manipulation and management, two and three-dimensional geometric construction, symbol library creation, dimensioning, scaling, sectioning, plotting, detail and assembly drawing including tolerance studies.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous CAD* 110

CAD 1026 - Electronics Graphics CAD*Credits: 3*

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.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous ?****CAD 1140 - Architectural CAD***Credits: 3*

This course is an introduction to the theory and practice of architectural planning, design, and drawing production. Topics include: drawing layouts, floor plan development, elevation views, renderings, material specifications, and building code requirements.

Prerequisite: None**Previous** CAD* 114**CAD 1170 - Principles of Residential Design***Credits: 3*

Students in this course will explore the basic concepts, procedures and processes used in the residential design process. They will interface with computer program(s) that can produce and alter design elements such as walls, rooms, floors, roof planes, foundations, framing, cabinetry and fixtures. Students will be able to interpret and produce dimensioned drawings using industry standard object and view capabilities.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous** CAD* 117**CAD 1330 - 2D CAD (AutoCAD)***Credits: 3*

The objective of this course is to give the student a basic understanding of Computer Aided Drafting using the latest version of AutoCAD. The student will learn drafting fundamentals for engineering through projects from various technical disciplines. Topics include drawing setup, text, dimensioning, layering systems, blocks, printing and plotting, orthographic and isometric, and section views as well. Upon finishing this course, students should be able to prepare drawings in their own engineering disciplines.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous** CAD* 133**CAD 2098 - Special Topics in CAD***Credits: 3*

This course focuses on special topics which will vary from semester to semester. The topics may incorporate a cross-functional learning approach by partnering with industry for real- world projects in CAD. Additional topics will be advanced concepts for two or three-dimensional drawings utilizing a team approach and project management techniques.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous** CAD* 299**CAD 2200 - Parametric Design (SolidWorks)***Credits: 3*

Introduction to computer-based design using SolidWorks® parametric 3D CAD software. The course focuses on Parametric Modeling and topics include: Design Intent and Process, Sketching Techniques, Model Development Techniques, Process-Specific Modeling, Design Changes, Editing Models, Patterning and Assembly Techniques. Students will participate in mostly individual and some group design projects as appropriate.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Cross-listed:** MFG 1010 - Parametric Design (SolidWorks)**Previous** CAD* 200, CAD* 141**CAD 2204 - CAD 3D Architectural***Credits: 3*

Applies engineering and technological principles to the design of residential and light commercial structures. Students will create architectural drawings and three-dimensional models using AutoCAD software.

Prerequisite: CAD 1140 with a C- or higher**Course Fees:** Supplemental Course Fee Level 1**Previous** CAD* 204, CAD* D116**CAD 2210 - Advanced Parametrics Design (Solidworks)***Credits: 3*

A continuation of the first course in Parametric CAD using SolidWorks® and project-based learning. Topics include advanced modeling techniques and tools, with emphasis on surfaces, SimulationXpress, sheet metal development, and top-down assembly techniques.

Prerequisite: CAD 2200 or permission of instructor**Previous** CAD* 220, CAD* 221**CAD 2271 - CAD Solids Mechanical PTC CREO***Credits: 3*

Introduces the basic PTC CREO software operation including part creation, drawing and assembly. 3D objects are made and orthographic drawings are created. PTC CREO is 3D solid modeling software from parametric technology.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

CAD 2300 - Parametric 3D CAD using NX

Credits: 3

This course introduces basic Siemens NX® parametric based solid modeling techniques. Exercises and projects include creating and editing solid models using primitive features, form features and sketches. The course also covers bidirectional associative nature of the software to demonstrate modifications made in the model to be reflected in the orthographic and auxiliary drawing views and vice versa.

Prerequisite: CAD 1330 or permission of instructor

Previous CAD* 230

CAD 2520 - Architectural Design & Modeling

Credits: 3

Enables students to develop advanced skills and understanding of the conceptual design process. Students will design mass models, building shells and cores, rendered images, landscapes, and architectural drawings. Modeling techniques are explored primarily using AutoCAD's Architectural Desktop.

Prerequisite: CAD 2204 with C- or higher

Previous CAD* 252

CANB 1270 - Cannabis Law and Policy

Credits: 3

This survey course covers a wide range of legal issues concerning cannabis, marijuana, and hemp farming, production and consumer use. The course provides information on federal, state, and local laws addressing the emerging cannabis industry. Topics surveyed in this class include constitutional law, business law, tax law, intellectual property, banking rules and regulations, land use, legal ethics and current issues arising from cultivation, distribution, and use of cannabis.

Prerequisite: none

Previous LGL* 170

CAT 2001 - Cross Sectional Anatomy I

Credits: 1

This course will introduce students to cross sectional imaging of the head and neck. Emphasis will be placed on pathology affecting the cranial cavity and neck in the application of computed tomography imaging. The uses for and

administration of pharmacological agents for CT/MRI imaging will be included in this course.

Prerequisite: Admission to the Computed Tomography (CT) Program and American Registry of Radiologic Technologists (ARRT) Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy Permission of the Middlesex Campus Program Coordinator.

Corequisite: CAT 2004

Cross-listed: MRI 2001 - Cross Sectional Anatomy I

Previous CAT* 201

CAT 2002 - CT Image Display, Post Processing & Quality Assurance I

Credits: 2

This course will introduce students to imaging parameters. The formation of computed tomography image is discussed as well as the essential component parts of a CT imaging system.

Prerequisite: Admission to the Computed Tomography (CT) Program and American Registry of Radiologic Technologists (ARRT) Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy Permission of the Middlesex Campus Program Coordinator.

Corequisite: CAT 2004

Previous CAT* 202

CAT 2003 - CT Procedures and Instrumentation I

Credits: 2

This course will introduce students to the set-up and operation necessary to acquire optimal images of the head and neck. Emphasis will be placed on the acquisition techniques required to obtain optimal images of the head and neck including their respective pathologies.

Prerequisite: Admission to the Computed Tomography (CT) Program and American Registry of Radiologic Technologists (ARRT) Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy Permission of the Middlesex Campus Program Coordinator.

Corequisite: CAT 2004

Previous CAT* 203

CAT 2004 - Clinical Experience I*Credits: 4*

This course introduces the student to the clinical setting and the practical skills necessary to operate computed tomography imaging systems. Clinical competency evaluations are performed during this course.

Prerequisite: Admission to the Computed Tomography (CT) Program and American Registry of Radiologic Technologists (ARRT) Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy Permission of the Middlesex Campus Program Coordinator.

Corequisite: CAT 2003

Previous CAT* 204

CAT 2005 - Cross Sectional Anatomy II*Credits: 2*

This course will introduce students to cross sectional imaging of the chest, abdomen, pelvis and extremities. Emphasis will be placed on pathology affecting the chest, abdomen, pelvis and extremities in the application of computed tomography (CT)/magnetic resonance imaging (MRI) imaging. The uses for and administration of pharmacological agents for CT/MRI imaging will be included in this course.

Prerequisite: CAT 2004 - All courses with a grade of C or higher.

Corequisite: CAT 2008

Cross-listed: MRI 2005 - Cross Sectional Anatomy II

Previous CAT* 205

CAT 2006 - CT Image Display, Post Processing & Quality Assurance II*Credits: 3*

This course will advance the students understanding of imaging parameters. The formation of computed tomography image is discussed as well as essential quality control and assurance testing.

Prerequisite: CAT 2004 with a "C" or higher for all.

Corequisite: CAT 2008

Previous CAT* 206

CAT 2007 - CT Procedures and Instrumentation II*Credits: 3*

This course will introduce students to the set-up and operation necessary to acquire optimal images of the chest, abdomen, pelvis and extremities. Emphasis will be placed on the acquisition techniques required to obtain optimal images of the chest, abdomen, pelvis and extremities including their respective pathologies.

Prerequisite: CAT 2004 with a "C" or higher for all.

Corequisite: CAT 2008

Previous CAT* 207

CAT 2008 - Clinical Experience II*Credits: 4*

This course is a continuation of CAT 2004, with the student honing their skills in their clinical settings and practical skills necessary to operate computed tomography imaging systems. Clinical competency evaluation(s) will be completed during this course which is/are required to sit for the national registry exam.

Prerequisite: CAT 2004 with a "C" or higher for all.

Corequisite: CAT 2007

Previous CAT* 208

CCS 1001 - College & Career Success*Credits: 3*

This course prepares students for success in college and beyond. Students will develop self-awareness and an understanding of how to navigate college, value diversity, develop skills and strategies for success, and explore career options. Essential academic skills including information literacy, critical thinking, and effective communication will be addressed. By the end of this course, students will create a personalized academic and career success plan.

Prerequisite: Must be eligible to take intensive/developmental-level English class (ENG 0960, or ENG 0930) or higher. ESOL 1302 or higher or recommendation of ESOL coordinator.

General Education Code: Continued Learning/Information Literacy (CLIX)

Previous CCS* 101, IDS* 105, IS 103, CSS* 101

CCS 1001H - College & Career Success - Honors*Credits: 3*

This course prepares students for success in college and beyond. Students will develop self-awareness and an understanding of how to navigate college, value diversity, develop skills and strategies for success, and explore career options. Essential academic skills including information literacy, critical thinking, and effective communication will be addressed. By the end of this course, students will create an in-depth personalized academic and career success plan and a major project that includes an oral presentation.

Prerequisite: Permission of Honors Program Coordinator

Corequisite: Student must be admitted to a CT State Honors Program

General Education Code: Continued Learning/Information Literacy (CLIX)

CENG 2095 - Civic Engagement Practicum*Credits: 3*

The Civic Engagement Practicum is a three-credit course designed to give those interested in the civic engagement certificate a hands-on experience with civic activity either on campus or in their community. It also requires a reflection of that experience and a way to tie together the courses required

for the program. The student will be required to perform a minimum of 80 hours of field work in this course or the equivalent in projects, assignments, research work, and/or campus civic engagement activities in a manner that is individually tailored to meet appropriate academic, personal, and career goals.

Corequisite: At least 9 credits in the civic engagement program of study.

Previous CEI* 292

CENT 1010 - Electric Circuits for Technology

Credits: 4

Introduces DC and AC circuit fundamentals, including Ohm's law, Kirchhoff's laws, power and energy relationships. Students learn to analyze DC and AC series, parallel, and series-parallel circuits using basic circuit analysis techniques. Students also learn the fundamentals of capacitors, and inductors, and analyze DC and AC circuits with these components. In the lab, students construct a variety of circuits & utilize basic circuit analysis techniques use instrumentation including power supplies, digital multimeters, function generators, and oscilloscopes.

Prerequisite: CENT 1016 and MATH 1001 or higher

Course Fees: Supplemental Fee Level 2

Previous CET*I110

CENT 1016 - Computer Applications for Technology

Credits: 3

Introduces technology-driven reporting requirements for text, data & graphics, virtual instrumentation, computer simulations for technology problem solving, and determination of computer tools for technology issues. Stresses technical report preparation, including graphical & 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.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CET* 116

CENT 1024 - Structured Programming

Credits: 4

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.

Prerequisite: CENT 1016

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CET* 124

CENT 1026 - Computer Servicing

Credits: 4

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.

Prerequisite: CENT 1016

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CET* 126

CENT 1036 - Electronics for Technology

Credits: 4

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.

Prerequisite: CENT 1010* and MATH 1001 or higher

Additional Info: *this pre-requisite was corrected on 10/29/2024 **Course Fees:** Supplemental Fee Level 2

Previous CET*I120

CENT 2010 - Computer Systems Software

Credits: 4

Investigates the computer's hardware-software interface. Topics include CPU architecture & programming, interfacing with I/O devices, memory management, file systems, and an introduction to networking. Laboratory assignments include installation & troubleshooting of system software for stand-alone & networked devices.

Course Fees: Supplemental Fee Level 1

Previous CET* 210

CENT 2052 - Digital Electronics for Technology

Credits: 4

Introduces binary & 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.

Prerequisite: CENT 1010

Course Fees: Supplemental Fee Level 2

CENT 2095 - Computer Engineering Technology Practicum*Credits: 3*

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: CENT 2010**Previous CET* 270****CHEM 1010 - Introductory Chemistry***Credits: 3*

A survey of and an introduction to the fundamental principles of chemistry. The topics of atomic structure, periodic relationships, chemical bonding, kinetics, gas laws, stoichiometry, solutions, equilibria, and electrochemistry are examined. Topics are covered in less detail than in CHEM 1110, 1210 and 1220. This course is intended for non-science majors. It fulfills the science requirement in the General Studies program. This course does not have additional laboratory time and will not count toward a lab science requirement.

Prerequisite: MATH 1010 with C- or higher **OR** MATH 1001 with C- or higher **OR** placement higher than MATH 1010 **AND** eligibility for ENG 1010

General Education Code: Scientific Knowledge & Understanding (SCKX)

Elective Code(s): LART, SCI

Additional Info: 3 hours of lecture per week **Course Fees:** Supplemental Fee Level 2 and Materials Fee

Previous CHE* 101**CHEM 1110 - Concepts of Chemistry***Credits: 4*

Introduction to the fundamental principles and the concepts of chemistry. Atomic structure, periodic relationships, bonding, kinetics, and equilibria are examined to permit their use in understanding chemical reactions though in less detail than in CHEM 1210 and CHEM 1220. The laboratory portion stresses the acquisition of skills in scientifically ethical data gathering and in the manipulation of apparatus and materials. Not a pre-requisite for CHE 2210 Organic Chemistry I.

Prerequisite: Eligibility for ENG 1010 **AND** completion of with a grade of C- or higher in either:

- MATH 1002 - Math for Science and Technology (*this course is not transferrable as a Quantitative Reasoning course for the CSUs*)
- MATH 1600 - Pathway to Calculus: College Algebra
- MATH 1010 - Intermediate Algebra
- MATH 1011 - Applied Algebra with Modeling
- MATH 1200 - Statistics I
- MATH 1201 - Statistics I with Computer Applications
- *or any course higher than MATH 1600 in the STEM Mathematics pathway, **OR** placement into a course higher than MATH 1600 in the STEM Mathematics pathway*

General Education Code: Scientific Reasoning (SCRX)

Elective Code(s): LART, SCI

Additional Info: 3 hours lecture and 3 hours laboratory per week

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous CHE* 111**CHEM 1120 - Principles of Organic Chemistry and Biochemistry***Credits: 4*

This one semester lecture and laboratory course is an introductory course to both organic chemistry and biochemistry with a focus on clinical relevancy. Discussions and laboratory applications of the structure and function of organic compounds, carbohydrates, lipids, proteins, nucleic acids, as well as the mechanism of enzyme-catalyzed reactions, metabolism and bioenergetics will be covered.

Prerequisite: CHEM 1110 with a C- or higher **OR** CHEM 1210 with a C- or higher **OR** permission of instructor

Elective Code(s): LART, SCI

Additional Info: 3 hours lecture/3 hours laboratory per week

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous CHE* 112

CHEM 1210 - General Chemistry I*Credits: 4*

The first of a two-semester sequence, this course introduces fundamental concepts, models, and techniques including stoichiometry, periodicity, atomic structure, reaction types, and molecular shape. This course also prepares the student for continued study in CHEM 1220. It is strongly recommended that a student have completed a high-school chemistry course or CHEM 1010 or CHEM 1110.

Prerequisite: MATH 1600 or higher with grade of C or higher or placement higher than MATH 1600 and eligibility for ENG 1010

General Education Code: Scientific Reasoning (SCRX)

Elective Code(s): LART, SCI

Additional Info: 3 hours lecture/3 hours laboratory per week

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous CHE* 121

CHEM 1220 - General Chemistry II*Credits: 4*

The second of a two-semester sequence, this course builds upon concepts presented in CHEM 1210, including discussions and laboratory applications of intermolecular forces, kinetics, equilibrium, acid-base chemistry, thermodynamics, electrochemistry, and an introduction to nuclear and organic chemistry.

Prerequisite: MATH 1600 or higher with a grade of C or higher or placement higher than MATH 1600; and ENG 1010 with a C- or higher or higher placement than ENG 1010; and CHEM 1210 with a C- or higher.

General Education Code: Scientific Knowledge & Understanding (SCKX)

Elective Code(s): LART, SCI

Additional Info: 3 hours lecture/3 hours laboratory per week

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous CHE* 122

CHEM 2098 - Special Topics in Chemistry*Credits: 1-4*

This course covers topics of special interest in chemistry for chemistry majors and may encompass independent study.

Topics vary by college and semesters and are meant to address current and relevant chemistry topics.

Prerequisite: CHEM 1210 with a grade of C- or higher; or CHEM 1110 with a grade of C- or higher; and ENG 1010 with a grade of C- or higher.

Elective Code(s): LART, SCI

Previous CHE* 298

CHEM 2305 - Introduction to Organic Chemistry*Credits: 4*

A one semester overview of the principles of organic chemistry, emphasizing functional groups, molecular structure, nomenclature, and organic reactions; synthetic

logic and basic methods of organic analysis will be included. Scientific calculator required.

Prerequisite: CHEM 1220 with a grade of C- or higher, or Instructor's permission

Elective Code(s): LART, SCI

Additional Info: 3 hours of lecture/4 hours of laboratory per week **Course Fees:** Supplemental Fee Level 2 and Materials Fee

Previous CHE* 210

CHEM 2310 - Organic Chemistry I*Credits: 4*

The first part of a two-part sequence designed to present the principles and theories involving the principal groups of carbon compounds. Topics include nomenclature, stereochemistry, and conformational analysis of organic molecules, and the preparation, reactions and mechanisms of alkanes, alkyl halides, alkenes, alkynes, and alcohols. The laboratory activities feature the basic reaction, purification, and separation techniques utilized in organic chemistry, and activities integrated with the theory of the functional groups covered in lecture.

Prerequisite: CHEM 1220 with a grade of C- or higher or instructor's permission

Elective Code(s): LART, SCI

Additional Info: 3 hours of lecture and 4 hours of laboratory per week **Course Fees:** Supplemental Fee Level 2 and Materials Fee

Previous CHE* 211

CHEM 2320 - Organic Chemistry II*Credits: 4*

There is a spacing issue. Course description should read "The second part of a two-part sequence designed to present the principles and theories involving the principal groups of carbon compounds. Presents nomenclature, preparation and reactions of alcohols, ethers, conjugated double-bond systems, aromatic compounds, 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. Laboratory exercises may also include using modern instrumentation to identify organic compounds.

Prerequisite: CHEM 2310 with a grade of C- or higher or permission of instructor

Elective Code(s): LART, SCI

Additional Info: 3 hours lecture/4 hours laboratory per week

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous CHE* 212

CHEM 2410 - Biochemistry*Credits: 4*

This intermediate level course focuses on the structure, function, and properties of biological molecules. The organization of amino acids, lipids, carbohydrates, and nucleic acids are addressed through a discussion of their hierarchical structure, their assembly into essential complexes in biological systems, and their relationship to human disease. 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.

Prerequisite: BIO 1210 with a C- or higher and CHEM 1210 with a grade of C- or higher; or CHEM 2310 with a grade of C- or higher; or instructor's permission

Elective Code(s): LART, SCI

Cross-listed: BIO 2020 - Biochemistry

Additional Info: 3 hours lecture/3 hours laboratory per week

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous CHE* 220

CHEM 2510 - Instrumental Analysis*Credits: 4*

This one semester lecture and laboratory course is a theoretical and hands-on introduction to analytical instruments commonly used in chemical, biological, and environmental analyses. Discussions and laboratory application of polarimetry, refractometry, spectrophotometry (infrared, ultraviolet, visible, and atomic absorption), and chromatography (paper, thin layer, gas-liquid, and liquid-liquid). Sample preparation, analysis, and data evaluation will be emphasized.

Prerequisite: CHEM 1220 with C- or higher, or permission of the instructor

Elective Code(s): LART, SCI

Additional Info: 3 hours lecture/3 hours laboratory per week

Course Fees: Supplemental Fee Level 2

Previous CHE* 250

CHNS 1000 - Getting Started in Chinese*Credits: 1*

This course introduces students to the essentials of the Mandarin Chinese language. This course will expose students to basic speaking and listening skills. Vocabulary needed to interact in Mandarin Chinese using simple phrases and common expressions is presented.

Additional Info: Not intended to complete General Education, LAS, or Program Language requirements.

Previous CHI* L105

CHNS 1011 - Elementary Chinese I*Credits: 4*

An introduction to the Chinese language and Chinese-speaking cultures with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous CHI* 111

CHNS 1012 - Elementary Chinese II*Credits: 4*

A continuation of Elementary Chinese I, this course builds upon previous introduction to the Chinese language and Chinese-speaking cultures with a continued emphasis on the development of the four basic skills: listening, speaking, reading, and writing. This is the second part to the beginning sequence for students who have had some prior study of this language either in high school, Elementary Chinese I or life experience. This is a four-credit course with an embedded language lab component.

Prerequisite: Students must have earned a grade of C- or higher in CHNS 1011, complete a Language and Culture placement test, or obtain permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous CHI* 112

CIS 1001 - Introduction to Computers*Credits: 3*

This is an introductory course in information technology concepts and software productivity tools intended for Computer Information Systems majors and other students interested in computers and Information Technology. Areas of instruction include computer concepts, current topics and trends in information technology, the role of computer systems in business problem solving, an introduction to the major career areas of Information Technology, and Microsoft Office skills that are important to all college students.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Continued Learning/Information Literacy (CLIX)

Course Fees: Supplemental Fee Level 1

Previous CSC*101, CIS*101

CIS 1002 - Foundations of Computing*Credits: 3*

This course will serve as a complete introduction to computers and computing and is suited for all students. There will be an in-depth view into computers and modern-day computing applications for students who can benefit from a rapid refresh of knowledge of the modern-day computing industry including an overview of leading advancements made in this space, discussions of current trends, an overview of various career and educational opportunities, and the exploration and relevancy of computing power across various industries. Latest computing concepts, fundamental functions and operations of the computer and the use and programming of newer computing devices will be covered. Covered topics include identification of hardware components, basic computer operations, security, and ethical issues, and the development and use of software applications. The course will survey computer information systems used for transaction processing, data analysis, and decision making. An introduction to programming concepts, the evolution of programming languages and related constructs will also be covered.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CSC* 102, CST* 114**CIS 1003 - Computer Science Principles***Credits: 3*

This course focuses on engaging students in activities that show how computing changes the world. By learning the central ideas of computer science and computational thinking, students will learn to be creative, collaborative, and innovative in developing technical solutions to problems. The course includes learning how to create mobile apps to solve those problems, examining how computing has impacted society, and analyzing large data sets.

Previous CSC*117**CIS 1103 - Computer Ethics***Credits: 3*

This course focuses on the study and practice of ethics in modern day computing and as it applies to the Internet. Issues discussed include privacy, speech and regulation of the Internet, security, intellectual property and codes of ethics and conduct. Students gain an understanding of the issues and concepts of moral reasoning, explore ethical theories and their impact on the computing field. The course also covers the relation between ethics and other theoretical and empirical inquiries and will enhance students' ability to decipher, think, and articulate clearly while sharpening their general interpretive and analytical skills.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CSC*180**CIS 1104 - Introduction to Operating Systems***Credits: 3*

The objective of the course is to provide the student with an understanding of how an operating system works. Students will learn operating systems concepts, how to use Windows advanced features, and how the operating systems interact with hardware both locally and on a network. Topics covered will include troubleshooting and customizing Windows, how to set up a local network, security strategies, and an overview of the more popular operating systems on the market today.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CST* 120, CST* 210, CST* 266**CIS 1141 - Introduction to Management Information Systems***Credits: 3*

The course provides the background necessary for understanding the role of information systems in organizations and for using computer tools and technology in solving business problems. Topics include organizational and technical foundations of information systems, theory of design of information, database, and network systems, e-commerce and common business application systems, and information security management. Students will learn and use business productivity software to demonstrate their knowledge of selected topical concepts.

Prerequisite: eligibility for ENG 1010**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CST*201**CIS 1142 - Information Systems in Organizations***Credits: 3*

The focus of this course is on how organizations use information systems for decision making. In particular, the course stresses the role of managers in the analysis, design, development, implementation, maintenance, and control of information systems as corporate resources. Ethics, privacy, and security are at the forefront of the modern age of computing in cyberspace. The challenges posed to organizations are growing exponentially as connectivity infiltrates all areas of life.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CSC*183

CIS 1143 - Project Management*Credits: 3*

This course introduces students to the theory and practice of managing projects. The student will be introduced to PMBOK (Project Management Body of Knowledge, from Project Management Institute). Students will learn how to initiate, plan, execute, control, and complete projects to meet organizational goals. Managing client expectations, developing a list of key milestones, assigning team responsibilities, tracking progress, and communicating progress are all topics examined. In addition to traditional project management tools such as PERT and GANTT charts, students will be introduced to project management software. Comprehensive cases and projects will be assigned and completed either individually or in collaboration with a student project team. This course will begin to prepare the student for the CompTIA Project+ exam as well as Project Management Institute CAPM® Exam, and for those with project management experience, the PMP ®Exam.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Course Fees:** Supplemental Fee Level 1**Previous** CSC*252, CST*B205**CIS 1211 - Database Design I***Credits: 3*

This course is designed to provide students with a complete introduction to database concepts and the relational database model. The topics include database design and normalization, Database Design Language (DBDL), and Entity-Relationship (E-R) diagrams, Structured Query Language (SQL), and Database Administration. Students will apply the principles learned in this course to construct useful databases that meet the requirements of business professionals. This course does not require prior programming experience.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CSC*121, CSC*150, CSC*231, CSC*232, CSC*233, CSC*237, CSC*238, CSC*239**CIS 2120 - Data Communication and Networking***Credits: 3*

The course outlines interconnecting computers using communication networks. The seven-layer OSI Reference framework, physical layer standards, data link protocols, repeaters, bridges, routers, local area networks, wide area networks, and network configurations will be discussed.

Prerequisite: CIS 1104 OR CST 1111**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CST*130, CST*131, CST*133, CST*170,

CST*171, CST*176, CST*180, CST*193, CST*231, CST*232, CST*234

CIS 2131 - Fundamentals of Cloud Computing*Credits: 3*

This course focuses on providing the student with knowledge of cloud computing and various related technologies in use today. Business across industries, regardless of scale, are utilizing cloud technologies for their operations. Knowledge development in this area is becoming increasingly important to enable strategic and operational plans that deploy applications and services on the cloud. After completing this course, students will achieve a fundamental understanding of this high-growth, rapidly changing branch of the computing industry. Students will be able to understand cloud segments and cloud deployment models, and able to identify key cloud companies.

Prerequisite: CIS 1001**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** new**CIS 2144 - Systems Analysis and Design***Credits: 3*

This course is an introduction to systems analysis and design concepts and techniques. This overview class focuses on the methods and principles of systems analysis and design utilizing a business perspective to explore the role, responsibilities, and mind-set of the systems analyst and systems project manager. Using a case study method, students will conduct system surveys, create feasibility studies, and design typical computer systems used in business and industry.

Prerequisite: Any Programming Language**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CSC*250, CSC*255**CIS 2232 - Designing and Deploying Cloud Applications***Credits: 3*

This course focuses on providing the student with knowledge and experience with designing and deploying cloud applications. Business across industries, regardless of scale, are utilizing cloud technologies for their operations. Practical hands-on skill building in this area is becoming increasingly important for companies to better achieve their strategic and operational goals. After completing this course, students will achieve fundamental understanding of this high-growth, rapidly changing branch of the computing industry by creating and deploying cloud applications. Students will be able to use one the popular cloud environments (e.g., AWS, Google, Oracle) to achieve the objectives of the course.

Prerequisite: CIS 1001 AND (CIS 1211 OR CSC 2235)
AND CIS 2131

Prerequisite/Corequisite: none

Corequisite: none

Previous new

CIS 2990 - Capstone Research

Credits: 3

The goal of this capstone project is to provide students with experience in researching and solving industrial problems. Students work in groups and research problems given by local businesses, industry, and government (BIG). This course mimics an internship - students learn to interact in a business setting, manage deadlines, produce technical documents, and think critically to find solutions. By the end of the course, each group produces a solution to their problem and completes a written, oral (video), and poster/PowerPoint summary of their work.

Prerequisite: permission of instructor

Prerequisite/Corequisite: none

Corequisite: none

Previous CSC*273, CSA*290

CIS 2994 - Coop Ed/Work Experience

Credits: 3

This course will give the student the opportunity to apply the concepts and skills acquired in their program of studies in an on-the-job experience at a designated business. Students will work at least 150 hours in their area of interest during the semester. The work environment will expose the students to a professional IT setting and challenge them to develop skills for employability. The emphasis of this course is on student learning, and they will maintain online blogs, attend career seminars, and complete textbook assignments as they reflect on their internship experience.

Prerequisite: permission of instructor

Prerequisite/Corequisite: none

Corequisite: none

Previous CSC*292, CSC*295, CSC*296

CIS 2998 - Special Topics

Credits: 1-6

N/A

Previous CIS* 298

CIS 2999 - Independent Study

Credits: 1-6

N/A

Previous CIS* 299

CJS 1000 - Perspectives of Criminal Justice

Credits: 3

This course prepares student for success in college and beyond. Students will explore academic and career options, set informed academic and career goals withing in the context of the criminal justice system. Students will begin to develop essential skills such as information literacy, critical thinking, and effective communication. The course will also have students develop personalized academic plans and learn academic behaviors essential for a career in criminal justice. Individual learning styles and study strategies associated with success will be emphasized. This course satisfies the college first year experience requirement.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous CJS* 100

CJS 1010 - Introduction to Criminal Justice

Credits: 3

This course examines an overview of the criminal justice system on the local, state, and federal levels in the United States. Students will be exposed to the historical, theoretical, philosophical, and practical perspectives of the system's police, court, and correctional agencies. The course is required and is a core class in the Criminal Justice major.

Prerequisite: Eligible for ENG 0930 or higher.

Previous CJS* 101

CJS 1020 - Introduction to Corrections

Credits: 3

A study of the history, philosophy, and evolution of corrections as well as the function of U.S. jails and prisons. The course also examines the procedures used by state and federal courts that result in the sentencing of offenders to penal institutions and community-based supervision and treatment programs. Topics include plea bargaining, speedy trial, sentencing, prisoner's rights, victimization, and juvenile justice.

Prerequisite: Eligible for ENG 0930 or higher.

Previous CJS* 102

CJS 1030 - Introduction to Security

Credits: 3

A study of the historical, philosophical, and legal basis of security. Emphasis on the role of security and the individual in modern society; and on the concept of professionalism. Course includes a survey of the administration, personnel, and physical aspects of the security world.

Prerequisite: Eligible for ENG 0930 or higher.

Previous CJS* 103

CJS 1050 - Introduction to Law Enforcement*Credits: 3*

A comprehensive examination of the public safety and law enforcement functions of government in a modern society. Topics covered include; evolution, history, and philosophy of the law enforcement function; the role of the police in a democratic and pluralistic society; police accountability, corruption and deviance; police operational principles and practices; and current problems confronting the police in their relationship to the community they serve.

Prerequisite: Eligible for ENG 0930 or higher.**Previous CJS*** 105**CJS 1060 - Introduction to Homeland Security***Credits: 3*

An introduction into the fundamental concepts of homeland security, emergency preparedness, and terrorist threats. This course provides an overview of all the important agencies associated with Homeland Security, and their interrelated duties and relationships. A historical perspective of events related to homeland security will also be examined. The principles and practices of emergency planning and management will be emphasized. In addition to technological and transportation implications, the most current and critical threats confronting Homeland Security will be examined.

Prerequisite: Eligible for ENG 0930 or higher.**Previous CJS*** 106**CJS 1200 - Police and the Community***Credits: 3*

An analysis of the challenges and benefits police encounter with their community. Students will become knowledgeable in practices which foster positive community relations and police-citizen communication. Students will be given the opportunity to study the police role in relation to sociological and psychological dynamics of the community.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher**Previous CJS*** 120**CJS 1230 - Police Patrol Procedures***Credits: 1*

This course will familiarize the student with the patrol function of police organizations, its importance and place within the agency, and its limitations. The various methods of conducting patrol, how to properly prepare for patrol duty, and the various tasks and procedures involved in properly performing patrol duties and responsibilities will be discussed. Students will apply concepts to mock scenario exercises.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 123**CJS 1240 - Spanish for Criminal Justice Professionals***Credits: 3*

The course is designed to serve those students interested in pursuing a career in the criminal justice professions and our seeking basic conversational skills in speaking Spanish. Lessons present typical everyday situations that professionals may encounter when dealing with Spanish speakers in a criminal justice setting. The course will introduce students to a practical vocabulary, everyday on-the-job situations, and the Hispanic culture.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 124**CJS 1250 - Motor Vehicle Stops***Credits: 1*

This course provides students with in-depth look at motor vehicle laws and enforcement with a focus on Connecticut Motor Vehicle laws. The practical aspect of this course will focus on the application of best practices in the execution of motor vehicle stops. Students will gain practical experience applying Connecticut Motor Vehicle Law. Topics covered include, felony and misdemeanor stops, stop procedures, use of force considerations, safety considerations and motor vehicle searches.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 125**CJS 1260 - Gangs and Families***Credits: 1*

This course examines gangs in America, covering topics such as why gangs form, why people join gangs and society's response to the issue. Students will be exposed to the history of gangs and theoretical perspectives of gang membership. Topics include an in-depth coverage of local gangs' symbolism, their graffiti, styles, tattoos, patches, and other markings. Additionally, this course will cover assorted proactive strategies for the police and the community in their attempt to control gang violence/crime.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 126

CJS 1280 - Narcotics Identification and Enforcement*Credits: 1*

This course provides a detailed overview of narcotics and drugs of abuse including history, identification, effects on the body, mind and behavior, as well as addiction and dependence. Current drug trends, including the legalization of marijuana and its effects, the opioid crisis, and the increased presence of transnational criminal organizations in the supply and trafficking of drugs into the United States will be examined. The evolving response of society and the criminal justice system including applicable law and enforcement tactics will also be explored.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 128**CJS 1310 - Stress and Resiliency in Public Safety***Credits: 1*

This course provides an overview of stress and stress management in public safety professions. Emphasis will be placed on understanding the psychological and physiological elements of stress, identifying contributors to stress in public safety professions and the development of resilience as a mechanism for enhancing well-being and combating stress.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 131**CJS 1330 - Law Enforcement Response to Critical Incidents and Hostile Situations***Credits: 1*

This course provides an overview of law enforcement's role and response to various tactical/hostile situations. Topic areas covered include initial response by patrol officers, functions of tactical teams, legal considerations, training and preparation, hostage negotiations and the responsibilities of command and control personnel. Students will have the opportunity to participate in mock scenarios and to interact with law enforcement personnel assigned to tactical units and to view tactical equipment.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 133**CJS 1350 - The Death Penalty***Credits: 1*

This course will introduce students to the death penalty, its history and significance in the United States, the political, social, and moral philosophies of its use as well as legal precedent. Topics include the appellate process,

constitutionality, innocence, Special attention will be given to Connecticut's abolishment of the death penalty, mental health issues as well as racial and economic trends, clemency, and execution.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 135**CJS 1360 - Crime and the Media***Credits: 1*

This course will examine the symbiotic relationship between the media and the Criminal Justice System. Students will be provided with an in-depth look at the role and influence of popular media, news media, and social media and how it influences public perception and understanding of the Criminal Justice System. The role of the media in conveying information to the public about criminal events and in soliciting information from the public will also be examined.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 136**CJS 1370 - Police Candidate Preparation***Credits: 1*

This course provides a detailed overview of the various aspects of the police hiring process with an emphasis on preparation for the physical fitness testing component and the oral panel interview. The course will include both classroom instruction and completion of physical fitness assessments.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 137**CJS 1390 - Interview and Interrogation***Credits: 3*

A comprehensive overview of the processes of interviewing and interrogation. Students will be introduced to a variety of interview and interrogation techniques and strategies. The course will cover interviewing and interrogation of witnesses, victims, suspects, and children. Students will perform mock interviews and interrogations to demonstrate their understanding of the course materials presented. Legal and ethical considerations involved will also be discussed.

Prerequisite: CJS 1010 with a C- or higher**Previous CJS*** 139

CJS 1400 - Crime Scene Techniques*Credits: 1*

This hands-on course will expose students to the fundamental skills necessary for analyzing, documenting, and processing a crime scene. Students will learn the proper methods for collecting and preserving physical evidence, as well as the principles of crime scene reconstruction. The finale of the workshop will include the processing of a mock crime scene.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 140**CJS 1410 - Fingerprinting***Credits: 1*

This hands-on workshop will expose students to the fundamental skills necessary for documenting, identifying, and developing latent fingerprints. Students will utilize both chemical and physical visualization techniques to include various fingerprint powders, magnetic powders, SPR, Cyanoacrylate fuming, iodine, crystal, and crystal violet.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 141**CJS 1420 - Law Enforcement K-9s***Credits: 1*

The course is designed to provide students with an overview of the use of K-9's in law enforcement. Topics include training, patrol work, special detection, community relations, search and rescue, liability, K-9 psychology, and special care required for maintaining the health and wellbeing of the canine. Course will also illustrate the distinction between working dogs and pets.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 142**CJS 1430 - City of Corrections***Credits: 1*

This class will connect students to the world of the State of Connecticut's Department of Corrections. Students will be introduced to the DOC thru an interactive lecture and practical exposure that will consist of various correctional staff as guest speakers. Students will learn the historical origin of the DOC, and how it has progressed into current times. Student's will also be introduced to the organizational structure of the DOC and how it operates to ensure public safety, staff wellness, and efficiency. Student's will also be exposed to various correctional jobs to include Correctional Warden, Correction Officer, K-9 Unit, CERT Team, Gang Intelligence Unit, Security Division, and Parole and

Community Services. It will also be arranged for the students to receive a tour of one of the correctional facilities.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 143**CJS 1450 - Interview and Interrogation Workshop***Credits: 1*

This course provides a basic introduction to interview and interrogation. Students will be introduced to a variety of interview and interrogation techniques and strategies as well as ethical and legal considerations in interviewing victims, witnesses and suspects. The course will introduce students to the stages of an interview and focus on how to overcome suspect denials and objections in order to elicit confessions from those individuals involved in criminal behavior. Topics include how to build rapport, how to calibrate a subject's individual normative behaviors and how to detect deception. Students will perform mock interviews and interrogations in application of principles and best practices covered in the course.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 145**CJS 1460 - Mind of a Serial Killer***Credits: 1*

Every wonder what in the world a person could be thinking? Students in this course will analyze and examine the mind of a serial killer. Students will begin by learning the basics of the criminal law system, from what happens from the time of the arrest to the time of prosecution and conviction. Students will then move into an examination of famous killers such as Charles Manson, Ted Bundy, and Jeffrey Dahmer. Students will take an in depth look at the inner workings of the mind and what makes these killers "tick."

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 146**CJS 1470 - Famous Cases***Credits: 1*

Students will be exposed to famous contemporary criminal cases that have been prominent with the field of criminal justice. Additional focus will be on famous cases from Connecticut to include Michael Ross, Cheshire Home Invasion, CT Woodchipper, Martha Moxley, Yale Student, Cannibal in Bridgeport, William Howell, and many more. In the course, students would look at the elements of each case and the trials that ensued. Students will learn to differentiate

between credible and valid sources of information, and the impact of the media on public perception of these cases.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous CJS* 147

CJS 1500 - Cannabis

Credits: 1-3

An introductory class on cannabis and how it is used medicinally in Connecticut. This course explores a variety of related topics including state laws on medical marijuana, the chemical composition of cannabis, and how it plays a role in human physiology pharmacology. The course will also examine the conflict between state, federal, and civil and laws. Additional topics will include employment law, ADA considerations, DUI enforcement, search and seizure, as well as national and global trends towards rescheduling cannabis.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous CJS* 150

CJS 1520 - Introduction to Digital Forensic Investigations

Credits: 3

This course introduces students to the field of digital investigations, its role and importance as well as the tools and techniques for collecting and curating digital evidence. It provides an overview of digital forensic methods including the tools and techniques used to perform investigations and the types of digital evidence that might be considered for various crimes. Legal considerations, career options and emerging trends are also examined.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 152

CJS 1550 - Probation Practices and Policies

Credits: 3

Course provides a comprehensive examination of probation services, current practices, and policies for both juvenile and adult offenders. The course will consider local, state, and federal models for the delivery of probation services, as well as innovative and experimental approaches. Students will explore the functions and duties of probation officers, including pre-sentence investigations, risk assessments, strategies for supervision and counseling, community resource development, supervision of sexual offenders, addiction services, and alternatives to incarceration programs.

Prerequisite: CJS 1010 with a C- or higher

Previous CJS* 155

CJS 1580 - Intelligence Analysis and Security Management

Credits: 3

Examines intelligence analysis and its indispensable relationship to the security management of terrorist attaches, man-made disasters, and natural disasters. It also explores vulnerabilities of our national defense and private sector, as well as the threats posed to these institutions by terrorists, man-made disasters, and natural disasters. Students will discuss substantive issues regarding intelligence support of homeland security measures implemented by the US and explore how the intelligence community operates.

Prerequisite: none

Corequisite: CJS 1060

Previous CJS* 158

CJS 1600 - Emergency Management and Disaster Mediation

Credits: 3

This course introduces student to emergency management theory, including basic definitions, identification of hazards, descriptions of the phases of emergency management, identification of resources, roles and responsibilities of emergency managers, and coordination of various systems. It also focuses on the principles and practices of emergency management at the local, state, and national levels and explores the concepts of preparedness, mitigation, response, and recovery. The roles and responsibilities of law enforcement, fire service, emergency medical service, public works, public health and others will be examined in assessing a community's ability to prepare for, respond to, and recover from a wide array of catastrophes.

Prerequisite: CJS 1010 and ENG 1010 eligibility

Previous CJS* 160

CJS 1720 - Domestic and International Terrorism

Credits: 3

This course is a survey of domestic and international terrorism. And will examine the history of terrorist organizations and the underlying social, political, religious and nationalistic conditions that gave rise to these organizations. The governmental responses in different countries to these organization's activities will also be reviewed.

Prerequisite: Eligible for ENG 1010

Previous CJS* 172

CJS 2010 - Criminology

Credits: 3

This course provides an introduction to the principles and concepts of criminology; analysis of the social context of criminal behavior, including a review of criminological theory, the nature and distribution of crime, the sociology of

criminal law and the societal reactions to crime and criminals.

Prerequisite: ENG 1010 **AND** (CJS 1010 **OR** SOC 1001) both with a C- or higher

Elective Code(s): LART, SSCI, GLKY

Cross-listed: SOC 2040 - Criminology

Previous CJS* 201

CJS 2020 - Juvenile Delinquency

Credits: 3

Examines the social aspects of juvenile delinquency and the factors that cause this behavior to emerge. The organization, functions and jurisdiction of the juvenile court system, as well as the processing, detention, case disposition and juvenile delinquency statutes are examined.

Prerequisite: CJS 1010 with a C- or higher **OR** SOC 1001 with a C- or higher **AND** ENG 1010 with a C- or higher

Cross-listed: SOC 2041 - Juvenile Delinquency

Previous CJS* 202

CJS 2030 - Juvenile Justice

Credits: 3

A close examination of how the juvenile justice process has evolved and expanded as society has sought to understand, control, and influence change in the delinquent behavior of children and youth.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 203

CJS 2090 - Police Management Seminar

Credits: 3

A practical application of previously studied theories and methods in police management. Students will use group work, case studies and projects to theoretically interpret and apply data in management situations.

Prerequisite: CJS 2500 with C- or higher

Previous CJS* 251

CJS 2095 - Practicum in Criminal Justice

Credits: 3

This course is an academic program that assists students with supervised placement into work experiences that are related to criminal justice. Under the supervision of the college and the host site, the student combines academic learning with work experience. Academic assignments will enhance the student's personal and career growth. The instructor will work with the student and employer to set individualized objectives related to job performance, personal development, problem solving, routine duties, and future career aspirations. Students work 100 to 120 internship hours or the equivalent. In addition to the work placement, students are required to participate and complete all academic requirements. A

comprehensive research project may be substituted with permission of the instructor. Prior to taking this course students must have completed 12 Criminal Justice core or program option credits with a grade of C- or better **AND** must have completed at least 30 credits towards their Associate degree. Students must have a 2.0 GPA and may not have any disciplinary record for violations of the CT State Student Code of Conduct.

Prerequisite: Enrollment in the criminal justice program and the permission of the program coordinator. Prior to taking this course students must have completed 12 Criminal Justice core or program option credits with a grade of C- or higher **AND** must have completed at least 30 credits towards their associate degree. Students must have a 2.0 GPA and may not have any disciplinary record for violations of the CT state student code of conduct.

Previous CJS* 290

CJS 2098 - Special Topics in Criminal Justice

Credits: 1-3

Special topics courses may be offered for 1 to 3 credits, depending on the content of the class. These courses are designed to expose students to a vast array of specialized topics within the field of criminal justice. Three, 1-credit courses can be bundled to fulfill a criminal justice directed elective requirement.

Prerequisite: varies

Prerequisite/Corequisite: varies

Corequisite: varies

Previous CJS* 298

CJS 2099 - Independent Study

Credits: 1-3

Students will have an opportunity to pursue with greater depth a topic within the field of criminal justice guided by a faculty mentor. Independent studies must be arranged in the semester prior to registration with approval from the Criminal Justice Program Coordinator.

Prerequisite: Criminal Justice Program Coordinator approval

Previous CJS* 299

CJS 2100 - Constitutional Law*Credits: 3*

This course provides a comprehensive overview of the United States Constitution, with emphasis on those amendments to the Constitution that affect the administration of justice and police power. This course will conduct intensive analysis of principles and theories that limit the authority and powers of state and local governments as well as a review of court decisions which interpret the Constitution and the Bill of Rights.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Elective Code(s): LART, SSCI

Cross-listed: POLS 2010

Previous CJS* 210

CJS 2110 - Criminal Law I*Credits: 3*

A study of the act(s) and mental state(s) which 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 court decisions, and the Model Penal Code.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 211

CJS 2120 - Criminal Law II*Credits: 3*

This is a continuation of Criminal law I (CJS 2110). Students will engage in more in-depth study of crimes against the state and public administration, digital crimes, and federal criminal law. Topics regarding narcotics trafficking, human trafficking, white collar crimes, organized crime and RICO, terrorism, and immigration law will also be covered in this course.

Prerequisite: CJS 2110 with a "C-" or higher.

Previous CJS* 212

CJS 2130 - Evidence and Criminal Procedure*Credits: 3*

A study of the U.S. Constitution particularly the Bill of Rights and the Fourteenth Amendment, as they relate to the functioning of the criminal justice system. Emphasis will be placed on Individual rights, due process and civil liberties.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 213, CJS* 217

CJS 2200 - Criminal Investigations*Credits: 3*

An introduction to the procedures and techniques of criminal investigations. Topics discussed include crime scene security/searches, collection and preservation of evidence, case preparation and testifying. The development of information sources, identification of witnesses, interview and interrogation, admissions, and case preparation are considered.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 220

CJS 2210 - Arson Investigation*Credits: 3*

An Introduction to the problems and effects of arson, analysis of the chemistry of the fire scene, use of investigative and detection aids, photographs, measurements and diagrams; collection and preservation of evidence; methods of interviewing and interrogation; legal aspects of arson investigation.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 221

CJS 2220 - Computer Investigation Techniques*Credits: 3*

This course will provide students with an overview of computer crime and the law enforcement response. Study includes an overview of the various types of computer crimes likely to be encountered in today's computer environment, as well as the methods of preventing, investigating, and prosecuting those crimes. Emphasis will be placed on electronic evidence, detection of computer crime as well as investigative and legal considerations in securing, seizing and examining electronic evidence and computer systems.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 222

CJS 2240 - Computer Crimes*Credits: 3*

A comprehensive introduction to computer operations and computer system components with an emphasis on storage and retrieval of information for investigative purposes. Topics covered include basic operating systems, hardware, software, encryption, identification of evidentiary information, internet servers and websites, freeware, bulletin boards, file types and manipulations, spreadsheets and data bases. Students will develop the ability to assemble evidence for a criminal investigation process.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 224

CJS 2260 - Introduction to Forensic Science*Credits: 3*

A study of how the disciplines of Biology, Chemistry, Earth Science, Physical Science, and Physics meld to form the field of forensic science. The course will focus 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 will be 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. Students may take either CJS/SCI 2260 or CJS/SCI 2850. Students cannot earn credit for both of these classes.

Prerequisite: ENG 1010 with a C- or higher**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** SCI**Cross-listed:** SCI 2260**Previous CJS*** 225, CJS* 226**CJS 2270 - Forensic and Crime Scene Photography***Credits: 3*

This course focuses on the use of photography in criminal investigations. Students will explore techniques of locating and identifying evidence as well as the scientific application of photography to crime scene and evidence documentation with a focus on best practices and the use of technology. Students will gain experience documenting various types of crime scenes through photograph. Topics will also include computer image enhancement, documentation, and the admissibility of photographs as court exhibits.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher**Previous CJS*** 227**CJS 2300 - Security Management***Credits: 3*

This course examines the functions of an integrated security program from a management perspective. Topics to be discussed include how a security organization is managed, actual situations that may be encountered, the duties of the security director, effective management skills, and the day-to-day management of the security function.

Prerequisite: CJS 1010 with a C- or higher and CJS 1030 with a C- or higher**Previous CJS*** 230**CJS 2340 - Computer Security and Data Protection***Credits: 3*

This course is designed to give the student a working knowledge of computer security and data protection. Topics that will be covered include types of attacks on computer systems, risk analysis, strategies to counter these attacks and risks, internet security, hacking, and other criminal activity.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous CJS*** 234**CJS 2350 - Information Warfare and Security***Credits: 3*

This course covers current information security practices and countermeasures put in place to safeguard against security breaches. The course reviews Internet infrastructures such as firewalls, IDS systems, and honey pots. Additional areas include risk analysis, computer-use policies, physical security, Internet/intranet security, Malware, firewall infrastructure, and current information security issues. Students will learn the tools and methods used by malicious individuals against networks and will develop skills to help organizations identify vulnerabilities in their systems.

Prerequisite: ENG 1010 with a C- or higher **and** CJS 1010 with a C- or higher **and** CJS 2340 with a C- or higher or permission of instructor**Previous CJS*** 235**CJS 2370 - Crime Scene Processing***Credits: 3*

This course will explore the skills necessary to process various crime scenes. Students will visit mock crime scenes and process these scenes in their entirety. Hands-on instruction will concentrate on teaching students to effectively secure the scene and document the scene with sketches and digital photography. Students will learn proper crime scene note-taking and diagramming techniques. Students will also actively engage in searching for evidence, collecting evidence, and creating chain-of-custody logs. Preparation for effective courtroom testimony will also be covered in this class.

Prerequisite: CJS 2200 with a C- or higher**Previous CJS*** 237**CJS 2380 - White Collar Crime***Credits: 3*

This course will examine the definitions and laws pertaining to white collar crime, as well as the practice, procedure and strategy concerning white collar criminal investigations and prosecutions. It will also provide an overview of the legal defense of white-collar criminal cases. Topics addressed will include the criminology of white-collar crime, investigative techniques used to combat white collar crime, prosecutorial

discretion, legal privileges, and common defenses.

Indictments, sentencing and the goals of punishment will also be covered, along with a discussion of substantive law as it relates to specific types of white-collar crimes.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 238

CJS 2400 - Correctional Administration

Credits: 3

This course examines prison administration, including theories of leadership and management, institutional mission, and strategic planning. Students will apply organizational concepts, leadership, and effective administrative approaches to the management of correctional facilities and offender populations. Emphasis will be placed on staff organization and functions, managing security and programs in prison.

Prerequisite: CJS 1020 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 240

CJS 2410 - Correctional Counseling

Credits: 3

This course is an introduction to various concepts, principles, and techniques of counseling as applied by trained professionals in the correctional setting. Group methods, evaluation, and therapeutic Environments will be examined as a means of promoting the understanding of the counseling process. Discussions will include the various counseling models and the history of counseling in correctional institutions and the community.

Prerequisite: CJS 1020 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 241

CJS 2430 - Institutional Treatment of the Offender

Credits: 3

This course will explore issues and policies in correctional counseling, counselor roles, work settings and challenges, offender classification and assessment, counseling processes, and therapeutic techniques. Current correctional approaches will be considered in examining how the correctional system addresses and balances the security and treatment needs of each individual from admission to release. Emphasis will be on the placement, treatment, community release and successful reintegration of the offender.

Prerequisite: CJS 1020 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 243

CJS 2440 - Community Based Corrections

Credits: 3

This course introduces students to historical, theoretical, and judicial processes in the development of community correctional programs and how they compare with traditional forms of correctional intervention. The emphasis will be on pre-trial diversion, halfway houses, probation, parole, drug, alcohol and self-help programs, recidivism, re- entry and the integration of evidence-based practices.

Prerequisite: CJS 1020 and ENG 1010, both with a C- or higher

Previous CJS* 244

CJS 2450 - Diversity and Multiculturalism in Criminal Justice

Credits: 3

This course will examine the importance of cultural awareness within the criminal justice field as well as the intersections between diverse groups and the agencies, policies, practices, and actors of the criminal justice system. Issues such as bias, stereotyping, hate and prejudice will be discussed as well as the context structure of various cultures. Students will examine how cultural differences impact perceptions and relationships and identify barriers to cross-cultural communication. Factors such as race, ethnicity, class, gender, sexuality, class, status, age, disability, religion and marginalized groups will be examined with respect to the contacts that criminal justice practitioners have with citizens, victims, suspects, and co-workers.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 245

CJS 2470 - Fair and Impartial Policing

Credits: 3

This course will introduce students to the concepts of fair and impartial policing and police legitimacy. Topics such as stereotyping, hate, and prejudice will be covered as well as the science of bias and the role of procedural justice in promoting fair and impartial policing practices. The course will also examine the relationship between procedural justice, police legitimacy, and police-community relations.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher and CJS 1050 or CJS 1200 with a C- or higher

Previous CJS* 247

CJS 2480 - Research Methods in Criminal Justice

Credits: 3

Introduction to the use of scientific inquiry in the criminal justice field. Topics will include the scientific approach to problem solving, problem and hypothesis formulation, principles of research design, knowledge of research

strategies, conducting literature reviews, writing and presenting research ideas, and reading empirical reports.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 248

CJS 2500 - Police Management and Administration

Credits: 3

This course introduces students to the complexities in the administration of modern law enforcement organizations by presenting and analyzing a variety of management styles and administrative techniques used in such organizations.

Students will examine many of the internal and external factors that impact contemporary law enforcement organizations.

Prerequisite: CJS 1010 with a C- or higher or ENG 1010 with a C- or higher and CJS 1050 with a C- or higher

Previous CJS* 250

CJS 2530 - Interpersonal Dynamics for Criminal Justice Professionals

Credits: 3

This course is designed to introduce the student to the major theories about interpersonal processes and their relevance to the problems within the criminal justice system. The course content flows from understanding the theories to techniques of interpersonal communication. Emphasis is placed on facilitating effective communication, sensitivity, decision-making and action planning in a multicultural society.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 253

CJS 2550 - Ethical Issues in Criminal Justice

Credits: 3

The course involves an identification and analysis of the diverse ethical issues and value conflicts encountered by law enforcement, court, and correctional personnel. Emphasis is placed on the function of personal and professional systems, the myriad factors that influence decision making by criminal justice professionals, and the societal, organizational, and legal consequences of unethical behavior.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 255

CJS 2570 - Writing and Research for Criminal Justice

Credits: 3

This course emphasizes the practical aspects of gathering, organizing, and preparing written reports and other documents applicable to criminal justice professions. Student will practice the process and procedure of creating and

completing successful professional documents in the criminal justice field, make use of the technologies commonly used for research and writing in the criminal justice field, and learn the convention of evidence, format, usage, and proper documentation.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 259

CJS 2580 - Street Gangs and Organized Crime

Credits: 3

Examination of the origin, growth and structure of organized crime and drug cartels. Organized street gangs, which can be defined as a criminal enterprise, and operate throughout the U.S. will also be explored.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 258

CJS 2610 - Restorative Justice and Mediation

Credits: 3

The process of victim and offender mediation and reconciliation is examined in this course. The effectiveness of the process in the offender rehabilitation will be discussed. Topics to be discussed include conflict resolution, bringing the victim and offender together, restitution of losses, reconciliation, mediation, and conflict management.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 261

CJS 2720 - Inside the Criminal Mind

Credits: 3

This course provides an overview of the various applications of psychology to forensic settings and examines the psychological bases and dynamics of criminal behavior. Topics include landmark legal cases, careers in forensic psychology, forensic psychological assessment, police psychology, criminal investigation and profiling, legal consultation, dynamics of violence and victimology, eyewitness testimony, ethics and a variety of other areas within the criminal and civil justice systems.

Prerequisite: CJS 1010 and C- or higher or PSY 1011 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 272

CJS 2800 - Victimology

Credits: 3

A comprehensive course designed to acquaint the student with the many issues faced by victims of crime. Topics covered will include victimology, restorative justice, victim's 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.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 280

CJS 2810 - Transportation and Border Security

Credits: 3

Provides an overview of modern border and transportation security challenges, as well as different methods employed to address these challenges. The course covers the time period post September 11, 2001 to the present. The course explores topics associated with border security and security for transportation infrastructure, to include; seaports, ships, aircraft, airports, trains, train stations, trucks, highways, bridges, rail lines, pipelines, and buses. The course will include an exploration of technological solutions employed to enhance security of borders and transportation systems. Students will be required to discuss the legal, economic, political, and cultural concerns and impacts associated with transportation and border security. The course provides students with a knowledge level understanding of the variety of challenges inherent in transportation and border security.

Prerequisite: CJS 1580 with a C- or higher

Previous CJS* 281

CJS 2820 - Criminal Court Systems and Practices

Credits: 3

This course is an overview of the American federal and state criminal court systems. The course will identify the roles of judicial officers and provide a comprehensive outline of criminal trial processes from pretrial to sentencing. Emphasis will be placed on constitutional law, motion practice, the Federal Rules of Evidence, and the Connecticut criminal court system.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Corequisite: CJS 2110

Previous CJS* 282

CJS 2850 - Forensic Science with Laboratory

Credits: 4

A study of how the disciplines of Biology, Chemistry, Earth Science, Physical Science, and Physics meld to form the field of forensic science. The course will focus on developing the scientific vocabulary necessary for investigators to communicate with scientists. This course is meant to assist student who are pursuing a career in criminal justice. Emphasis of the course be 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. The laboratory component will provide hands on opportunities to integrate scientific methodology as it relates to criminal justice and the limitations of scientific

testing. Students may take either CJS/SCI 2260 or CJS/SCI 2850. Students cannot earn credit for both of these courses.

Prerequisite: ENG 1010 with a C- or higher

General Education Code: SCRXX

Cross-listed: SCI 2850

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous CJS* 285

CJS 2880 - Careers in Criminal Justice

Credits: 3

This course is designed to provide students with an understanding of the various employment opportunities within the criminal justice field, as well as the requirements associated with obtaining different types of criminal justice employment. Topics covered include; how to complete a job search, resume writing, interview skills, ethical decision-making and stress management. Students will learn how to maximize their performances in written, physical agility, oral interview, and background investigations and will also be provided with an overview of the polygraph, psychological, and medical screening phases common to many criminal justice professions. Students will complete mock interview exercises and will be exposed to current professions in the field through guest lectures and job shadow opportunities.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 288

CJS 2940 - Contemporary Issues in Criminal Justice

Credits: 3

This course exposes students to the contemporary issues that impact the functions, and organization of Criminal Justice agencies in the United States with an emphasis on the use of research methodology in examination of issues. Topics in the course includes issues such as: 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.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Previous CJS* 294

CMGT 1110 - Construction Graphics/Quantity Take-Off

Credits: 3

Understand and interpret construction documents for building and heavy/highway construction. Focus of course will be on the analysis of architectural and structural drawings and specifications. Understand quantity take-off processes and conduct take-offs of site work, concrete, rough carpentry, light -gage steel construction, masonry, steel, sheathing and interior finishes.

Previous CTC* 140

CMGT 1120 - Construction Project Administration*Credits: 3*

Examination of the role of the Construction Project Administrator. Emphasis on interpretation of construction documents and administration of project-related documents and reports associated with the construction process.

Previous ARC* 221**CMGT 1150 - Construction Building Systems***Credits: 3*

Students will successfully be able to demonstrate procedures as a construction management professional including a basic body of knowledge of construction, job identification, terminology, and the use of equipment as used in light and heavy construction. An introduction to sustainable construction will include green building construction fundamentals, integrating building systems, and sustainable construction methods.

Prerequisite: ENG 1010**Previous** CTC* 222**CMGT 1160 - Heavy/Highway Systems***Credits: 3*

The course is an introduction to heavy and highway construction practices. Emphasis on construction equipment, labor, materials, and methods as they relate to field operations.

Prerequisite: ENG 1010**Previous** CTC* 224**CMGT 2150 - Construction Building Estimating***Credits: 3*

The course is focused on reviewing construction costs in more detail for the purpose of construction estimating and bidding. Estimation of cost calculations will include pricing labor, material, and equipment costs in the areas of site work, concrete, masonry, steel, carpentry, roofing, finishes, mechanical and electrical systems.

Prerequisite: CMGT 1110, CMGT 1150**Course Fees:** Supplemental Fee Level 1**Previous** CTC* 229**CMGT 2160 - Heavy/Highway Estimating***Credits: 3*

This course examines the role of the Heavy/Highway construction estimator. The focus is on reviewing construction costs in more detail for the purpose of construction estimating and bidding. Estimation of cost calculations will include pricing labor, material, and equipment costs as they relate to civil construction projects

Prerequisite: CMGT 1110, CMGT 1160**Course Fees:** Supplemental Fee Level 1**Previous** CTC* 234**CMGT 2230 - Construction Safety***Credits: 3*

This course examines the role of the Heavy/Highway construction estimator. The focus is on reviewing construction costs in more detail for the purpose of construction estimating and bidding. Estimation of cost calculations will include pricing labor, material, and equipment costs as they relate to civil construction projects.

Prerequisite: CMGT 1150, CMGT 1160**Previous** new**CMGT 2275 - Construction Planning***Credits: 3*

Examination of the role of the construction planner/scheduler. Emphasis on CPM scheduling using arrow and precedence diagram techniques. Procedures associated with determining project completion dates, progress, schedule updating, and project time reduction.

Prerequisite: CMGT 2150, CMGT 2160**Previous** New**CMGT 2285 - Construction Project Management***Credits: 3*

Students will successfully be able to demonstrate procedures as a construction management professional including sustainable practices such as quality control, sustainable materials, understanding and interpretation of state high performance building codes. Students will gain familiarity with project documents, and communication between construction and design elements.

Prerequisite: CMGT 1150, CMGT 1160**Course Fees:** Supplemental Fee Level 1**Previous** CTC* 220**CMGT 2500 - Construction Business Principles***Credits: 3*

Examination of the role of financial management and accounting in the construction industry. Emphasis on ethical, organizational, financial, legal, managerial, and accounting issues.

Prerequisite: ACCT 1130, CMGT 2285**Previous** New

COMM 1000 - Introduction to Communication*Credits: 3*

In this introductory course to the discipline, students will learn about a variety of historical and contemporary approaches to the study and practice of communication. The course treats communication as a fundamentally cultural practice that shapes meaning in peoples' beliefs, attitudes, values, and practices across contexts.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** HUM, LART**Previous COM* 100****COMM 1010 - Introduction to Mass Communication***Credits: 3*

This course is a survey of the American mass media and communication. It will examine mass communication and media literacy in today's society by investigating forms of media (print, music, movies, television, and the Internet), the messages of media (news, public relations, advertising, and entertainment), and the ethical, legal, and cultural issues surrounding media.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** HUM, LART**Previous COM* 101****COMM 1201 - Film Study and Appreciation***Credits: 3*

This course is an introduction to the art, history, and influence of film. Students will trace the history of cinema through both technical advancements and aesthetic developments enabling them to understand the aesthetics of films as well as the cultural and historical context in which the films were made.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** GLKY**Cross-listed:** ART 1060 - Film Study & Appreciation**Previous COM* 154****COMM 1301 - Public Speaking***Credits: 3*

In this introductory course to Public Speaking students will engage in the process of transmitting ideas and information orally in a variety of situations. Effective oral communication involves generating messages and delivering them with attention to vocal variety, articulation, and nonverbal signals. In order to be a competent speaker, a person must be able to compose a message and provide ideas and information suitable to the topic, purpose, and audience.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Oral Communication (ORAX)**Elective Code(s):** HUM, LART**Previous COM* 173****COMM 1302 - Interpersonal Communication***Credits: 3*

The course examines the theory and practice of communication in interpersonal relationships across a variety of cultural contexts.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Oral Communication (ORAX)**Elective Code(s):** HUM, LART**Previous COM* 172****COMM 1303 - Group Communication***Credits: 3*

Students will learn about the theory and process of small group communication. The course will examine the creation, development, and functions of small groups. Students will gain experience leading group discussions and analyzing patterns of communication in community-based small group settings.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** HUM, LART**Previous COM* 178****COMM 1304 - Introduction to Public Relations***Credits: 3*

A comprehensive survey of public relations principles and practices: fact-finding, planning and programming, action and communication, evaluation. This course covers relationships between organizations and their publics, and the effective use of media. Students will plan a complete public relations program.

Prerequisite: ENG 1010 and basic computer literacy**Elective Code(s):** HUM, LART**Previous COM* 201****COMM 1305 - Intercultural Communication***Credits: 3*

This course approaches communication as a fundamentally cultural accomplishment. The course will examine how people acquire and enact cultural identities, build cultural institutions, and maintain and resist cultural practices. We approach these issues through the examination of both theoretical perspectives and data-based studies of cultural practices. The course seeks to develop student sensitivity to cultural variation in behavior, ideology, and communicative practice, in the service of increased intercultural competence, and ethical participation in intercultural contexts.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** GLKY, HUM, LART**Previous COM* 202**

COMM 1306 - Social Media in Contemporary Society*Credits: 3*

With the advent and proliferation of new communication technologies, interpersonal relationships and communities have taken on new forms, transcending space and time, challenging our definitions of what "relationships" and "community" can be. In this course, we will examine theories and concepts pertaining to the development of interpersonal relationships and communities in mediated contexts, the role of culture in shaping those contexts, and the social consequences of new communication technologies.

Prerequisite: Eligibility for ENG 1010 or permission of instructor

Elective Code(s): HUM, LART

Previous COM* 113

COMM 1401 - Journalism I*Credits: 3*

This course covers news gathering and reporting within the context of news criteria. Interviewing, ethics and law are introduced.

Prerequisite: ENG 1010

Elective Code(s): HUM, LART

Previous COM* 121

COMM 1402 - Photojournalism*Credits: 3*

Explore the fundamentals of photographic storytelling including news and feature photography. Students examine the history of photojournalism and apply this understanding to their own visual storytelling. Course work focuses on ways of using the camera and related imaging equipment, developing professional relationships with photographic subjects, ethical standards, and law as applied to contemporary photojournalism.

Prerequisite: One of the following introductory courses in Photography: ART 1410, ART 1450. Students are also encouraged to enroll in COMM 1401.

Corequisite: None

Elective Code(s): HUM, LART

Previous COM* 225

COMM 1501 - Visual Communication*Credits: 3*

This course provides a theoretical and technical foundation in visual communication. Visual communication is the process of creating, evaluating, and distributing effective visual messages. Students are introduced to the principles of visual design, media content and forms, aesthetic dimensions and audience characteristics. Students apply these principles in the production process while designing projects using visual media hardware and software.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): CRTY, HUM, LART

Previous COM* 105

COMM 1502 - Sports Reporting*Credits: 3*

Sports Reporting introduces students to the fundamentals of sports writing. Students will analyze sports reporting in print, broadcast, and online. Assignments emphasize practical skills grounded in journalism, including interviewing, writing, and editing. Students will produce both written and recorded (audio/video) assignments to demonstrate course competencies.

Prerequisite: Eligible for ENG 1010

Corequisite: None

Elective Code(s): HUM, LART

Previous COM* 122

COMM 1511 - Media Writing*Credits: 3*

Building on the basics of Journalism, this class focuses on writing news and feature stories for both print and broadcast. The classroom becomes a newsroom where students assign, write and edit stories and then recast their news stories into a broadcast format. Instruction centers on issues in reporting, writing, and editing. Course work will appear in the student newspaper and in the student produced television news show.

Prerequisite: COMM 1401 or permission of Instructor

Corequisite: None

Elective Code(s): HUM, LART

Previous COM* 215

COMM 1601 - Digital Video Production*Credits: 3*

This course is an introduction to single camera video field production and post-production techniques with an emphasis on visual storytelling. Students will learn program development, proposal and script preparation, high-definition camera operation, portable lighting techniques, sound recording, video editing, motion graphics, visual effects and preparing finished programs for distribution. Students will

create news, documentary, instructional and narrative programming for a variety of platforms including mobile, Internet streaming and broadcast television.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous COM* 129

COMM 1603 - Television Production

Credits: 3

The fundamentals of television production are presented in this lab course in the College's TV studio. Scripting, camera set-ups, how to work with talent, and the control room side of TV production are topics that will be covered.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: ARHX

Elective Code(s): CRTY, HUM, LART

Previous COM* 141, COM* 220, COM* 221

COMM 1604 - Video Filmmaking

Credits: 3

A creative workshop in which students will work in groups and make their own movies. Students work with video camcorders and editors. Students will learn scripting, shooting, editing and audio production techniques.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): CRTY, HUM, LART

Previous COM* 166

COMM 1612 - Audio Production

Credits: 3

This course is an introduction to the art, practice, theory, and best practices of audio production. Students will apply audio production theories to hands-on production techniques and digital editing. Copywriting, mic usage, vocal performance, and digital audio production software will be covered.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): CRTY, HUM, LART

Previous COM* 131

COMM 1613 - Radio Production

Credits: 3

This course introduces the skills needed for general radio, commercial, news, and spoken word production. Current

practices in radio production and broadcasting will be covered including station automation, FCC regulations, studio operations, podcasting, Internet radio, and other forms of digital broadcasting. Copywriting, and digital audio workstation-based projects in informational and music-based programming may include pre-recorded elements and programs for the college's radio station.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): HUM, LART

Previous COM* 231

COMM 1998 - Special Topics in Communication

Credits: 3

A faculty-developed course that focuses on exploring a communication study or process that is outside the current courses that are offered in the Communication program. This course is designed to provide our students with an opportunity to pursue an area of study that is of interest to a large group. The program coordinator and department chairperson will approve the area of study. Students may repeat COMM 1998 for no more than a total of nine (9) credits. Each course iteration must focus on a unique topic.

Previous COM* 198

COMM 2202 - Film History

Credits: 3

Film History examines the narrative, stylistic, industrial and cultural aspects of contemporary U.S. film.

Prerequisite: Eligibility for ENG 1010

Elective Code(s): HUM, LART

Previous COM* 157

COMM 2203 - Topics in Film

Credits: 3

This course will examine a specific topic in film and film making from a historical and artistic perspective. Topics that may be covered include examining the work of an influential director, a specific film genre, or artistic film movement, among others. Students may repeat Topics in Film for no more than 9 credits. Each course iteration must follow a unique Topic.

Prerequisite: Eligibility for ENG 1010

Elective Code(s): HUM, LART

Previous COM* 156

COMM 2302 - Professional Communication*Credits: 3*

Builds on the theory and practice of public speaking. Designed for professionals, advanced communication students, and for students needing to improve their presentational skills beyond an entry level course.

Prerequisite: COMM 1301**Corequisite:** None**Elective Code(s):** HUM, LART**Previous COM* 174****COMM 2303 - Argumentation and Debate***Credits: 3*

Advanced instruction in oral communication with emphasis on argumentation, rhetoric, and the conventions of formal debate. Students practice evaluative listening, research skills, and delivering persuasive arguments in a formal debate setting.

Prerequisite: ENG 1010 and COMM 1301**Corequisite:** None**Elective Code(s):** HUM, LART**Previous COM* 275****COMM 2401 - Publications Workshop***Credits: 3*

This hands-on course is designed to train students to produce the student publication. Students will practice all aspects of production, including writing, editing, managing, layout and design, photography, proofreading, and pre-press work (including digital imaging). Students will learn to judge appropriate news content, check facts, and investigate legal and ethical concerns. The course will also allow students to specialize in one or two supporting areas of newspaper production, including editing, layout and management. Advertising (sales and design) may also be part of this course.

Prerequisite: ENG 1010 and basic computer literacy, or permission of instructor.**Elective Code(s):** HUM, LART**Previous COM* 116****COMM 2402 - Advanced Publications Workshop***Credits: 3*

This hands-on course continues the work students began in Publications Workshop, with a focus on further developing the skills integral to strong writing and reporting and the production of a student publication and contributing more of a range of content and expertise to that publication. Students will focus on more in-depth reporting and writing than in Publications Workshop 1 and will be coached in developing reporting and writing projects that enable them to focus on areas for growth and topics of particular interest. In addition, students will be called upon to develop leadership skills, mentoring students enrolled in Publications Workshop and

taking a more active role in determining the direction of the student media.

Prerequisite: COMM 2401**Previous COM 216****COMM 2501 - Mass Media and Society***Credits: 3*

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: ENG 1010 and COMM 1010**Corequisite:** None**Elective Code(s):** HUM, LART**Previous COM* 208****COMM 2502 - Social Media Strategy***Credits: 3*

This course introduces students to various forms of social media and how to use them strategically, especially for business and professional purposes. Students analyze a range of social media platforms with an emphasis on communication, marketing, and public relations. The course explores how social media has transformed the way we interconnect and interact with the world, both personally and professionally. Students are expected to apply their knowledge by participating in hands-on social media projects.

Prerequisite: Eligible for ENG 1010**Corequisite:** None**Elective Code(s):** HUM, LART**Previous COM* 120****COMM 2512 - Screenwriting***Credits: 3*

This course is introduction to the basics of screenwriting for television and film. The course covers the formatting of scripts for both television and film as well as market considerations. Elements of storytelling including characterization and plotting will be emphasized.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** CRTY, HUM, LART**Previous COM* 211****COMM 2513 - Scriptwriting for Media***Credits: 3*

An introduction to writing scripts for radio, television, film and new media. Through extensive writing, students will learn the basic requirements for writing public service announcements, commercials, news copy, corporate and educational videos, reality and documentary treatments, and dramatic features. This course will teach standard formats and techniques used by professional scriptwriters including

preliminary proposals, outlines, treatments, screenplays and scripts, as well as key terms, concept development and analysis.

Prerequisite: ENG 1010

Corequisite: None

Elective Code(s): HUM, LART

Previous COM* 111

COMM 2601 - Advanced Digital Video Production

Credits: 3

This production course covers professional practices in creating digital fiction and nonfiction projects. Students learn advanced preproduction, production, and post-production techniques with an emphasis on strong storytelling. Students learn advanced skills in proposal writing, scripting, production, and editing for long-form content. Two hours of lecture; three hours of hands-on production.

Prerequisite: COMM 1604 or COMM 1601

Corequisite: None

Elective Code(s): HUM, LART

Course Fees: Supplemental Fee Level 2

Previous COM* 244

COMM 2611 - Advanced Audio Production

Credits: 3

The course introduces students to advanced digital production techniques for radio, video, and multimedia. Through lectures, demonstrations, and production assignments, students gain valuable knowledge of the theory and practices of audio art as a recognized form of artistic expression using advanced techniques of audio manipulation on digital audio workstations. Topics include digitizing, formats, synthesis, filtering, and effects via digital techniques. Particular emphasis is placed on audio for radio and video. The course provides students with intensive practice and skill development in audio production techniques, while preparing them to work directly with video and radio program producers.

Prerequisite: COMM 1612

Corequisite: None

Elective Code(s): HUM, LART

Previous COM* 232

COMM 2695 - Radio Practicum

Credits: 1

Students enrolled in the practicum gain hands-on experience working in a radio station environment. Each student is assigned a weekly, three-hour airshift. Students will learn how to operate station equipment, follow a format clock, and adhere to FCC rules and regulations. This class is graded on a pass/fail basis. Course may be repeated for up to three credits. As part of their shift, each student will participate in an aircheck session with the instructor after each week in order to identify strengths and weaknesses and the potential improvement thereof.

Prerequisite: Permission of instructor

Corequisite: None

Elective Code(s): CRTY, HUM, LART

Previous COM* 191

COMM 2995 - Internship

Credits: 3

This course provides students with the opportunity to apply classroom theory in an actual work setting, in paid and unpaid supervised positions, related to their majors. Completion of approximately 15-20 hours per week of work (150 hours for unpaid placements, depending on major; 300 hours for paid placements) and participation in Cooperative Education Online are required. In addition to the work placement, students are required to attend and complete classroom work (online) to enhance their cooperative education work experiences.

Prerequisite: Permission of instructor

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): HUM, LART

Previous COM* 295

COMM 2998 - Advanced Topics in Communication

Credits: 3

A faculty-developed course that focuses on exploring a communication study or process that is outside the current courses that are offered in the Communication program. This course is designed to provide our students with an opportunity to pursue an area of study that is of interest to a large group. The program coordinator and department chairperson will approve the area of study. Students may repeat COMM 2998 for no more than a total of nine (9) credits. Each course iteration must focus on a unique topic.

Previous COM* 294

CSA 1110 - Introduction to Software Applications

Credits: 3

The computer plays a significant role as a productivity tool in many fields of study and employment. This course focuses on integrating comprehensive computing skills to introduce students to the knowledge, skills, and techniques necessary to

achieve proficiency in the Microsoft Office software applications suite (Word, Excel, PowerPoint, and Access). The computer operating system, file management operations, computer concepts, and vocabulary are included as integral elements to understanding the software applications environment. Students will examine productivity and computing procedures in academic and workplace settings, enhance their computer skills, and be able to critically apply these skills.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Continued Learning/Information Literacy (CLIX)

Previous CSA*105

CSA 1111 - Spreadsheet Applications

Credits: 3

This course will enable student to achieve an expert competency in creating, managing, and distributing professional spreadsheets. Upon completion students will be prepared for industry expert level certification.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous CSA*135

CSA 2112 - Database Applications

Credits: 3

This course will introduce the student to the concept of a database management system and its integral role in today's workplace. Students will gain hands-on experience creating and relating tables, entering and editing data, working with and customizing forms, creating and using queries, and creating and customizing printed reports using database software. Upon completion students will be prepared for industry expert level certification.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous CSA* 140, CSA* 145

CSA 2113 - Advanced Applications

Credits: 3

This course focuses on the intermediate level skills of Microsoft Office applications. Students go beyond an introductory level with documents, spreadsheets, databases, and presentations. Suitable for professional purposes as well as personal use. An exercise-oriented approach will be utilized that allows learning by doing.

Prerequisite: CIS 1001 or CSA 1110

Prerequisite/Corequisite: none

Corequisite: none

Previous CSA*205

CSC 1201 - Introduction to Programming

Credits: 4

This course covers fundamentals of programming and program development techniques. Topics include data types, functions and methods, selection, repetition, strings, arrays, and file processing. Programming laboratory projects in a closed laboratory environment are supervised by the instructor. Three hours lecture; two hours of laboratory.

Prerequisite: Eligibility for MATH 1600 or higher

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CSC* 104, CSC* 105, CSC* 106, CSC* 108, CSC* 115

CSC 1203 - Python Fundamentals

Credits: 3

This is an introductory course in structured programming concepts using Python and assumes no prior programming experience (in 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. This course assumes students are comfortable working with simple algebraic equations. Students should also have basic file and folder management skills on a personal computer.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): CPL

Previous CSC* 124, CSC* 105

CSC 1205 - Visual Basic

Credits: 3

This course uses Visual Basic.NET, an object-oriented/event-driven language, to teach programming concepts. Through "hands-on" application of the concepts presented in the lectures and tutorials, the student will learn Visual Basic.NET tools used to create applications that correspond to Windows standards. By the end of the course, the student will be able to design and code simple business applications and will be prepared for more advanced courses in programming using VB, C++, C#, Java, etc.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): CPL

Course Fees: Supplemental Fee Level 1

Previous CSC*126, CSC*205, CSC*206, CSC*208, CSC*211

CSC 1211 - Java I*Credits: 3*

This is a first Computer Programming course. The course emphasizes problem solving and sound programming practices. No previous programming experience is necessary. During this course students will learn how to construct algorithms and convert them into computer programs using typical flow control statements and data types, will learn basic object oriented techniques and contrast them with function-oriented techniques, will work with primitive, compound and user-defined data types, will learn how to define functions and pass parameters to them, will use simple console input and output and simple file input and output, and will learn fundamental software engineering testing techniques. The coursework includes a significant amount of homework assignments.

Prerequisite: eligible for MATH 1600**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** CPL**Course Fees:** Supplemental Fee Level 1**Previous** CSC* 127, CSC* 220, CSC* 105, CSC* 223, CSC* 113, CSC* 226**CSC 1231 - Database Development I***Credits: 4*

Relational database development including data modeling, database design and database implementation. The student learns to create and alter tables, retrieve, insert, update, and delete data using a fourth generation language in a supervised laboratory setting. Uses of database technology, understanding DBMS and RDBMS concepts, normalizing designs, transforming of logical design into physical databases, embedded SQL, and the role of the DBA are also covered. Three hours lecture; two hours of laboratory.

Prerequisite: eligibility for ENG 1010**Prerequisite/Corequisite:** none**Corequisite:** none**Course Fees:** Supplemental Fee Level 1**Previous** CSC* 233**CSC 1271 - Web Development and Design I***Credits: 4*

This course provides the entry into the fast-moving website development industry. With its heavy hands-on mode of delivery, students will learn HTML 5, Cascading Style Sheets 3 (CSS 3), and be exposed to JavaScript. Adhering to standards, specifically from the World Wide Web Consortium (W3C) and the European Computer Manufacturers Association (ECMA), will play a dominant role in the creation of web pages that are both platform and browser independent. Programming laboratory projects in a closed laboratory environment are supervised by the instructor. Three hours lecture; two hours of laboratory.

Prerequisite: eligibility for ENG 1010**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** CRTY**Course Fees:** Supplemental Fee Level 1**Previous** CST* 150, CST* 151, CST* 152, CST* 153, CST* 154**CSC 1273 - Intro to Programming w/JavaScript***Credits: 3*

This course teaches students the fundamentals of programming using JavaScript, a dynamic computer programming language most commonly used as a part of web pages. Students will gain an understanding of the fundamental concepts of programming and interactive design. This introductory course is suitable for students with no prior knowledge or programming experience.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** CPL**Previous** CST* 200, CSC* 268, CSC* 116**CSC 2212 - Java II***Credits: 3*

This is a second course in computer programming using Java and assumes prior knowledge of Java. It emphasizes object-oriented techniques: using and creating classes and objects, inheritance, polymorphism, and Java interfaces. Other topics included models as abstractions of situations, exception handling, introduction to event-driven programming, recursion, elementary searching and sorting techniques. A programming project is required.

Prerequisite: CSC 1211**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** CPL**Course Fees:** Supplemental Fee Level 1**Previous** CSC* 128, CSC* 220, CSC* 221, CSC* 229, CSC* 224

CSC 2213 - Object Oriented Programming*Credits: 4*

The features and tools of an object-oriented programming language like Java will be covered in detail. The object-oriented model will be used in developing object-based and object-oriented programs. Environment, classes, arrays, strings, inheritance, graphics, exceptions, I/O streams, and the APIs will be discussed. Programming laboratory projects in closed laboratory environment, supervised by the instructor, will be assigned. Three hours of class work, two hours of laboratory per week.

Prerequisite: CSC 1201**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** CPL**Course Fees:** Supplemental Fee Level 1**Previous** CSC*226**CSC 2214 - C++ Programming***Credits: 4*

This course covers the main components of the C++ programming language. It begins with a treatment of basic programming constructs such as data types, selection and iteration, functions, arrays and input/output. It then moves onto more advanced OOP concepts such as objects and classes, instantiation, encapsulation, inheritance, polymorphism, overloading, pointers, and class libraries.

Prerequisite: Any programming class or permission of instructor**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** CPL**Previous** CSC*213, CSC*214, CSC*215**CSC 2215 - C# Programming***Credits: 4*

This course offers students the opportunity to extend their experience and programming skills in the area of .NET development. C# (pronounced C Sharp) is an object-oriented programming language with syntax similar to JAVA, C# is becoming increasingly popular with developers in the areas of Windows applications and web sites using relational databases. Using the Visual Studio Integrated Development Environment (IDE) the course will cover topics including arrays, methods, classes, objects, inheritance, and exception handling. File streams and database applications will also be an important part of the course.

Prerequisite: any programming course or permission of instructor**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** CPL**Previous** CSC* 217, CSC* 218**CSC 2216 - Data Structures and Algorithms***Credits: 4*

Common data structures used to represent information in an object-oriented environment. Topics include stacks, queues, references, linked lists, binary trees and hashing. Efficiencies of algorithms and their relations to data representations will be discussed. Programming laboratory projects are used for homework, quizzes and the final. This course is exclusively online with instruction and support provided via Blackboard. Three hours lecture; two hours of laboratory.

Prerequisite: CSC 2213**Prerequisite/Corequisite:** none**Corequisite:** none**Course Fees:** Supplemental Fee Level 1**Previous** CSC* 241**CSC 2217 - Digital Design***Credits: 4*

From how logic sets the basis for number systems and data representations to the building-blocks of computers and so much more, this course explores the elements of digital logic & design, digital circuitry, and the fundamentals of modern digital systems through hands-on design exercises.

Prerequisite: eligibility for MATH 1610**Prerequisite/Corequisite:** none**Corequisite:** none**Course Fees:** Supplemental Fee Level 1**Previous** CST* 145, EET* 252**CSC 2218 - Software Engineering Methods***Credits: 4*

This course explores the methods of software application development following the software processes required for the production of high-quality software. Techniques for creating documentation and using software development tools will be presented. Students will understand and apply the practices of lean and agile development, including stakeholder feedback, use cases, user stories, iterative development, stable/consumable code, continuous integration, test driven development, and value stream maps. Three hours lecture; two hours of laboratory.

Prerequisite: CSC 2213 or CSC 2252 or CSC 2272**Prerequisite/Corequisite:** none**Corequisite:** none**Course Fees:** Supplemental Fee Level 1**Previous** CSC*256, CSC*265**CSC 2219 - Introduction to Bioinformatics***Credits: 3*

This class is the intersection between volumes of genetic information, information technology, a bit of math and molecular biology. This is an introduction to the processes that are historically, currently and with some effort - possibly predictive expression information of DNA, RNA and proteins

found in organisms. Molecular biology topics will be covered beyond the college biology course with the goal to help the student understand what information is available to any cell to adapt to stay alive. This class is designed as a "projects" course where students will work as individuals within teams to answer specific questions. The computing and mathematical processes that allow this work to be completed will be examined to appreciate the thought process required to address specific topics.

Prerequisite: CSC 1201 and MATH 1600 or higher

Prerequisite/Corequisite: none

Corequisite: BIO 1210

Previous CSC* 111

CSC 2232 - Database Development II

Credits: 4

Reinforcement of topics covered in CSC 1231 as well as introduction of new topics including: working with Views, how to code Scripts, how to code stored Functions, Procedures, & Triggers, Cursors and Exception Handling advanced calculations and multi-valued dependencies; and some current trends. A case study approach is used to apply concepts and methodologies. 3hours lecture, 2 hours lab

Prerequisite: CSC 1231

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CSC* 234, CSC* 239

CSC 2233 - Database Development III

Credits: 4

This course is designed to teach student the architecture (logical and Physical) structure of the Modern Database Management Systems. As each student is required to have a working knowledge of the Relational Database Model as well as SQL programming skills, this course focuses on the administration of a DBMS administrator including creation, management, maintenance, and operation of a database management system. 3 hours lecture, 2 hours lab

Prerequisite: CSC 2232

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CSC* 235, CSC* 239

CSC 2235 - Introduction to Database Design

Credits: 3

An in-depth introduction to information management techniques with emphasis on data modeling and relational database design. Topics include conceptual data modeling, relational database design and normalization, database query languages, schema integration and integrity constraints, physical database design, and database usability issues. Using SQL, students will design and implement a database

application, working from the E-R modeling stage through to the actual implementation.

Prerequisite: Any 1000 level programming course or higher

Prerequisite/Corequisite: none

Corequisite: none

Previous CSC* 121, CSC* 231, CSC* 238, CSC* 239

CSC 2251 - Mobile Device Programming

Credits: 3

This course is designed as an introduction to mobile device programming. It is intended for students with an interest in learning to develop applications which will run on Android based smart phones. Prior programming experience is expected.

Prerequisite: Elective CPL or instructor permission

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CSC* 228

CSC 2252 - Programming Mobile Devices I

Credits: 3

The course will introduce students to the various platforms in use on small and mobile devices. Platforms will include Apple iPhone and Google Android OS as well as web development in the context of the small device. Students will create cross-platform applications for each platform. 3 hours lecture, 2 hours lab.

Prerequisite: CSC 1201

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CSC* 262

CSC 2253 - Programming Mobile Devices II

Credits: 3

This course enables 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. Three hours lecture; two hours of laboratory.

Prerequisite: CSC 1201

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CSC* 263

CSC 2272 - Web Development and Design II

Credits: 4

As a continuation of the Web Development and Design I class, this course continues the knowledge and skills development of a web developer. The course covers advanced CSS and JavaScript in detail. CSS skills include

mobile first design principles, positioning elements, and CSS frameworks. JavaScript fundamentals such as data types, functions, arrays, loops, and conditional statements are included. Asynchronous JavaScript and XML (AJAX) is included. A large website project will be built. Three hours lecture; two hours of laboratory.

Prerequisite: CSC 1271

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CST*250, CST*252

CSC 2274 - Client-Side Web Development

Credits: 3

This course examines the fundamentals of how to plan, design, and develop effective web pages that blend HTML (Hypertext Markup Language), CSS (Cascading Style Sheets), and client-side scripting. Students will explore how to create and enhance the user experience through the incorporation of various page elements, layout methods, formatting/styling techniques, text, graphics, images, multimedia, and scripting to produce an effective and functional, multi-page website.

Prerequisite: Any 1000 level programming course or higher

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CSC* 114, CSC* 227, DGA* 241, CSC* 268

CSC 2275 - Web Development With PHP

Credits: 4

This course will introduce students to web development using PHP. Students will learn how to design web sites according to the MVC model. Object-oriented PHP will serve as the means by which the model component of the MVC- based web application is implemented. Session management will be used to deliver customized content. Students will also use the MySQL database in conjunction with PHP to create dynamic web applications. 3 hours lecture, 2 hours lab.

Prerequisite: CSC 2213

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CSC* 257, CSC* 258, CSC* 269

CSC 2276 - XML for the Worldwide Web

Credits: 4

The course will build on students' knowledge of HTML and JavaScript in the rich world of XML. Topics covered include: creating well-formed and valid XML documents, Document Type Definitions (DTDs), namespaces, entities, XML Schemas, formatting using Cascading Style Sheets (CSS) and eXtensible Stylesheet Language (XSL), and transformations

using XSL Transformations (XSLT). XQuery will be covered as well. Three hours lecture; two hours of laboratory.

Prerequisite: CSC 1201 or CSC 2272

Prerequisite/Corequisite: none

Corequisite: none

Course Fees: Supplemental Fee Level 1

Previous CST* 255

CST 1111 - Computer Hardware

Credits: 4

Laboratory-based course emphasizing computer architecture and related components. Analyzing and troubleshooting the relationships between the operating system, computer hardware, and peripheral devices.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous CST*140, CST*141, CST*149, CST*239, CST*240

CST 1121 - Networking I

Credits: 3

An introduction to the fundamentals of data communications, telecommunications, and networking. This course provides a general overview of computer networks by focusing on the terminology and technology in current networking environments including OSI (Open Systems Interconnect model), LAN (Local Area Network) architecture, client/server model, network operating systems, system architectures, Internet, and telecommunications.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous CST* 130, CST* 131, CST* 133, CST* 170, CST* 171, CST* 176, CST* 180, CST* 193, CST* 231, CST* 232, CST* 234

CST 1141 - Linux System Administration

Credits: 4

Introduction to network fundamentals, Linux, and Python programming as well as techniques and skills for network administration, data collection, and analysis. Cyber Security and Network Security topics are also woven into the various topics.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous CST264, CST*266

CST 2122 - Networking II

Credits: 3

Introduction to the OSI model concentrating on the network, data link and physical layers. Emphasis on IP addressing

(IPv4 & IPv6), Ethernet technologies and copper and fiber optic cabling.

Prerequisite: CST 1121 or instructor permission

Prerequisite/Corequisite: none

Corequisite: none

Previous CST* 132, CST* 181, CST* 188, CST* 229, CST* 230, CST* 261, CST* 281, CST* 231

CST 2123 - Networking III

Credits: 3

This course will cover the theory and implementation of routing and switching protocols. Covered topics include VLANs and trunks, troubleshooting and security.

Prerequisite: CST 2122 or instructor permission

Prerequisite/Corequisite: none

Corequisite: none

Previous CST* 182, CST* 183, CST* 282, CST* 283, CST* 229

CST 2124 - Voice over IP Networking

Credits: 3

The course covers the engineering of voice and data networks. Students will learn about the technical and business aspects of data and voice communication, and emphasis will be on the latest telecommunication technologies and their applications in business. Students will gain a comprehensive understanding of how Voice over Internet Protocol (VoIP) systems are designed and built.

Prerequisite: Networking I or instructor permission

Prerequisite/Corequisite: none

Corequisite: none

Previous CST* 228

CST 2125 - Protocol Analysis

Credits: 3

This is an advanced course intended for networking professionals and students who already grasp the general concept of data communications and networking but would like a more detailed understanding of the processes and protocols used in today's networks. Network architectures will be discussed from an OSI model perspective of the networking protocol stack. Protocol analyzers will be used to perform a detailed analysis of networking protocols.

Prerequisite: Networking I or instructor permission

Prerequisite/Corequisite: none

Corequisite: none

Previous CST* 196

CST 2142 - Windows Server Administration

Credits: 4

An understanding of network operating systems, including file systems, security, hardware, maintenance, and troubleshooting methodologies. Increased confidence in the

use of computer hardware, network operating systems, management software and networks. Exposure to many of the various aspects of systems management from multiple perspectives.

Prerequisite: CST 1121 or instructor permission

Prerequisite/Corequisite: none

Corequisite: none

Previous CST* 127, CST* 163, CST* 171, CST* 184, CST* 235, CST* 236, CST* 238, CST* 164

CST 2161 - Virtualization & Cloud Computing

Credits: 3

This course introduces students to the VMware vSphere foundational skills needed to create, deploy, clone, configure, manage, troubleshoot and migrate VMware vSphere virtual machine environments. Students will learn to deploy, configure and troubleshoot VMware ESXi vCenter and VMware Server Appliances. This course begins to prepare students for the VMware Certified Associate industry certification.

Prerequisite: Networking I or instructor permission

Prerequisite/Corequisite: none

Corequisite: none

Previous CST* 262

CTC 1006 - Blueprint Reading for Construction

Credits: 3

Provides the fundamentals of blueprint reading for estimating and construction. Topics include construction methods, construction math, lines and symbols, abbreviations, notations, using architectural and engineering scales, dimensioning, basic sketching and various types of plans - site, architectural, mechanical, electrical, plumbing, structural, and shop drawings and specifications.

Prerequisite: C- or higher in ENG 1010

Previous CTC* 106

CWM 1006 - Introduction to Utility Management

Credits: 3

Introduces areas of natural gas, electric, drinking water and wastewater management 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.

Previous CWM* 106

CWM 1008 - Clean Water Chemistry, Biology & Math

Credits: 4

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, III and IV Wastewater Operator Certification Examinations administered by the Connecticut Department of Energy and Environmental Protection.

Previous CWM* 108

CWM 1011 - Clean Water I

Credits: 3

Introduces the safe and effective operation of wastewater treatment plants including preliminary, primary, and secondary treatment and disinfection.

Previous CWM* 110

CWM 1012 - Clean Water II

Credits: 3

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.

Prerequisite: CWM 1011, DEP Class 1 License OR Permission of Instructor

Previous CWM* 112

CWM 1013 - Clean Water III

Credits: 3

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.

Prerequisite: CWM 1012, DEP Class 2 License OR permission of instructor

Previous CWM* 114

CYS 1101 - Practices in Security Management

Credits: 3

This course offers in depth coverage of the current risks and threats to an organization's data as well as the strategies for safeguarding critical electronic assets. The course provides a foundation for those responsible for protecting network services, devices, traffic, and data. Additionally, Fundamentals of Network Security prepares students for further study in more specialized security fields. The course provides a foundation for those preparing for the Computing Technology Industry Association's (CompTIA) Security+ Certification exam.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous CST*248, CST*273

CYS 2111 - Network Security

Credits: 3

Broad introduction to the field of cybersecurity. Information assurance terminology and issues in context of the rules and guidelines that control them. Methodologies and technologies for assurance. Security policies and laws related to cyber defense.

Prerequisite: CST 1121 or permission of instructor

Previous CST* 246, CST* 269, CST* 270, CST* 274, CST* 275, CST* 277, CST* 280

CYS 2121 - Information Assurance & Risk Management

Credits: 3

This course is designed to introduce students to information assurance and risk mitigation principles as applied to information management. Topics covered in the course include asset identification, vulnerabilities assessment, risk management, threat identification, and physical safeguards of mission critical data. Students will also learn how to conduct a security gap analysis, create a risk management plan, and select an appropriate risk control.

Prerequisite: CYS 2111

Prerequisite/Corequisite: none

Corequisite: none

Previous CST*247, CJS*234

CYS 2131 - Computer Forensics & Network Intrusions

Credits: 3

This course exposes students to a broad range of forensic methods and techniques used to detect, trace, and stop network intrusions and perform network forensic investigations after an intrusion has occurred. Students will learn how to identify network intrusion paths and points of entry and how to "bag-and-tag" digital evidence, examine evidence, and document a chain of custody throughout a forensic investigation.

Prerequisite: CYS 2111

Prerequisite/Corequisite: none

Corequisite: none

Previous CJS* 235, CST* 156

CYS 2141 - Cyber Crimes*Credits: 3*

This course provides an overview of the different types of computer crimes including hacking, fraud, social engineering, ransomware; their impact on the laws and regulations at the state, federal, and international level, and the guidance provided by the National Institute of Standards and Technology (NIST) to protect against cybercrime. Topics include types of cybercrimes, cybercrime laws and regulations, protection against cybercrime, impact of cybercrime in the economy.

Prerequisite: CYS 2111**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CST*135, CJS*224**CYS 2151 - Ethical Hacking & Pen Testing I***Credits: 3*

Introduces students to ethical hacking and penetration testing using the latest open source software, techniques, and methodologies used by hackers and security professionals to lawfully hack an organization. Ethical hackers are employed by corporations for the purpose of testing their networks for weaknesses. Topics include stages of ethical hacking, foot printing and reconnaissance, scanning networks, enumeration, and vulnerability analysis. Emphasis will be given to the legal and ethical issues related to hacking. This course is the first of two Ethical Hacking courses, and covers the first part of the CEH exam content requirements.

Prerequisite: CYS 2111**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CST*267, CST*284, CST*285**CYS 2152 - Ethical Hacking & Pen Testing II***Credits: 3*

This course covers advanced ethical hacking and penetration testing techniques using the latest software, techniques, and methodologies used by hackers and security professionals to lawfully hack an organization. Topics include session hijacking, hacking of web applications and servers, as well as social engineering and denial of services hacking techniques. This course is the second of two Ethical Hacking courses and covers the second part of the CEH exam content requirements.

Prerequisite: CYS 2151**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CST* 288**CYS 2161 - Cryptography Fundamentals***Credits: 3*

This course will cover where and how cryptography is used. Topics will include the role of keys, cryptographic algorithms, and protocols as they relate to security (attacks and defenses) in complex real-life systems.

Prerequisite: CYS 2111**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** CST* 287**CYS 2171 - Cybersecurity Operations***Credits: 3*

Students will learn the foundational knowledge and skills required for a career in cybersecurity operations, including managing a Security Operations Center (SOC). The course introduces students to cybersecurity technologies, including network intrusion detection, network traffic monitoring, packet analysis, and Computer Security Incident Response Team (CSIRT).

Prerequisite: CYS 2111**DANC 1001 - History and Appreciation of World Dance***Credits: 3*

The History and Appreciation of World Dance course is an introduction to dance as an art form, wherein students study the historical, cultural, social, and performative contexts of diverse dance forms. In this course, students examine what dance reveals about cultural, national, and ethnic identity, class and gender and the history of major dance forms/genres. Emphasis is on engaging in aesthetic, theoretical, and scholarly discourse aimed at illuminating how dance functions as a form of communication and personal, aesthetic expression. Students explore dance through seminar, lecture, field work (attending live performances), and lab (dance exercises) participation.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Previous** DAN* 101

DANC 1002 - Ballet: Renaissance to Romantic*Credits: 3*

This studio course studies Ballet from the Renaissance to the Romantic period. A basic understanding of the fundamental principles of ballet technique, physical control, and the historical contributions of ballet to the overall development of dance as an art form are the core curriculum.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** CRTY**Previous DAN*** 102**DANC 1009 - Ballroom Dance***Credits: 1*

This studio course introduces students to the history, evolution, music, steps, and various stylings of ballroom dancing. The three standard style dances: Tango/Swing, the Waltz, and the Foxtrot, and three Latin style dances: Rumba, Salsa, and Cha, Cha, Cha are explored.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous DAN*** 109**DANC 1010 - Tap***Credits: 1*

Tap Dance is a collage of sound produced by using taps and body as an instrument. In this studio course, students are introduced to the dance style tap and they examine the cultural and historical perspectives of rhythm tap through research and practice.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous DAN*** 110**DANC 1011 - Jazz I: Afro-American/Caribbean***Credits: 3*

This studio course introduces students to the origins of Jazz dance. The history and practice of Afro-Caribbean and American Vernacular Jazz Dance is designed to introduce students to the power and beauty of Jazz dance in America. Study emphasizes African and Caribbean, as well as "street" and "ballroom" influences. Basic skills of jazz movement, jazz music, and rhythmic awareness are included.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** CRTY**Previous DAN*** 111**DANC 1013 - Modern Dance: Early 20th Cent-1940s***Credits: 3*

In this studio course, students are introduced to the foundational techniques of modern dance and the social, historical, and cultural changes of the twentieth century that made America ripe for new dance forms. Emphasis is on important figures in the dance world (turn of the 20th century to 1940) including their techniques, theories of movement, and compositional ideas. The goal is for students, through exposure and exploration, to synthesize the thought process behind the theories of movement, compositional ideas, and techniques to modern dance performance.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** CRTY**Previous DAN*** 113**DANC 1014 - Hip Hop and Dance***Credits: 1*

Students in this studio course examine the historical, political, economic, and cultural perspectives of the Hip-Hop dance genre (including Hip-Hop music) and lifestyle in America, and its worldwide influence. This course introduces students to the dance skills of Hip Hop with emphasis on general body technique and development, rhythmic awareness, rhythmic combinations of movement, key figures, and a variety of hip-hop styles. The course segues from the Bee Bop and Doo Woo era to the Lockin', Poppin', and Breakin' era of the 1980's then onto the 1990's Street Style, and basic House, Voguing, Krumping, etc. to present day.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous DAN*** 114**DANC 1018 - Dance Pedagogy for Young Children***Credits: 3*

This course introduces students to the basic techniques and methodology for teaching dance to young children. Using the standards established by the State of Connecticut and the National Dance Education Organization (NDEO), appropriate dance content will be explored. Emphasis is placed on dance techniques, types of dance, movement activities, child development, and teaching strategies.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Cross-listed:** ECED 1018**Previous DAN*** 118

DANC 1031 - Contemporary African Dance*Credits: 1*

This studio course is an introduction to contemporary African dance. Students learn the fundamentals of African dance through instruction on basic movements and techniques (this may include African Diaspora and Afro-Caribbean) and participating in traditional African dance. The context for learning about African dance is explored using student research, videos, lectures, readings, dance studio, and class discussions.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous DAN*** 131**DANC 1061 - Yoga I***Credits: 1*

This studio course is designed to introduce students to the methods and skills necessary to understand and perform Yoga. Relaxation techniques and flexibility are stressed.

Cross-listed: HPE 1061 - Yoga I**Previous DAN*** 261**DANC 1075 - Kinesiology for Dancers***Credits: 3*

Students in this course, examine the structure and function of the human body anatomical and mechanical. Emphasis is on the musculoskeletal system as a mechanism for motion and full body mechanical and anatomical principles are analyzed. While not required, students with a foundation in the performing arts, other organized physical activities, or regular body movement practices are the target audience for this course.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Additional Info:** This course may include field work.**Previous DAN*** 175**DANC 1111 - Jazz II: Broadway and Film***Credits: 3*

This studio course segues from American Vernacular Jazz Dance into concert jazz dance and Broadway dance. Emphasis is placed on the historical (1930's-2000's) and cultural perspectives of this American dance genre and the differentiating styles and techniques.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous DAN*** 112**DANC 1114 - Movement and Expression***Credits: 3*

This course is an exploration of the basic techniques, styles, concepts and composition of theatrical dance and movement. Emphasis is placed on movement expression of emotion, intentions, gestures, and physical characterization. Music and theatrical texts used provide the foundation for course activities.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Cross-listed:** THR 1114**Previous DAN*** 124**DANC 1115 - Dance as Cultural Expression***Credits: 3*

This course is an introduction to the basic principles and techniques of modern dance and its relationship to human culture. Class work will introduce students to technical concepts involved in training the body to be an articulate expressive instrument. The course examines the basic elements of dance including stretch, strength, coordination, building confidence, body awareness, cardiovascular, and dance vocabulary, explores basic elements of composition and improvisation, and facilitates creative group presentations as a path to understanding dance as a form of historical cultural expression.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** CRTY**Cross-listed:** THR 1115**DANC 2002 - Ballet II: Classical to Contemporary***Credits: 3*

Ballet II is a continuation of DANC 1002. This studio course examines the art and technique of Ballet from the Classical to Contemporary periods and is designed to further the student's study of the technique of classical ballet and its history in the twentieth century.

Prerequisite: DANC 1002**Previous DAN*** 202**DANC 2009 - Ballroom Dance II***Credits: 1*

This course is designed to expand students' study of the history, evolution, music, steps, and styles of ballroom dancing. Three standard style dances, Swing, the Waltz, and the Foxtrot, and three Latin style dances, the Rumba, the Salsa, and the Tango, will be covered. It is strongly advised that students take DANC 1009 - Ballroom Dance prior to taking this course or have a foundation in ballroom dance.

Prerequisite: DANC 1009 or permission of instructor**Prerequisite/Corequisite:** None**Corequisite:** None**Previous DAN*** 209

DANC 2013 - Modern Dance II: Second Generation America*Credits: 3*

This studio course is a continuation of DANC 1013, and encompasses the emerging techniques, theories and philosophies of movement as presented by America's second generation from Merce Cunningham to Alvin Ailey. The social and cultural changes that influenced this period's dance also will be explored. Exposure to this study will enable the student to integrate the thought behind the movement.

Prerequisite: DANC 1013 or permission of instructor.

Previous DAN* 213

DANC 2021 - Dance Repertory/Ensemble I*Credits: 3*

This studio course is designed to introduce students to the demands of working collaboratively and collectively in a dance ensemble. Modern, Jazz, or Ballet compositions by faculty or renowned choreographers will be taught, rehearsed and presented in concert. Performance skills of projection, clarity, staging, spacing and truth to choreographers' techniques will be practiced. Works for repertory may include Charles Weidman's "Brahm's Waltzes", Anna Sokolow's "Rooms", Balanchine's "Tarantella", and Pilobolus' "Improvisational Techniques". Note: Additional rehearsals required.

Prerequisite: Permission of Instructor.

Previous DAN* 221

DANC 2022 - Choreographic Principles/Ensemble I*Credits: 3*

Choreographic Principles/Ensemble I is designed for students to discover sources of movement and develop the tools for structuring movement in time and space. It includes assigned composition problems and structured movement improvisation. Students may find their own personal statement in movement and develop a solo dance, and/or they may focus on making a group work. Students develop creative decision-making in working with a group. Elements of performance-costume, decor, lighting, staging-will also be explored and executed in formal concert. The Ensemble is the performing arm of the College. Studio course. Note: Additional rehearsals required.

Prerequisite: Permission of Instructor.

Elective Code(s): CRTY

Previous DAN* 222

DANC 2121 - Dance Repertory/Ensemble II*Credits: 3*

This studio course is a continuation of DANC 2021, and is designed to expand students' study of dance compositions by faculty and renowned choreographers who will teach their work. Works may be from the modern, jazz, or ballet genre. The studied works will be videotaped and then rehearsed by

the instructor. Students, working as an ensemble, will present these works in formal or informal concert. Performance skills of projection, clarity, staging, spacing, and truth to choreographers' intent and technique will be further practiced. Students will continue to develop and execute production skills related to production. Note: Additional rehearsals required, and participation in a Dance Concert is mandatory.

Prerequisite: DANC 2021 and Permission of Instructor.

Previous DAN* 225

DANC 2122 - Choreographic Principles/Ensemble II*Credits: 3*

This studio course is a continuation of DANC 2022, and is designed for students to expand their knowledge of movement and dance and to continue to develop the tools for structuring movement in time and space. The course includes assigned compositional problems and structured movement improvisation. Students will continue to explore their own personal statement in movement and develop solos and/ or group work and will continue to develop and demonstrate creative decision-making in working with an ensemble, both choreographically and in production. Tools and vocabulary continue to be offered in an environment open to creative communication. Elements of performance (costume, decor, lighting, staging) and production (publicity, press releases, stage and house management, scheduling) will also be explored. Note: Additional rehearsals may be required, and participation in Dance Concert is mandatory.

Prerequisite: DANC 2022 and Permission of Instructor.

Previous DAN* 224

DANC 2161 - Yoga II*Credits: 1*

This studio course is a continuation of DANC 1061 and is designed to expand student's understanding of the methods and skills necessary to perform Yoga. Relaxation techniques and flexibility are stressed.

Prerequisite: DANC 1061 or Permission of Instructor.

Previous DAN* 264

DANC 1001 - Public Health Issues and Addiction*Credits: 3*

This course provides a comprehensive overview of the public health problems related to substance misuse, abuse, and dependence. Study areas include trends in substance abuse, process addictions, relevant national drug policies, the role of the media, domestic violence, fetal alcohol spectrum disorder, HIV/AIDS plus other contagions, and costs to society. In this course, students will be introduced to the harm reduction, prevention, and treatment continuum and its application to the public health model.

Prerequisite/Corequisite: ENG 1010

Previous DAR* 101

DARC 1011 - Addiction Counseling I*Credits: 3*

Students will learn, practice, and develop counseling skills such as: attending, reflecting, active listening, and mirroring; and the theories that are fundamental to addiction counseling and understand the relationship between theory and skills. In this course, students will reflect on their roles as counselors and define the qualities, knowledge base, and skills essential to becoming a competent, ethical, and culturally responsive counselor-in-training.

Prerequisite/Corequisite: ENG 1010**Previous DAR*** 111**DARC 1012 - Group Counseling Theory and Techniques***Credits: 3*

This course will introduce the student to the concepts and theories of group counseling and will present an overview of the different modalities of group counseling, from psychoeducational groups to process groups. This course will also explore the use of group counseling as an effective modality for treating addictions and the implications for use in a multicultural environment. Students will have an opportunity to examine their own performance as a group leader and a group member through experiential groups.

Prerequisite: DARC 1011 AND ENG 1010**Previous DAR*** 112**DARC 1014 - Introduction to Family Systems***Credits: 3*

This course focuses on families with addictions by investigating the family as a system, the family life cycle, family roles, family rules, and the multicultural perspectives of the family. Family counseling theories, genograms, and goals, strategies, and techniques are introduced to students.

Prerequisite: DARC 1011 AND ENG 1010**Previous DAR*** 114**DARC 1017 - Substance Abuse Prevention***Credits: 3*

This course is a comprehensive overview of the prevention area of substance abuse. The course explores prevention theory and research, models of prevention, ethics, performance domains for prevention certification, application of theory, cultural competencies, and research to program planning.

Prerequisite: ENG 1010 or permission of coordinator**Previous DAR*** 117**DARC 1019 - Addiction Counseling in a Correctional Setting***Credits: 3*

This course will provide an examination of addiction treatment across the spectrum of correctional settings. Students will understand the link between criminal behavior and addiction as well as the avenues for entering recovery via the correctional system. A focused study will investigate the evidenced-based treatment approaches that addictions counselors in correctional settings must be capable of implementing.

Prerequisite: ENG 1010 and DARC 1011**Previous DAR*** 119**DARC 1058 - Biology of Addiction***Credits: 3*

Students will explore how and why drugs of abuse impact the human body as well as society with an introduction to basic neurotransmission and understand how each class of psychoactive substance alters neurotransmission and homeostasis and examination of the consequences of short and long-term substance use, abuse, and addiction on all major systems of the body and the fetus.

Prerequisite: ENG 1010**Previous DAR*** 158**DARC 2011 - Addiction Counseling II***Credits: 3*

This course provides an overview of the major counseling theories and figures including: Reality, Person-Centered, Gestalt, and Rational-Emotive, and addresses the techniques and professional practices associated with the theories. Emphasis is placed on current evidence-based treatment models such as Motivational Interviewing, Solution-Focused, and Cognitive Behavioral. Students in this course will apply appropriate basic counseling skills developed in DARC 1011 to a variety of treatment settings, cultures, and client populations based on previous exploration of evidence-based theories, models, and techniques.

Prerequisite: DARC 1011 with a grade of C or higher and ENG 1010**Previous DAR*** 213**DARC 2012 - Multicultural Addiction Counseling***Credits: 3*

Students will be introduced to major concepts essential to the understanding of culture, race, and diversity within the context of addiction counseling, develop an awareness of their own cultural communication styles, their values and their beliefs regarding the use of substance, develop an awareness and understanding of communication styles of others, and practice conducting culturally competent assessments, recovery plans and counseling skills for the

treatment of substance abuse disorders. Combines didactic and experiential learning opportunities.

Prerequisite: DARC 1011 AND ENG 1010

Previous DAR* 212

DARC 2020 - Co-Occurring Disorders

Credits: 3

This course will introduce students to major concepts in the treatment 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 assessments, recovery plans, counseling skills and continuum of care issues relevant to the recovery process for this special population. Combines didactic and experiential learning opportunities.

Prerequisite: DARC 1011 AND ENG 1010

Previous DAR* 220

DARC 2095 - Counseling Internship I

Credits: 6

Students will observe, practice, and develop increased competency in the 8 Practices Dimensions of addiction counseling through supervised field placement (onsite and DAR faculty). Students will progress from active observers to co-counselors, and then counselors through reflection, self-evaluation, seminar participation, field placement (15 hours per week), and clinical supervision.

Prerequisite: DARC 1001, DARC 1011, DARC 1012, DARC 1058, and ENG 1010 all with a C or higher and approval of the program coordinator (selective admission component of the DARC program).

Corequisite: DARC 2011 AND any of the following DARC electives: DARC 1014 DARC 1017 DARC 1019 OR DARC 2020

Previous DAR* 251

DARC 2195 - Counseling Internship II

Credits: 6

Students will observe, practice, and develop increased competency in the 12 core functions of addiction counseling through supervised field placement (onsite and DAR faculty). Students will progress from active observers to co-counselors, and then counselors through reflection, self-evaluation, seminar participation, field placement (15 hours per week), and clinical supervision.

Prerequisite: Completion of DARC 2095 with a C or higher and approval of the program coordinator (selective admission component of the DARC program)

Corequisite: DARC 2020

Previous DAR* 252

DAT 1000 - Graphic Design for DAT

Credits: 3

This course is an introduction to the basic principles and processes of Graphic Design for Digital Arts. Students will apply design concepts, terminology, and methodologies in the analysis of graphic arts from traditional to computer designed graphics.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): CRTY

Previous GRA* 150

DAT 1001 - Introduction to Digital Arts

Credits: 3

This course is an introduction and overview of the digital arts. The basic elements, components and skills required for digital art development and production will be defined and explored. Topics include; applications of digital arts, presentation software, visual design principles, digital media design, Web design, configuring a multimedia system, emerging technologies, multimedia components, and interactive multimedia development.

Prerequisite: CSA 1110 or equivalent experience

Prerequisite/Corequisite: none

Corequisite: none

Previous DAT* 101

DAT 1002 - Introduction to Photography

Credits: 3

Introduction to the fundamentals of photography concentrating on the use of the camera as a form of expression and communication. Manual camera functions and basic image editing procedures will be covered. Photographic composition, genres and ethics will also be considered through lectures and assignments. Note: students enrolled in this course will be responsible for purchasing a DSLR Camera or other approved camera with manual functions.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous DAT* 102

DAT 1111 - Foundations of Web Development

Credits: 3

This is an introduction to HTML, CSS, and JavaScript in client-side web development. The process of planning, development, and implementation of web sites is covered.

Prerequisite: DAT 1001

Prerequisite/Corequisite: none

Corequisite: none

Previous DAT* 104

DAT 1125 - Interactive Media Design*Credits: 3*

Interactive Media Design is a practical and theoretical approach to the development and application of interactive digital media for desktop, portable devices, and Web-based applications. Learners will design, develop, and present interactive digital media content.

Prerequisite: DAT 1111 or DAT 1221**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 116**DAT 1211 - Digital Graphics***Credits: 3*

Tools and concepts learned in this course are the backbone of all the other digital art technology courses. Primarily working with raster graphics, but touching on vector imaging, the overarching idea is to gain a strong working knowledge of the tools and design principles to produce convincing composite images.

Prerequisite: DAT 1001**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** CRTY**Previous DAT*** 108**DAT 1221 - Digital Layout***Credits: 3*

This course introduces page layout software that aides in the design and publishing of high-quality documents in both print and digital formats. Basic design principles will be addressed in addition to the technical aspect of creating both static and interactive documents.

Prerequisite: DAT 1001**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 106**DAT 1311 - 2D Animation for Digital Arts***Credits: 3*

This course stresses the effective utilization of the animation pipeline to create motion graphics that illustrate proper timing and composition. The 12 Principles of Animation will be introduced and explored. Understanding and implementing solid asset design that will function properly when put into a project pipeline will also be covered.

Prerequisite: B or higher in DAT 1001**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 205**DAT 1321 - Fundamentals of 3D Graphics***Credits: 3*

This course stresses the effective utilization of the animation pipeline to create motion graphics that illustrate proper timing and composition. The 12 Principles of Animation will be introduced and explored. Understanding and implementing solid asset design that will function properly when put into a project pipeline will also be covered.

Prerequisite: B or higher in DAT 1001**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 212**DAT 1411 - Video Foundations***Credits: 3*

This course is an introduction to the three phases of video production: pre-production, production, post-production. Students will script, storyboard, shoot, and edit for the appropriate audience and platform.

Prerequisite: DAT 1001**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 110**DAT 1511 - Electronic Audio Production I***Credits: 3*

This course is an introduction to the art and science of electronic music and audio production. The history, elements, and tools of electronic music and audio will be defined and explored. Exposure to acoustics theory, analog and digital audio principles, recording engineering techniques, sound sampling, electronic synthesis, MIDI, and audio for multi-platform applications are some of the aspects that will be covered.

Prerequisite: DAT 1001 or instructor permission**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 218**DAT 1525 - Acoustics and Sound Design***Credits: 3*

The advanced functions of the properties of sound, human hearing, electro-acoustic instruments, digital sound reproduction systems, sound synthesis, and psychoacoustics are examined. Students will develop and participate in a number of practical sound design and post-production activities focusing on exploration of Foley design and field recording techniques.

Prerequisite: DAT 1001 or instructor permission**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 220

DAT 2131 - Multi-platform Web Development*Credits: 3*

This is an extension of the Foundations of Web Development course where students will gain a working knowledge of the different web development platforms in use today including social media. The focus will be developing the skill to quickly adapt to emerging technology.

Prerequisite: DAT 1111**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 215**DAT 2145 - Programming for the Arts***Credits: 3*

Introduction to programming as it relates to the arts by using current technologies applied to audio, video, 3D, game engines, as well as physical elements.

Prerequisite: DAT 1111 or any programming language**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 240**DAT 2211 - Image Compositing***Credits: 3*

As a continuation of the DAT 1211 course, you will utilize the knowledge gained there and add more advanced tools and techniques. This course focuses on manipulating raster graphics in a non-destructive manner, extending artistic capabilities and increasing efficiency.

Prerequisite: DAT 1211**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 230**DAT 2221 - Vector Imaging***Credits: 3*

This course is an introduction and overview digital illustration. The basic elements, components and skills required for development of digital illustration capabilities will be defined and explored.

Prerequisite: DAT 1211**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 236**DAT 2321 - 3D Animation***Credits: 3*

This course is a continuation from where the Fundamentals of 3D Graphics course left off. The 12 principles of animation will be employed, as the focus is on animation, with continued exploration of lighting and rendering.

Prerequisite: DAT 1321**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 234**DAT 2411 - Video Editing and Enhancements***Credits: 3*

You will utilize the knowledge gained in the Video Foundations course while introducing more complex editing techniques into the process. Advanced editing techniques, color correction, and sound sweetening are some of the skills that will be refined.

Prerequisite: DAT 1411**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 224**DAT 2421 - Motion and Special Effects***Credits: 3*

This class provides advanced skills that are gained from merging the compositing and editing concepts of Digital Graphics with Video Foundations. Special effects, motion graphics, and chroma-keying are some skills that will be developed.

Prerequisite: DAT 1411**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 226**DAT 2511 - Electronic Audio Production II***Credits: 3*

This course provides intermediate instruction in digital synthesis, digital sequencing software, and electronic composition methods. Students will complete a series of directed and independent compositional projects in a variety of styles with attention to construction of timbres, additive and subtractive synthesis, digital sampling, signal processing, and algorithmic composition.

Prerequisite: DAT 1511**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DAT*** 219

DAT 2535 - Studio and On-Site Recording*Credits: 3*

This course presents an in-depth study of the techniques and methodologies used in studio and live recording. In addition to classroom assignments and exercises, students will be expected to complete field work resulting in the recording, editing, and mastering of a live or studio project. Exposure to multi-track recording, studio acoustics and design, mixing consoles, microphone placement techniques, signal processors, and studio session procedures are some of the many aspects to be covered.

Prerequisite: DAT 1511 or DAT 1525**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** DAT* 237**DAT 2990 - Digital Arts Project***Credits: 3*

The capstone course for all Digital Arts Technology degree seekers, each student will produce a significant and unique project in the concentrated area of their choice under the approval and guidance of an advisor. Appropriate documentation will accompany the project, which can be a website, an interactive magazine, a 30 second to 1.5-minute animation, a 3 to 7-minute video, a demo reel, an EP or countless other portfolio building options.

Prerequisite: One of: DAT 1525, DAT 2131, DAT 2145, DAT 2211, DAT 2221, DAT 2321, DAT 2411, DAT 2421, DAT 2535 or instructor permission**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** DAT* 290**DENT 1005 - Introduction to Dental Hygiene I***Credits: 1*

Provides students with a survey of contemporary issues encountered by healthcare 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.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** DNT* 105**DENT 1006 - Introduction to Dental Hygiene II***Credits: 1*

Continues the study of DENT 1005 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: DENT 1005**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** DNT* 106**DHYG 1112 - Basic Medical Support***Credits: 2*

Provides professionals (police, fire, coaches, athletic trainers, lifeguards, educators, public safety, medical and dental personnel, etc.) with knowledge and skills in providing basic emergency medical care until further assistance arrives. Focus on cardiopulmonary resuscitation (2 person CPR) training for the professional. Certification will be granted upon successful completion.

Previous ?**DHYG 2005 - Nutrition for Health Professionals***Credits: 3*

Provides health care professionals with information on the current concepts in nutrition. The course includes biochemistry and metabolism of nutrients as well as nutrition throughout the lifecycle. Nutritional counseling is an integral part of the course.

Prerequisite: C or higher in CHEM 1110, BIO 1210 or BIO 2111**Previous** DHY* 205**DHYG 2008 - Dental Hygiene Professionalism, Ethics, and Jurisprudence***Credits: 2*

Examination of dental hygiene professionalism, interprofessional collaboration, current biomedical issues related to ethical decision-making, employee rights and responsibilities, and regulations related to the practice of dental hygiene.

Prerequisite: Matriculation into the Dental Hygiene Program**Previous** DHY* 208**DHYG 2009 - Fundamentals of Dental Hygiene Theory***Credits: 3*

Presents a comprehensive theoretical introduction to dental hygiene and is designed to familiarize the student with the concept of total client/patient care.

Prerequisite: Matriculation in the Dental Hygiene program**Corequisite:** DHYG 2028, DHYG 2010C, and DHYG 2012**Previous** DHY* 209

DHYG 2010C - Fundamentals of Dental Hygiene Clinic*Credits: 2*

A comprehensive introduction to dental hygiene treatment delivery. The course is designed to familiarize the student with the concept of total patient care via simulated clinical practice of theory techniques.

Prerequisite: Matriculation into the Dental Hygiene Program

Corequisite: DHYG 2028, DHYG 2009, and DHYG 2012

Previous DHY* 210

DHYG 2012 - Diagnostic Radiography for the Dental Hygienist*Credits: 4*

Concentrates on production, evaluation and interpretation of intraoral and panoramic radiographs, radiation safety and biology. Radiographic competency must be met in the production and evaluation of diagnostic full mouth series in the laboratory setting.

Prerequisite: Matriculation into the Dental Hygiene Program

Corequisite: DHYG 2028

Previous DHY* 212

DHYG 2025 - Dental Materials for the Dental Hygienist*Credits: 2*

Provides a comprehensive study of dental materials, including the properties and manipulation, biomechanical function, physical and chemical properties, and biocompatibility of dental materials. An emphasis will be placed on those materials and skills utilized by the dental hygiene practitioner for dental hygiene diagnosis and treatment planning. Critical analysis of current evidence-based literature will be an integral part of this course.

Prerequisite: Matriculation into the Dental Hygiene Program

Previous DHY* 225

DHYG 2028 - Histology & Oral Anatomy for the Dental Hygienist*Credits: 4*

Provides a comprehensive study of microscopic morphology of the head, neck and oral tissues, and anatomy of the head and neck, including embryology and structures and functions of the human dentition. This study is specific and relevant to the practice of dental hygiene for utilization in skill development, radiographic interpretation, and client education.

Prerequisite: Matriculation into the Dental Hygiene Program

Corequisite: DHYG 2009, DHYG 2010C, and DHYG 2012

Previous DHY* 228

DHYG 2033 - Oral Medicine and Pathology*Credits: 2*

Introduces the student to the results of local, as well as systemic conditions that have oral manifestations. The student will become familiar with the disease processes that impact patient care.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous DHY* 233

DHYG 2139 - Dental Hygiene II Theory*Credits: 3*

Presents the principles and assessment of oral health, dental hygiene care planning, treatment methods, and the preventive measures employed against dental disease. The course establishes the scientific principles of disease prevention and focus is on instrumentation techniques. An overview of dental specialties is also included.

Prerequisite: C or higher in DHYG 2028, DHYG 2009, DHYG 2010C, and DHYG 2012

Corequisite: DHYG 2025, DHYG 2033, and DHYG 2140C

Previous DHY* 239

DHYG 2140C - Dental Hygiene II Clinic*Credits: 3*

Clinical application of principles and assessment of oral health, dental hygiene care planning, treatment methods, and preventive measures employed against dental disease. Student self-assessment of clinical skills is required.

Prerequisite: C or higher in DHYG 2028, DHYG 2009, DHYG 2010C, and DHYG 2012

Corequisite: DHYG 2139

Previous DHY* 240

DHYG 2259 - Dental Hygiene III Theory*Credits: 3*

A comprehensive approach to client assessment, education, care planning and evaluation of delivery of care is provided. The focus is on dental health science with an emphasis on the care of clients who are medically compromised. Utilizing case studies, the student will be required to undertake an evidenced-based decision-making process regarding delivery of care.

Prerequisite: C or higher in both DHYG 2139 and DHYG 2140C

Corequisite: DHYG 2260C

Previous DHY* 259

DHYG 2260C - Dental Hygiene III Clinic*Credits: 4*

A comprehensive approach to client care including assessment, education, care planning, treatment methods and

evaluation of delivery of care is provided. Client care is provided in a number clinical settings in Connecticut.

Prerequisite: C or higher in both DHYG 2139 and DHYG 2140C

Corequisite: DHYG 2259

Previous DHY* 260

DHYG 2267 - Community Oral Health

Credits: 3

Provides an introduction to the basic concepts, methods, materials, technology, principles and practices in oral public health promotion and disease prevention. This course provides students with a broad understanding of the health care system and the social, political, cultural, behavioral and economic forces influencing that system. Students will be introduced to their role as a community health promoter through a variety of didactic and service-learning experiences.

Prerequisite: C or higher in both DHYG 2139 and DHYG 2140C

Previous DHY* 267

DHYG 2268 - Civic Engagement for the Dental Hygienist

Credits: 3

Provides a continuation of Community Oral Health through the lens of civic engagement as it relates to public health. Principles of public health will be emphasized as it relates to oral health or overall health using a community-based process for health promotion and disease prevention both on campus and within the community. Students will assess historical knowledge of the evolution of the American health care systems as it relates to society and access to care. Students will plan, implement, and evaluate a civic engagement project as it relates to public health while applying research methodology.

Prerequisite: C or higher in DHYG 2259 - Dental Hygiene III Theory, DHYG 2260C - Dental Hygiene III Clinic, and DHYG 2267 - Community Oral Health.

Prerequisite/Corequisite: none

Corequisite: none

Previous DHY* 287

DHYG 2362 - Periodontics

Credits: 2

Focus is on the recognition of clinical, biological, and histological characteristics of the periodontium classification of periodontal disease; the role of microorganism; the role of local factors in the etiology of periodontal disease; and the principles of therapy.

Prerequisite: C or higher in both DHYG 2028, DHYG 2139, and DHYG 2140C

Previous DHY* 262

DHYG 2364 - Pharmacology

Credits: 3

Acquaints dental hygiene students with medications used in modern dental practice. Focus is on various drugs, their modes of action, and their principal uses.

Prerequisite: C or higher in both DHYG 2140C and DHYG 2139

Previous DHY* 264

DHYG 2375 - Pain Control and Local Anesthesia for the Dental Hygienist

Credits: 3

This course presents the basic science and dental science foundations of clinical local anesthesia in preparation for Connecticut State Certification for administration of local anesthesia by dental hygienists. Students will learn to perform safe, effective and proper techniques of intraoral pain control utilizing local anesthetic administration on a student-client partner. Emphasis is placed on client evaluation for predicting and preventing complications.

Prerequisite: Matriculating second year dental hygiene student

Previous DHY* 275

DHYG 2379 - Dental Hygiene IV Theory

Credits: 2

Presents a complete, comprehensive integration of the student's basic science and dental science education as it relates to the theory of assessment, education, treatment planning, delivery of care, and evaluation in the contemporary practice of dental hygiene.

Prerequisite: C or higher in both DHYG 2259 and DHYG 2260C

Corequisite: DHYG 2380C

Previous DHY* 279

DHYG 2380C - Dental Hygiene IV Clinic

Credits: 4

Presents a complete, comprehensive integration of the student's basic science and dental science education as it relates to the clinical application of assessment, education, treatment planning, delivery of care, and evaluation in the contemporary practice of dental hygiene. Student self-assessment of clinical performance is required.

Prerequisite: C or higher in DHYG 2259, DHYG 2260C, DHYG 2362, and DHYG 2364

Corequisite: DHYG 2379

Previous DHY* 280

DMS 1000 - Principles of Sonography*Credits: 3*

This course will introduce the student to the principles of Diagnostic Medical Sonography. Lecture and videos will include normal sonographic cross-section anatomy, medical terminology, ethical and professional behavior, patient care, ultrasound equipment, and scanning protocols. Students will recognize normal anatomy on a sonogram and describe basic protocols of ultrasound examinations. Introduction to ultrasound equipment and acoustic properties will be discussed.

Prerequisite: Acceptance into the DMS Program; BIO 2112, ENG 1010, MATH 1600, PHYS 1101

Previous DMS* 100

DMS 1000L - Principles of Sonography Lab*Credits: 2*

This course introduces the student to basic ultrasound scan skills in the DMS 1000. Students will demonstrate proper ergonomics and operation of the ultrasound equipment. Students will recognize normal anatomy on sonographic images and demonstrate patient care and the professional behaviors of a healthcare member.

Prerequisite/Corequisite: DMS 1000 completed with a grade of "C" or higher

Previous DMS* 100L

DMS 1095 - Clinical Practicum I*Credits: 2*

Students will be assigned to a clinical site for two days per week throughout the semester. With supervision, students will assist with patient care, patient interviews, and sonographic exams.

Prerequisite: DMS 1000, DMS 1000L

Corequisite: DMS 1121L, DMS 1121, DMS 1121L

Previous DMS* 122

DMS 1120 - Abdomen/Small Parts Sonography I*Credits: 3*

Through lecture this course will focus on the sonographic appearance of disease processes in the abdomen and in superficial organs. This includes: indications for examination, testing, patient history, laboratory values, and outcomes. In addition, the greyscale and doppler appearance of pathology, and necessary scanning modifications will be covered. Differential diagnoses, treatments, patient outcomes, and the use of other correlating imaging modalities will be discussed.

Prerequisite: DMS 1000, DMS 1000L

Corequisite: DMS 1095

Previous DMS* 120

DMS 1120L - Abdomen/Small Parts Sonography I Lab*Credits: 1*

This course is the laboratory DMS 1120. This course reviews the proper manipulation of ultrasound machine controls and transducer manipulations to obtain diagnostic quality images. Instruction will cover scanning normal anatomy, protocols for images, and utilize proper ergonomics while scanning. Students will learn to conduct patient interviews and demonstrate patient care skills. Instructions for proper use of Color and spectral Doppler will be introduced. Students will be able to perform abdomen and small parts protocols.

Corequisite: DMS 1120

Previous DMS* 120L

DMS 1121 - Obstetrics and Gynecology Sonography I*Credits: 3*

This course will cover sonographic anatomy, pathologies and scanning techniques for the non-gravid female pelvis. Correlation with lab values, and other imaging modalities will be discussed. Application of Doppler will be included. Ultrasound imaging of the gravid pelvis includes the normal first, second and third trimester of the developing fetus will be discussed. Obstetrical protocols and measurements with correlation to gestational age will be reviewed.

Prerequisite: DMS 1000, DMS 1000L

Corequisite: DMS 1095

Previous DMS* 121

DMS 1121L - Obstetrics and Gynecology Sonography I Lab*Credits: 1*

This course is the laboratory DMS 1121. This course will include scanning techniques for the non-gravid and gravid pelvis utilizing simulators and phantoms. Students will demonstrate patient care skills and proper ergonomics in the on-campus laboratory. Labs will focus on the sonographic appearance of the non-gravid and gravid female pelvis. Students will be able to produce diagnostic quality ultrasound images and perform pelvic protocols. Application of color and spectral Doppler will be demonstrated. Students will be introduced to scanning the normal first, second and third trimester fetus. Students will obtain fetal measurements using simulation and correlate to gestational age.

Prerequisite: DMS 1000, DMS 1000L

Corequisite: DMS 1095

Previous DMS* 121L

DMS 1123 - Vascular Sonography I*Credits: 3*

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, congenital and acquired variants and abnormalities. Focus will be on extracranial and extremity venous and arterial studies.

Prerequisite: DMS 1095

Corequisite: DMS 1195

Previous DMS* 123

DMS 1123L - Vascular Sonography 1 Lab

Credits: 1

This course is the laboratory component to DMS 1123. This course will include a focus on the scanning techniques, ergonomics, machine controls and image optimization of the upper and lower extremity arterial, venous, and carotid ultrasound examinations. Hemodynamics and application of spectral and color doppler will be applied. Students will learn techniques for the physiologic examinations both with and without exercise. Students will be able to perform vascular protocols of the upper, lower extremities arterial, venous, carotid arteries and physiologic examinations.

Prerequisite: DMS 1095

Previous DMS* 123L

DMS 1124 - Sonographic Physics and Instrumentation I

Credits: 4

This course covers the principles of sonographic physics. Lectures on 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 to obtain high-quality diagnostic sonographic images. This course will prepare students for their national certification examination.

Prerequisite: DMS 1095

Corequisite: DMS 1195

Previous DMS* 124

DMS 1195 - Clinical Practicum II

Credits: 2

During this course students will be assigned to a clinical site for 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: DMS 1095

Previous DMS* 125

DMS 2095 - Clinical Internship I

Credits: 4

Students will be assigned to a clinical site for approximately 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: DMS 1195

Previous DMS* 220

DMS 2195 - Clinical Practicum III

Credits: 3

Students will be assigned to a clinical site for approximately 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: DMS 2095

Corequisite: DMS 2222

Previous DMS* 223

DMS 2221 - Abdomen/Small Parts Sonography II

Credits: 3

Through lecture and applied lab, 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 correlation of other imaging modalities will also be discussed. After successful completion of the program, students will be eligible to take their national certification examination in Abdomen-extended through the American Registry of Diagnostic Sonography (ARDMS).

Prerequisite: DMS 2095

Corequisite: DMS 2195

Additional Info: Lecture Hours: 2 Lab Hours: 1 **Previous DMS*** 221

DMS 2222 - Vascular Sonography II

Credits: 3

A continuation of Vascular Sonography I and educates the student in advanced vascular sonography and pathology. Didactic and laboratory 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.

Prerequisite: DMS 2095

Corequisite: DMS 2195

Additional Info: Lecture Hours: 2 Lab Hours: 1 **Previous DMS*** 222

DMS 2225 - Obstetrics and Gynecology Sonography II*Credits: 3*

This course focuses on the sonographic appearance of obstetrical abnormalities in the first, 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, and Doppler applications. Abnormalities specific to multi-gestations will also be presented. Students will become skilled in recognizing fetal abnormalities and be prepared for the obstetrical portion of their national examination.

Prerequisite: DMS 2295**Corequisite:** DMS 2395**Previous DMS*** 225**DMS 2226 - Advances in Sonography Seminar***Credits: 3*

Through lecture and lab, this course will cover the role of the sonographer in guided interventional procedures. The risks, benefits, sterile techniques and indications will be discussed. Protocols for FAST exams in the emergency department will be reviewed. Sonography for detection of foreign bodies will be introduced. Current ultrasound applications and ultrasound of the non-cardiac chest will be covered. This course provides students the opportunity to explore the latest advances in sonographic technology through researching new technologies or application for their capstone project.

Prerequisite: DMS 2295**Corequisite:** DMS 2395**Additional Info:** Lecture hours 2, Lab 1 hour **Previous DMS*** 226**DMS 2295 - Clinical Internship II***Credits: 1*

Students will be assigned to a clinical site for approximately 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: DMS 2195**Previous DMS*** 224**DMS 2395 - Clinical Practicum IV***Credits: 3*

Students will be assigned to a clinical site for approximately 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: DMS 2295**Corequisite:** DMS 2226**Previous DMS*** 227**DNAS 1023 - Chairside Dental Assisting***Credits: 4*

This course provides dental assistant instruction to enhance the development of dental health care professionals. The course introduces the basic theory related to general and specialty dental procedures. Students will learn the principles of four-handed dentistry which are applied during dental laboratory sessions for the development of chairside assisting skills.

Prerequisite: PSY 1011, BIO 1005, and COMM 1301 (minimum of a C)**Corequisite:** DNAS 1036**Previous DAS*** 123**DNAS 1030 - Dental Materials for the Dental Assistant***Credits: 3*

Provides the knowledge and skills required of the dental assistant in the preparation and application of dental materials. Laboratory exercises will complement didactic theory through manipulation of dental materials.

Prerequisite: DNAS 1042**Corequisite:** DNAS 1040, DNAS 1044, DNAS 1046, DNAS 1047**Previous DAS*** 130**DNAS 1031 - Oral Anatomy and Pathophysiology***Credits: 3*

This course combines basic oral anatomy with oral pathology. Students will learn the basic anatomy of the oral cavity and the bones of head and neck. Additionally, students will be introduced to oral pathology including developmental anomalies and pathological lesions.

Prerequisite: PSY 1011, BIO 1005, and COMM 1301 (minimum of a C)**Corequisite:** DNAS 1036**Previous DAS*** 131**DNAS 1032 - Dental Materials***Credits: 4*

This course is an introduction to the study of the physical and chemical properties of dental materials utilized in the dental office, with the consideration of the mechanical functions, clinical appearances, and biocompatible properties of dental materials. This course will provide students with the knowledge and skills necessary to safely manipulate dental materials in laboratory and clinical settings. Skills necessary

for the manipulation of dental materials will be developed during laboratory sessions.

Prerequisite: DNAS 1036 (Minimal grade of a C)

Corequisite: DNAS 2095

Previous DAS* 132

DNAS 1033 - Dental Radiography

Credits: 4

This course will prepare students for the Dental Assisting National Board Examination, Radiation Health and Safety. Topics include radiation production, hazards and safety, radiation control factors, exposure and processing techniques and errors. Emphasis will be placed on proper technique during intraoral radiographic procedures. All radiographic skills will be developed to Laboratory competency during sessions.

Prerequisite: PSY 1011, BIO 1005, and COMM 1301 (minimum of a C)

Corequisite: DNAS 1036

Previous DAS* 133

DNAS 1034 - Oral Health Promotion

Credits: 1

This course will provide students with the theory of preventive dentistry including preventive procedures, oral hygiene instruction, and nutrition as it relates to oral health.

Prerequisite: DNAS 1036, with a minimum of a grade C in each of the courses

Corequisite: DNAS 2095

Previous DAS* 134

DNAS 1035 - Dental Practice Management

Credits: 3

This course will introduce students to the administrative dental assistant tasks such as: managing electronic dental records, information management, dental patient scheduling, inventory management, financial arrangements and collections, dental insurance processing, and bookkeeping procedures (accounts receivable and accounts payable). Students will work with the dental practice management software system.

Prerequisite: DNAS 1036 (Minimal grade of a C)

Corequisite: DNAS 2095

Previous DAS* 135

DNAS 1036 - Infection Control in Dentistry

Credits: 1

Students study microorganisms and diseases of concern to dentistry. Emphasis will be placed on the mode of transmission, practicing aseptic techniques, and methods for preventing disease transmission through personal protection, disinfection, and sterilization. Focus will be on Occupational Safety and Health Administration (OSHA) standards, Center

for Disease Control (CDC) and the American Dental Association (ADA) recommendations, and the Environmental Protection Agency (EPA) guidelines. The course will prepare students for the Dental Assisting National Board-Infection Control Examination. (DANB- ICE).

Prerequisite: PSY 1011, BIO 1005 and COMM 1301 (minimum of a C)

Corequisite: DNAS 1033

Previous DAS* 136

DNAS 1040 - Essential Chairside Functions for the Dental Assistant

Credits: 4

Provides basic knowledge and skill application for general chairside assisting procedures including professionalism, infection control, evaluation of patient medical and dental history, assessment data, and four-handed dentistry; and the coordination of didactic, clinic, laboratory, and activities to become proficient and efficient in general dentistry chairside performance and be familiar with the different dental specialties.

Prerequisite: DNAS 1042

Corequisite: DNAS 1030, DNAS 1044, DNAS 1046, DNAS 1047

Previous DAS* 140

DNAS 1042 - Research Seminar for the Dental Assistant

Credits: 2

Dental Assisting Research Seminar provides students with the tools necessary for success in the dental assisting program and college environment. The review of program requirements, policies, and procedures leads to the study of the history of dentistry and the dental health care team. Introduction to the dental assisting profession and professional association(s) provides initiation to co-curricular life of the college and community involvement. Prepares students to develop their own plan for academic, personal, and professional success through self-evaluation, application of specific strategies, discussions, guided journaling, and classroom exercises. These activities help students acquire strategies to help them cope with the academic and personal demands unique to the dental assisting program.

Previous DAS* 142

DNAS 1043 - Advanced Dental Radiology

Credits: 2

This course will prepare students for the Dental Assisting National Board Radiation Health and Safety (RHS) Examination. Students' complete radiographic patient care requirements, learn extraoral radiographic exposure techniques, and evaluate image interpretation exercises. The protocol in the use and administration of ionizing radiation adheres to federal and state regulations and patient and

operator safety standards. Student requirements for radiographic patient care are set by the Commission on Dental Accreditation (CODA) Dental Assisting Program and must be completed to receive certification and participate in graduation.

Prerequisite: DNAS 1023 (Minimal grade of a C)

Corequisite: DNAS 2095

Previous DAS* 143

DNAS 1044 - Preventative Dentistry for the Dental Assistant

Credits: 3

An introduction to the prevention and management of oral diseases including nutrition and pharmacology as they relate to dental assisting procedures.

Prerequisite: DNAS 1042

Corequisite: DNAS 1030, DNAS 1040, DNAS 1046, DNAS 1047

Previous DAS* 144

DNAS 1046 - Oral Anatomy for the Dental Assistant

Credits: 3

Provides an in-depth investigation of the development of the orofacial complex through the study of oral histology and embryology. The exploration of facial/cranial osteological structures and landmarks gives a foundation to the study of the gross anatomy of the hard and soft structures of the head and neck region including muscular; circulatory; nervous; lymphatic; glandular systems; and tooth morphology.

Prerequisite: DNAS 1042

Corequisite: DNAS 1030, DNAS 1040, DNAS 1044, DNAS 1047

Previous DAS* 146

DNAS 1047 - Principles of Radiation for the Dental Assistant

Credits: 3

Focuses on the foundations of radiography, radiographic equipment, and safety. Legal issues, quality assurance and infection prevention are also emphasized.

Prerequisite: DNAS 1042

Corequisite: DNAS 1030, DNAS 1040, DNAS 1044, DNAS 1046

Previous DAS* 148

DNAS 1048 - Radiography Theory & Practice for the Dental Assistant

Credits: 3

Provides an in-depth study of principles of the X-ray production and radiation physics, biology, and safety. The learned concepts in quality assurance; radiographic image identification and mounting; and patient management are applied in the study of intraoral and extraoral techniques.

Previous DAS* 164

DNAS 1049 - Practice Management, Laws, and Ethics for the Dental Assistant

Credits: 2

Examination of current biomedical issues related to ethical decision making, employee rights and responsibilities, and standards related to dental practice management. The Connecticut State Dental Practice Act is compared with other practice acts in various states.

Prerequisite: DNAS 1030, DNAS 1040, DNAS 1044, DNAS 1046, DNAS 1047, DNAS 1048

Corequisite: DNAS 1095

Previous DAS* 170

DNAS 1095 - Dental Assisting Clinical Externship Experience

Credits: 7

Students gain clinical experience assisting a dentist as an integral part of the educational program designed to perfect students' competence in performing chairside assisting functions. Students must have a minimum of 300 hours of clinical experience. A daily record of professional activities will be kept by the student and provided to the course instructor for review. Lecture and seminars will be conducted weekly with a focus and discussion on the clinical experience and preparation for Dental Assisting National Board General Chairside Exam.

Prerequisite: DNAS 1030, DNAS 1040, DNAS 1044, DNAS 1046, DNAS 1047, DNAS 1048

Corequisite: DNAS 1049

Previous DAS* 172

DNAS 2095 - Dental Assistant Clinical Practicum I

Credits: 2

This clinical practicum supports students in the development of dental assisting clinical skills during the delivery of dental patient care. Students' complete required clinical hours, procedural competencies, and patient requirements at an educational dental health care setting.

Prerequisite: DNAS 1036 (With a minimal grade of a C). Students must be Cardiopulmonary Resuscitation and Basic Life Support certified. (CPR/BLS)

Corequisite: DNAS 1035 and DNAS 1043

Previous DAS* 200

DNAS 2195 - Dental Assistant Practicum II*Credits: 1*

This practicum provides dental assistant experience at a contracted private dental practice. Students adhere to the dental assistant protocols of the practice, as they complete program/course requirements.

Prerequisite: DNAS 1043. Students must be Cardiopulmonary Resuscitation Basic Life Support (CPR-BLS) certified.

Previous DAS* 201

DSC 1001 - Visual Gestural Communication*Credits: 3*

This course introduces students to the various aspects of non-verbal communication in human interaction. Students will learn and practice non-verbal communication skills, review research on the functions of non-verbal communication, and examine how different non-verbal cues affect social conversation and interaction. Students will develop skills across a spectrum of non-verbal communication and emphasize the use and understanding of facial expressions, gestures, eye contact, and body language. Students will create and perform stories using these elements while developing visual element skills in communicating without words.

Classes will include storytelling analysis and guests to demonstrate minimal skills language.

Corequisite: ASL 1001

Previous DSC* 101

DSC 1012 - Deaf Communities: Facts and Perspectives*Credits: 3*

This course includes three modules. Module 1 provides an overview of the nature and experience of being Deaf, including both historical/cultural aspect of Deaf people and how it has evolved over the past decade. Module 2 is an analysis of American Sign Language (ASL) poetry and storytelling through the use of standard American folklore and other culturally valued forms of literature; Module 3 is an exploration of the causes of Deafness and the technology used for treatment from the medical perspective, including education of Deaf children, vocational/educational considerations for people who are Deaf and the organizations serving people who are Deaf or Hard of Hearing. Also included are the potential careers working with people who are Deaf and Hard of Hearing and the degree requirements to consider.

Prerequisite: ASL 1001, ASL 1002, and Eligibility for ENG 1010

Additional Info: Requirements: Reliable high speed internet, Computer access Windows 10 or IOS, Ability to connect to computer platform and use interactive program such as ZOOM, Ability to use Blackboard and Microsoft PowerPoint

Previous DSC* 112

DSC 2095 - Field Experience in Deaf Studies*Credits: 3*

Student work experience of fifty (50) hours in an approved agency or site providing services for Deaf people approved by the instructor. Instructor will distribute information on potential clinical sites. Report to the instructor weekly on Blackboard.

Prerequisite: ASL 1001, ASL 1002, AND DSC 1001

Corequisite: ASL 1001, ASL 1002, AND ASL 2005

Previous DSC* 222

DTS 2201 - Programming in Data Science*Credits: 3*

Introduction to the field of data science and the programming language of R. Explores the data science lifecycle, including question formulation, data collection and cleaning, exploratory data analysis and visualization, statistical inference and prediction, and decision-making. Focuses on quantitative critical thinking and key principles and techniques needed to carry out this cycle. No prior programming experience required.

Prerequisite: MATH 1200

Previous DTS* 201

DTS 2203 - Elements of Data Science*Credits: 4*

This course introduces the basic concepts of data science as they apply to several disciplines. Students will explore methods to collect, organize, manage, examine, prepare, analyze and visualize combined data sources. Emphasis will be placed on the development of sound research questions, the identification and verification of data sources, the recognition of random behavior, the retrieval, cleaning and manipulation of data and the process for identifying the data elements that are relevant for a given audience. The ethics of data production and use will also be discussed.

Prerequisite: MATH 1200 OR MATH 1201

Previous DTS* 203

DTS 2205 - Introduction to Artificial Intelligence*Credits: 3*

This course provides an introduction to artificial intelligence (AI), the history and evolution of AI, and AI technology, and AI applications. Topics explore concepts in data analysis, machine learning and deep learning. Students examine the use of AI in society and ethical issues related to AI, and build AI models to solve problems in the domains of statistical data, natural language processing, and machine learning.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: MATH 1200

Previous new

DTS 2215 - Data Ethics and Security*Credits: 3*

This course introduces critical and ethical issues surrounding data and society. A blend of social and historical perspectives on data ethics, policy, security, and case examples will be explored. There is a strong focus on the core principles related to proper management, use, and understanding of data. Current issues related to data ethics and security are addressed and explored.

Prerequisite: Eligibility for ENG 0910**Prerequisite/Corequisite:** none**Corequisite:** none**Previous DTS*** 215**DTS 2220 - Introduction to Machine Learning***Credits: 3*

This course focuses on machine learning as an integral tool for data science, including how to use data to automatically understand the world, make complex decisions, and even predict the future. Several algorithms will be introduced along with which language (Python or R) is better suited for which algorithm based on the particular goal in mind.

Programming language(s) will be used.

Prerequisite: DTS 2201 OR DTS 2203**Previous DTS*** 220**DTS 2230 - Natural Language Processing***Credits: 3*

Students learn fundamental concepts in Natural Language Processing (NLP) and text processing. The course focuses on developing knowledge and skills necessary to create and apply language recognition applications. Students learn to build chatbots that employ machine learning algorithms and neural networks.

Prerequisite: DTS 2220**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** new**DTS 2240 - Artificial Intelligence for Computer Vision***Credits: 3*

Students examine and apply basic techniques in computer vision. The course focuses on machine learning models in computer vision using OpenCV and python libraries. Students develop applications and learn to implement computer vision within an artificial intelligence project cycle.

Prerequisite: DTS 2220**Prerequisite/Corequisite:** none**Corequisite:** none**Previous** new**DTS 2258 - Data Journalism***Credits: 3*

This course combines the world of data with the art of journalism. Taking students through the entire process of gathering, cleaning, organizing, visualizing, and reading the data with the intention to discover stories that lie within. Students will create a narrative from start to finish, accompanying their story with visuals created from the data. Tableau and online tools will be used.

Prerequisite: ENG 1010, MATH 1200**Prerequisite/Corequisite:** MATH 1200**Previous DTS*** 258**DTS 2274 - Data Visualization***Credits: 4*

In this course, students study tools for communicating data-driven findings to promote an advanced understanding, motivate analyses, prompt innovative ideas, afford new awareness's and enlightenment, and make sense of current and new information in computer science. Students utilize the best practices in programming techniques and technologies to reveal valuable data-driven insights.

Prerequisite: CSC 1201**Previous DTS*** 274**DTS 2290 - Capstone Research***Credits: 3*

PIC Math (Preparation for Industrial Careers in Mathematics) is a program sponsored by the Mathematical Association of America (MAA), the Society for Industrial and Applied Mathematics (SIAM), and the National Science Foundation (NSF). The goal of this capstone project is to provide students with experience in researching and solving industrial problems. Students work in groups and research problems given by local businesses, industry, and government (BIG). This course mimics an internship - students learn to interact in a business setting, manage deadlines, produce technical documents, and think critically to find solutions. By the end of the course, each group produces a solution to their problem and completes a written, oral (video), and poster/PowerPoint summary of their work.

Prerequisite: Permission by instructor**Previous DTS*** 299**ECED 1001 - Introduction to Early Childhood Care and Education***Credits: 3*

This course is designed to acquaint students with the field of early childhood inclusive education. The course will emphasize the importance of ages birth to eight and the part that early care and educational settings play in every child's development including children with disabilities, developmental delays, language, and cultural differences. The course will review theories and philosophies of early care and

education and will acquaint students with historical perspectives as well as modern trends, developments, and curriculum models. The course will explore the organization and composition of early childhood settings; curriculum planning based on Developmentally Appropriate Practices, materials, and equipment; and the role of the teacher including reflective practice. The course includes four, 2.5 hours of preschool classroom observations for a minimum of 10 hours. A minimum of 10 hours of field work is required for this course.

Previous ECE* 101

ECED 1002 - Foundations of Child Development

Credits: 3

This course is concerned with human development from prenatal through elementary education with particular emphasis on the preschool child including children with developmental delays, disabilities, language and/or cultural differences. The early childhood developmental benchmarks through successive stages will be studied in depth. A minimum of 10 hours of field work is required for this course.

Prerequisite/Corequisite: ENG 1010

Previous ECE* 182

ECED 1018 - Dance Pedagogy for Young Children

Credits: 3

This course introduces students to the basic techniques and methodology for teaching dance to young children. Using the standards established by the State of Connecticut and the National Dance Education Organization (NDEO), appropriate dance content will be explored. Emphasis is placed on dance techniques, types of dance, movement activities, child development, and teaching strategies.

Cross-listed: DANC 1018

Previous ECE* 118

ECED 1031 - Introduction to Children's Literature

Credits: 3

This course examines literature for all children from infancy to young adulthood, including critical study of the various forms of literature, exemplary authors and illustrators, historical/social contexts, trends/issues, and the role of literature in children's education.

Cross-listed: ENG 1250

Previous ECE* 131

ECED 1104 - Infant and Toddler Growth and Development

Credits: 3

Students will be introduced to theories, practices, and philosophies/approaches associated with caring for all young children during the first three years of life, including those children with disabilities, developmental delays, language and/or cultural differences. The relationship between nature (typical and atypical growth and development) and nurture (environment) are critically explored in this introductory course. The course will cover brain research; attachment; temperament; emotions and feelings; routines, health, safety, and nutrition; family engagement, indoor and outdoor environments.

Previous ECE* 141

ECED 1142 - Fundamentals of Infant and Toddler Care and Education

Credits: 3

This course examines curriculum models and the methods and techniques for caring for infants and toddlers. Students will learn ways to interact with and support children under the age of three. Emphasis will be on the learning environment including feeding and routines; responsive, reciprocal, nurturing, relationships; cultural sensitivity, and inclusion. This includes knowledge and skills needed to plan, implement, and evaluate developmentally appropriate curricula for all children birth to three including children with developmental delays, disabilities, language and/or cultural differences. Topics explored will include how to create routines and organize the environment to support learning, the role of families, as well as creating experiences and interactions to support development in all domains.

Prerequisite: ECED 1104 or ECED 1002

Previous ECE* 241

ECED 1143 - Developmental Interventions for Infants and Toddlers at Risk

Credits: 3

This course is an in-depth study of typical and atypical development of children under the age of three. Students will investigate current trends and issues, examine developmental intervention strategies, and examine environments in relation to young children at-risk.

Prerequisite: ECED 1104 and ECED 1002 or PSY 2004

Previous ECE* 142

ECED 1202 - Introduction to the Role of Educational Paraprofessional

Credits: 3

This course introduces students to the roles and responsibilities of educational paraprofessionals working

with young children (ages 2.9 to 8) in public-school settings. Emphasis is on providing educational paraprofessionals and students interested in paraprofessional opportunities with knowledge and skills for aiding certified and licensed professional staff in schools.

Cross-listed: SPED 1402 - Introduction to the Role of Educational Paraprofessional

Previous EDU* 102

ECED 1303 - Creative Arts and Experiences

Credits: 3

This course is designed to study the concept of creativity and the creative process as it applies to art and creative play for all young children including children with disabilities, developmental delays, language and /or cultural differences. Students will explore a wide variety of creative media suitable for use with all young children. Emphasis is given to creative experiences and environments as they impact on the development of all young children.

Elective Code(s): CRTY

Previous ECE* 103

ECED 1306 - Music and Movement for Children

Credits: 3

This course is designed to have students acquire skills in order to plan and implement creative music and movement education experiences for all children from infancy through age eight including children with disabilities, delays, language and/or cultural differences. Areas of exploration will include singing, listening to music, rhythmic activities, chants, creating music, using instruments with children, multicultural music, dance and movement, musical games, and using music spontaneously in the classroom. The main goals of the course are to develop an understanding of the importance of music and movement education experiences in an early childhood environment, the role that music plays in the growth and development of young children, and how these experiences can be creatively planned, implemented, and integrated throughout the daily curriculum. All students will build a repertoire of music and movement education experiences.

Elective Code(s): CRTY

Previous ECE* 106

ECED 1376 - Health and Wellness

Credits: 3

The relationship between health, safety and nutrition and child development will be examined. Emphasis will be on the strategies needed to implement a safe, healthy, and nutritionally sound program for all children including children with disabilities, developmental delays, language and/or cultural differences. Community agencies and resources that benefit all children and families will be explored.

Previous ECE* 176

ECED 1377 - Guiding and Understanding Children's Behavior

Credits: 3

This course will review the many positive guidance, behavior management and discipline strategies that are appropriate to be used with all young children including children with disabilities, developmental delays, language and/or cultural differences. Positive guidance approaches that go beyond rules and punishment will be examined. The course will explore how to support all children's social and emotional development including resilience. Self-reflection as a teacher will be stressed. The course will study how the environment affects behavior. Teaching/management styles will be analyzed to identify the best techniques to help guide all children to learn self-control.

Prerequisite: PSY 2004 or ECED 1002

Previous ECE* 190

ECED 1800 - Child Development Associate (CDA) Credential Preparation

Credits: 3

This course is designed for childcare providers who wish to obtain a Child Development (CDA) Credential. Students will study the national standards from evaluation and credentialing by the Council of Early Childhood Professional Recognition and become familiar with the Direct Assessment System. Students will examine and review the CDA Competencies and Functional Areas and their integration with early childhood theory and practice. A majority of this coursework will assist students in the development of their professional resource file and the completion of other necessary documentation and the final assessment process. Students will prepare to apply for the CDA Credential with one of the following endorsements: center-based preschool, center-based infant/toddler, family day care, or home visitor. This course emphasizes best practices in diversity, equity, and inclusion.

Prerequisite: ECED 1001, ECED 1002

Prerequisite/Corequisite: none

Corequisite: none

Previous new

ECED 1801 - Child Development Associate (CDA): Seminar and Fieldwork*Credits: 3*

This seminar and fieldwork course is 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 of 10 hours of fieldwork in a licensed early childhood setting. This course will assist and continue to assist in the preparation of the required CDA Professional Resource File, the required Classroom Observation Visit and the final assessment process. This course also emphasizes best practices in diversity, equity, and inclusion.

Prerequisite: ECED 1001, ECED 1002**Prerequisite/Corequisite:** none**Corequisite:** none**Previous new****ECED 2307 - The Natural Sciences and Young Children***Credits: 3*

This course presents pedagogical methods, content, and current research in the field of natural sciences. Emphasis is placed on planning an integrated, inclusive curriculum and creating an environment that stimulates natural curiosity.

Prerequisite: ECED 1001 or permission of program coordinator**Previous ECE* 207****ECED 2309 - STEM for Young Children***Credits: 3*

This course is designed to help students explore a wide variety of developmentally appropriate math, science, engineering, and technology (S.T.E.M.) experiences suitable for use with young children. Foundational S.T.E.M. concepts are presented in relation to everyday objects and occurrences. This course will focus on the teacher's role in supporting children's interests in S.T.E.M. experiences. This course includes an introduction to the appropriate uses of various forms of technology with and by children, families, and educators as informed by contemporary research and best practice. Emphasis will be placed on the relationship between essential dispositions and cognitive learning.

Previous ECE* 109**ECED 2322 - Curriculum and Methods for Diverse Learners***Credits: 3*

The study of the methods and techniques needed to plan, implement, and evaluate a developmentally and culturally appropriate, inclusive curriculum. Experiences will focus on

the strategies used to design the learning environment; the interactions between and among teachers, children, and families; and the fostering of opportunities to enhance the development all children including those with disabilities, developmental delays, language and/or cultural differences. Students will share knowledge, experiences, and skills in a cooperative and supportive environment. A minimum of 25 hours of field work is required for this course.

Prerequisite: ECED 2410 and Home Campus Program Coordinator Approval**Previous ECE* 222****ECED 2331 - Language Development and Emergent Literacy in Young Children***Credits: 3*

An introduction to language and literacy acquisition and development in the young child. Exploration of the early childhood language arts curriculum includes speaking, listening, writing, and reading skills and the teaching strategies that will support the curriculum. Emphasis on the influence of a child's background and experiences on emerging literacy development will be explored. As will the importance of family partnerships and assessment. This course will address the learning needs of all children including children with disabilities, developmental delays, language and/or cultural differences. Creation of a literacy-rich environment that engages children in developmentally appropriate language arts experiences will be included. A minimum of 5 hours of field work is required for this course.

Prerequisite: ECED 1001 or ECED 1142 and ECED 1002 or ECED 1104 or PSY 2004**Previous ECE* 231****ECED 2410 - Observation, Documentation, and Assessment of Young Children***Credits: 3*

This course is designed to increase objectivity in observing and interpreting children's behavior, to observe developmental characteristics and to increase awareness of typical and atypical patterns of behavior for all children including those with disabilities, developmental delays, language and/or cultural differences. Observation and participation placements are provided for the study of young children at the College's Laboratory School or at an area NAEYC accredited center with the approval of the professor. The students will observe and participate in a center to gain experience and competency in working with young children including those with disabilities, developmental delays, language and/or cultural differences. Weekly seminars devoted to issues in observing and understanding all children's development will extend the individual's observing and participating experiences. A minimum of 45 hours of field work is required for this course.

Prerequisite: ECED 1001, ENG 1010, and ECED 1002 &

Home Campus Program Coordinator Approval

Previous ECE* 210, ECE* 214

ECED 2515 - Exceptional Learners

Credits: 3

The course provides an overview of the study of the exceptional child with emphasis on the history, laws, concepts, practices, and terminology used by professionals in the field within inclusive settings. Accommodations and teaching techniques effective for children with disabilities and developmental delays will be explored. A minimum of 5 hours of field work is required for this course.

Prerequisite: ECED 1001 and PSY 2004 or ECED 1002 or permission of program coordinator, or bachelor's degree in education or related discipline

Previous ECE* 215, ECS* 107

ECED 2552 - Children on the Autism Spectrum

Credits: 3

In this course students examine autism spectrum disorder (ASD), philosophies aligned with ASD and, strategies and interventions regarded as ASD best practices in the literature. The course emphasizes the identification process, appropriate traditional and nontraditional strategies, behavior interventions, and models focusing on, but not limited to, Applied Behavioral Analysis (ABA). Field work may be required in this course.

Prerequisite: ECED 1001 or permission of program coordinator

Previous ECE* 252

ECED 2690 - Student Teaching I

Credits: 3

The purpose of the Student Teaching Practicum I is to enable the student to apply child development theory in a learning environment and to work with children under close supervision. Guided observation, participation, and supervised student teaching in an approved site is required. Students will plan, organize, implement, reflect and evaluate classroom experiences. Weekly seminars devoted to issues in Early Childhood Education and the experience of the student teachers will extend the individual's student teaching experience. Students will complete a minimum of 100 hours of student teaching in an approved setting.

Prerequisite: All core ECED courses with a grade of C- or higher and permission of program coordinator

Previous ECE* 290

ECED 2692 - Student Teaching II

Credits: 3

The purpose of the student teaching practicum is to enable the student to apply child development theory in a learning environment and to work with children under close supervision. Guided observation, participation, and

supervised student teaching in an approved site is required. Students will manage a classroom, plan, organize, implement, reflect and evaluate classroom experiences. Weekly seminars devoted to issues in Early Childhood Education and the experience of the student teachers will extend the individual's student teaching experience. Students will complete a minimum of 100 hours of student teaching in an approved setting.

Prerequisite: ECED 2690 with a grade of C- or higher, within 9 credits of graduation, and permission of program coordinator

Previous ECE* 291

ECED 2695 - Student Teaching Practicum

Credits: 6

The purpose of the student teaching practicum is to enable the student to apply child development theory in a learning environment and to work with children under close supervision. Guided observation, participation, and supervised student teaching in an approved site is required. Students will manage a classroom, plan, organize, implement, reflect and evaluate classroom experiences. Weekly seminars devoted to issues in Early Childhood Education and the experience of the student teachers will extend the individual's student teaching experience. Students will complete a minimum of 200 hours of student teaching in an approved setting.

Prerequisite: All ECED courses with a grade of C- or higher, within 9 credits of graduation, and permission of program coordinator.

Course Fees: Supplemental Fee Level 2

Previous ECE* 295

ECED 2706 - Administration and Supervision of Programs for Young Children

Credits: 3

This course is designed to examine the multi-dimensional aspects of administering high quality education programs for young children ages 0-8. Emphasis is placed on best practices in supervision, program implementation and operations, and the basic responsibilities of an administrator in private, public, and federally funded schools/programs. Field work may be required in this course. Students who complete this course are encouraged, but not required, to complete ECED 2712.

Prerequisite: Permission of program coordinator.

Previous ECE* 206

ECED 2712 - Management and Leadership in Programs for Young Children

Credits: 3

This course is designed to provide basic understanding of the multi-dimensional role of leaders and mentors in education and an administrator in an early education program that

serves young children between the ages of 0 to 8 and through didactic and exploratory learning. Emphasis and examination are on leadership, communication, management, advocacy, and strategic approaches. Field work may be required in this course.

Prerequisite: ECED 2706 and permission of program coordinator.

Previous ECE* 212

ECED 2713 - Finance for Early Childhood Programs

Credits: 3

This course will focus 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.

Prerequisite: ECED 2706

Previous ECE* 213

ECED 2825 - Anti-Bias, Equity, and Diversity in Education

Credits: 3

This course introduces anti-bias and multicultural education, equity, implicit bias, and microaggression awareness as it applies to working with children and families. It examines and challenges prevailing misconceptions, stereotypes, and "isms". This course offers practical guidance for creating a culturally relevant and anti-bias/multicultural curriculum for children and families. Students practice self-reflection and critical analysis of the four goals of anti-bias education.

Prerequisite: Eligibility for ENG 1010 or permission of program coordinator.

Previous ECE* 225

ECED 2875 - Children, Families, and Communities

Credits: 3

This course is an in-depth look at the child, family school and community and the relationship between and among them. It will review the socialization process and the development of the child as a social being. The course will examine how family systems, community settings and school environments impact young children including those with disabilities, developmental delays, language and/or cultural differences. Students will explore creating effective working relationships with families through communication considering the role of culture, diversity and theory.

Prerequisite: Eligibility for ENG 1010 or permission of program coordinator.

Previous ECE* 275, SOC* 111

ECON 1001 - Principles of Macroeconomics

Credits: 3

A study of the overall performance of the economy. Following fundamental economic concepts of supply and demand, and exchange and specialization, the topics explored include the circular flow of money, income, and spending; the monetary and banking systems; the business cycle, unemployment and inflation; fiscal and monetary macroeconomic policy; economic growth and development; and the market economic system.

Prerequisite: Eligibility for ENG 1010

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Social and Behavioral Science (SBSX)

Elective Code(s): BUS, GLKY, LART

Previous ECN* 101

ECON 1002 - Principles of Microeconomics

Credits: 3

Study of the optimization under scarcity and determination of price and quantity in product, resource and financial markets. Topics discussed include consumer and producer theory, demand and supply elasticities, competition and monopoly, how the structure of competition impacts producer and consumer decisions as well as the wellbeing of society, also functional and individual income distribution, poverty and government intervention in markets.

Prerequisite: Eligibility for ENG 1010

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Social and Behavioral Science (SBSX)

Elective Code(s): BUS, GLKY, LART

Previous ECN* 102

ECON 1030 - Consumer Economics

Credits: 3

The course covers the proper management of personal income and expenditures. Topics include: a study of inflation and business cycles, commercial and savings accounts, budgets, charge accounts, installment buying use of credit, home ownership, insurance and taxes.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): LART, SSCI

Previous ECN* 130

ECON 2050 - Money & Banking*Credits: 3*

This course examines monetary theory and policy with special attention to the monetary system, commercial banking, the thrift industry, central banking, and capital markets.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** LART, SSCI**Previous** BFN* 211, ECN* 250**EDUC 2010 - Foundations of U.S. Education***Credits: 3*

Foundations of U.S. Education is an introductory course in U.S. education through a study and analysis of the historical, sociological, philosophical, ethical, legal, and financial factors basic to the governance and practice of American education. Observations are required. It is designed to provide students who want to pursue careers in elementary or secondary education with knowledge of the philosophical theories, historical circumstances, political influences, ethical consideration, and societal elements which have uniquely shaped the educational system and the governance and operation of schools in America.

Prerequisite: Eligible for ENG 1010**Previous** EDU* 210**EDUC 2020 - Normal and Exceptional Childhood and Adolescent Development***Credits: 3*

This course examines changes in the individual from conception through adolescence, including both typical and atypical aspects of physical, cognitive, linguistic, and social/emotional development. Traditional and contemporary theories, as well as current research and methodology, will form the basis of the course content.

Prerequisite: PSY 1011 or ECED 1002**Previous** EDU* 220**EDUC 2101 - Principles of Teaching for Elementary Education***Credits: 3*

This course presents students with knowledge on concepts in education (K-6) and approaches to the teaching profession for inclusive classrooms. Students will have an opportunity to explore the profession and what it entails through fieldwork. Emphasis is placed on students developing knowledge of social justice and the multicultural context in which education occurs in the U.S by examining the social, cultural, and political origins of contemporary schooling with a focus on schools as social institutions. Finally, the epicenter of this course is the role of teachers as both actor and subjects of

educational reform movements. Field work may be required in this course.

Previous EDU 201**EDUC 2202 - Secondary Education Teaching Professions***Credits: 3*

In this course, middle and high school and art teachers, examine current trends, challenges, practices in education and the teaching profession. Emphasis is placed on students developing knowledge of social justice and the multicultural context in which education occurs in the U.S. Students are required to spend a minimum of 40 hours of fieldwork including observation an approved inclusive classroom.

Prerequisite: Permission of program coordinator**Previous** EDU* 202**EDUC 2800 - Foundations of Research Methods in Human Services and Education***Credits: 3*

Through a combination of lecture and hands-on projects, this course examines the philosophy, methodology, current social issues; how they are applied to social justice and questions, the basis of research methods with the goal of programmatic evaluation, and beginning the process of conducting research in the social sciences. This course emphasizes the unique contribution of interdisciplinary research (in disciplines such as but not limited to human services, early childhood education, anthropology, mental health, social work, sociology, and gerontology), the process of identifying challenges/questions, solutions, and application using real-world situations.

Prerequisite/Corequisite: ENG 1010, PSY 1011 and MATH 1001 OR permission of the Human Services or Education Program Coordinator**Cross-listed:** HSER 2800**EDUC 2870 - Adult Learning Theory and Practice***Credits: 3*

This course will examine the theories and practices of effective adult teaching and learning. The course includes the neuroscience that informs those theories; the theorists and their constructs; and practices based on those theories. This will be presented in the context of diversity, inclusion, equity and belonging for the students in the course and for the audience with whom they will be working.

Prerequisite: Permission of ECE Coordinator**Additional Info:** This course is designed for those who are in a supervisor role, providing professional development, coaching teachers/staff or those in a mentoring capacity.

EET 1044 - Fundamentals of Electric Circuits & Machines*Credits: 3*

This course covers the basic of DC and AC electricity in its first half and provides the foundation for the basics of power generation, distribution, and conversion. Replaces the course Electricity and AC/DC Machinery.

Prerequisite: MATH 1610**Prerequisite/Corequisite:** None**Corequisite:** EET 1045 - Fundamentals of Electric Circuits & Machines Lab**Additional Info:** Three Rivers campus **Previous** EET* 144**EET 1045 - Fundamentals of Electric Circuits & Machines Lab***Credits: 1*

Students will conduct laboratory experiments in electrical power, from basic principles through operation of AC and DC machinery; it is for students in the Nuclear Engineering Technology and other non-electrical programs. Replaces course Electricity and AC/DC Machinery Lab.

Prerequisite: MATH 1610**Prerequisite/Corequisite:** None**Corequisite:** EET 1044 - Fundamentals of Electric Circuits & Machines**Course Fees:** Supplemental Fee Level 1**Previous** EET* 145**EETA 1002 - Electrical Applications***Credits: 3*

The student will learn the fundamentals and basic principles of DC and AC circuits. Topics include resistance, voltage, current, Ohm's law, power, capacitance, inductance, impedance, single and three phase voltage, transformers, electromagnetic induction. DC generators and motors, and relay ladder logic for motor control will also be introduced. Students will learn how to build actual circuits and use test equipment in the lab and learn how to simulate circuits using a computer simulation program.

Prerequisite: MATH 1600 or MATH 1610**Prerequisite/Corequisite:** None**Corequisite:** None**Previous** EET* 102**EETA 1004 - Electronics Assembly and CAD***Credits: 1*

This course will introduce the student to manufacturing assembly processes and Computer Aided Design Software used in the electronics industry. Topics covered will include safety, component identification, proper hand-soldering techniques, soldering for terminals, de-soldering (re-work), automated through-hole and surface mount assembly processes, creation of schematics using an industry standard electrical CAD program, creating bill of materials, designing

through-hole printed circuit boards using PCB design software. Laboratory work will include assembling, soldering, and de-soldering circuit board projects, creating schematics and designing printed circuit boards.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** EET* 104**EETA 1010 - DC Circuit Analysis***Credits: 4*

The fundamentals of direct current circuit analysis are covered extensively. Topics include resistance, Ohm's law, power law, energy, series circuits, parallel circuits, series-parallel circuits, Kirchhoff's Laws, Thevenin's theorem, Norton's theorem, superposition theorem, maximum power transfer theorem, nodal analysis, capacitance, inductance, transient response of RC and RL circuits, and ethics in engineering. Considerable circuit analysis problem solving is required. Hands-on weekly laboratory experiments reinforce the theoretical topics covered in the lecture and provide training to enable the student to build, test, and troubleshoot dc circuits with appropriate equipment such as ohmmeters, ammeters, voltmeters, and wattmeters safely and confidently.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** MATH 1600 or MATH 1610**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** EET* 110**EETA 1014 - AC Circuit Analysis***Credits: 4*

The application of circuit analysis techniques acquired in DC Circuits Analysis are extended to circuits excited by AC sources. Emphasis is placed on solving ac circuit problems using complex numbers and phasor diagrams. Topics include transients, frequency response, power, resonance, filter theory, mutual inductance, transformer theory, and polyphase circuits. The laboratory will provide extensive experience in single and three phase circuit construction and testing.

Prerequisite: EETA 1010**Corequisite:** MATH 1610**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** EET* 114

EETA 1026 - Programming Using LabVIEW*Credits: 2*

Students will learn how to create "virtual instruments" using LabVIEW™, a powerful graphical programming language for data acquisition and manipulation. Emphasis is placed on standard programming structures, real-time data acquisition, mathematical manipulation, and graphing.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** MATH 1600 or MATH 1610**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** EET* 126**EETA 1036 - Electronic Devices***Credits: 4*

Semiconductor physical concepts and P-N junction theory is established and applied to modern solid-state such as diodes, Bipolar Junction Transistors and Field Effect Transistors. Voltage regulation, rectification, and biasing will also be covered. Emphasis will be placed on circuit analysis and applications using these devices. Laboratory exercises will explore the basic operating principles and analysis techniques.

Prerequisite: EETA 1010**Prerequisite/Corequisite:** MATH 1610 and EETA 1014**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** EET* 136**EETA 2008 - Applied Calculus for Circuits***Credits: 4*

The analysis of RLC circuits using classical calculus for inputs which are both sinusoidal and non-sinusoidal are examined. Basic derivatives and integration are taught as they apply to RLC circuitry. First and second order differential equations are derived and solved for circuits using classical methods and by use of Laplace transforms. The Fourier series for periodic signals will be derived and evaluated. Students will apply their programming skills in the laboratory to solve circuit problems and illustrate results graphically using LabVIEW™.

Prerequisite: EETA 1014 AND EETA 1026 AND MATH 1610**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** EET* 208**EETA 2032 - Advanced Electronic Devices***Credits: 4*

Characteristics of small signal amplifiers using BJT's are examined, and followed up with a study of linear op-amp circuits. Comparators and Schmitt Triggers using op-amps are also explored. Basic characteristics of power amplifiers and oscillators are studied, and the operation of the thyristor family of devices is introduced. Operating principles and circuit analysis techniques are emphasized.

Prerequisite: EETA 1036 and MATH 1610**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** EET* 232**EETA 2051 - Electronic Instrumentation***Credits: 3*

A study of the operating principles of electronic and electrical instruments. Both analog and digital instruments are covered. Sources of instrument errors and standards of measurement are included, along with the design of VOM circuits and basic electronic instruments. Also included is an introduction to Basic Virtual Instrument Programming (LabVIEW™) and data acquisition.

Prerequisite: EETA 1026 and EETA 1014**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** EET* 251**EETA 2052 - Digital Electronics***Credits: 4*

A study of number systems, logic gates, Boolean algebra, logic simplification using Boolean Algebra, DeMorgan's Theorems, and Karnaugh maps. Combinational logic circuits are covered extensively including adders, comparators, encoders, decoders multiplexers, and demultiplexers. Latches, flip-flops, and timers are examined as well as their applications in sequential logic circuit applications. The lecture topics are reinforced with considerable laboratory exercises requiring the student to construct, verify, and troubleshoot digital logic circuits.

Prerequisite: (EETA 1010 or EGR 2221) and (MATH 1600 or MATH 1610)**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** EET* 252**EETA 2053 - Advanced Digital Electronics***Credits: 4*

A continuation of the study of Digital Electronics. Topics covered include multi-bit shift registers, finite state machines, counter design (asynchronous and synchronous), logic families, A/D and D/A converters. Digital signal processing is introduced as well as the basics of data transmission. RAM and ROM memory circuits are studied. Programmable logic devices will be covered from SPLDs to FPGAs. HDL is introduced. Schematic design for a targeted FPGA is covered extensively in the lab. Students will

validate their designs by programming the FPGA and testing circuit operation. Students will also be required to design, simulate, build, and test digital logic circuits using breadboards and ICs.

Prerequisite: EETA 2052

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous EET* 253

EETA 2056 - Microcontrollers

Credits: 4

A study of the fundamentals of a modern microcontroller such as one of Microchip Corporation's many PICs™. Microcontroller architecture is examined. Programming of the controller is accomplished using a high-level programming language such as Micro Engineering Lab's PICTM Basic Pro. Students will learn how to write programs, run software simulations, and use a compiler. The lab exercises will require the student to program actual microcontrollers, test for proper operation, and debug programs as needed. Programming topics covered include looping, decisions, time delays, interrupts, and LCD display. Interfacing with various hardware elements is explored.

Prerequisite: EETA 2052 and MATH 1610

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous EET* 256

EETA 2062 - Electrical Machinery & Controls

Credits: 4

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.

Prerequisite: EETA 1014, EETA 1036, and MATH 1610

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous EET* 262

EETA 2068 - Control Systems

Credits: 4

An introductory course which investigates primarily electro-mechanical control systems. Discrete control systems using relay logic and programmable controllers (PLC's) are studied. Open and closed loop analog speed control systems, pneumatics, hydraulics, and Robotics are also covered.

Prerequisite: EETA 1014 and EETA 2032 and EETA 2052

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous EET* 268

EETA 2072 - Electronic Communications

Credits: 4

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.

Prerequisite: EETA 2032

Course Fees: Supplemental Fee Level 2

Previous EET* 272

EETA 2090 - Capstone Project

Credits: 2

Students will apply the knowledge, techniques, skills, and tools learned to a specific electronic project of interest. Students will design and develop their project which will require creating schematics, breadboarding, testing, troubleshooting, designing a PCB, soldering, and assembling the PCB into an enclosure. Cultural diversity will be explored with an emphasis on awareness and respect. Students will gain an appreciation of cultural appropriate business etiquette and strategies as they research cultural diversity. The course also requires teamwork, written and oral communication.

Prerequisite: EETA 1004 and EETA 1014 and EETA 2032 and EETA 2051 and EETA 2052

Course Fees: Supplemental Fee Level 2

Previous EET* 294

EGR 1105 - Robotics: Construction & Design*Credits: 4*

Explore the multidisciplinary world of robotics, and its relevance to current humanitarian, social, and environmental concerns. Modeling fields of science and engineering, this class will be based on teamwork and cooperative problem solving in a supportive, hands on, laboratory environment. Solutions to a series of challenges will be designed, constructed, tested, and revised by students working together in groups. A standard, modular, mobile robotics system will be used to design and construct robots capable of carrying out a single task or multiple tasks related to a variety of applications. The role of science, engineering and technology in modern society will also be explored.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Course Fees:** Supplemental Fee Level 2**Previous EGR*** 105**EGR 1110 - Introduction to Engineering***Credits: 3*

Students will be introduced to the fields of engineering and engineering analysis through design and graphics and comprehensive engineering projects. Topics include: sketching, charts, graphs, forces, thermodynamics, energy, electrical circuits, mechanisms, robotics, manufacturing technologies, and fundamentals of engineering economics. This course prepares students for the rigor of future engineering classes, to provide students with a solid foundation of basic engineering skills including conversions, graphing and statistics, and to introduce students to the different engineering majors and career options.

Prerequisite/Corequisite: MATH 1610 (or "C" or higher if taken prior)**Previous EGR*** 111**EGR 1115 - Programming for Engineers***Credits: 3*

Introduces engineering students to structured and object-oriented programming methods. Students will examine and solve a variety of engineering problems. Students will design, code and execute modular programs using an object-oriented language such as C++ or Java. The course will include the use of abstract data types in solving classical engineering problems.

Prerequisite: C or higher in MATH 1010**Previous EGR*** 115**EGR 1118 - Material Science***Credits: 3*

This course is designed to introduce the student to the structure and applications of engineering and commodity materials, and provide basic understanding and knowledge of

materials, including classifications, properties, applications, treatments, processing techniques, and selection methods. Contrasts and comparisons will be drawn between materials to determine which is best for a given application. Emphasis will be placed on material properties and testing.

Prerequisite: MATH 1010 placement or completion of MATH 1010 concurrent.**Prerequisite/Corequisite:** MATH 1010**Previous EGR*** 118**EGR 1120 - Engineering Drawing Specs***Credits: 3*

This is an introductory course in the interpretation of engineering drawings beginning with the basics of orthographic projections. Topics include: Geometric Constructions, Orthographic Drawings, Auxiliary Views, Sections, Dimensioning, Tolerances, Working Drawings, Descriptive Geometry, and an introduction to Geometric Dimensioning and Tolerancing (GD&T).

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous EGR*** 112**EGR 2098 - Engineering Internship***Credits: 3-4*

This course provides an opportunity for students to gain practical experience in an industrial setting under the supervision of a faculty advisor and an industrial supervisor.

Prerequisite: Varies based on the internship placement**Prerequisite/Corequisite:** Varies based on the internship placement**Corequisite:** None**Previous EGR*** 299**EGR 2201 - MATLAB for Engineers***Credits: 3*

An introductory programming course that emphasizes engineering problem solving through programming, graphing, visualization and data analysis using MATLAB tools. This class will cover basic matrix algebra, plotting, curve-fitting, built-in functions, logical functions and user-defined functions.

Prerequisite: C or higher in MATH 1610**Previous EGR*** 201, CSC* 267**EGR 2211 - Engineering Statics***Credits: 3*

The main objective of this course is to develop in the engineering students the ability to analyze any problem in a simple and logical manner and to apply to its solution a few, well understood, basic principles. This course introduces the concepts of engineering based on forces in equilibrium.

Topics include concentrated forces, distributed forces, forces due to friction, and inertia as they apply to machines, structures, and systems. Upon completion, students should be able to solve problems which require the ability to analyze systems of forces in static equilibrium.

Prerequisite: "C" or higher in MATH 2610, or taking MATH 2610 concurrently

Prerequisite/Corequisite: MATH 2610

Previous EGR* 211

EGR 2212 - Engineering Dynamics

Credits: 3

The main objective of this course is to develop in the engineering students the ability to analyze any problem in a simple and logical manner and to apply to its solution a few, well understood, basic principles. This course introduces students to the fundamentals of engineering dynamics, including rectilinear and curvilinear motion, translations, rotation, and plane motion; work, energy, and power; and impulse and momentum. The basic principles of dynamics are applied to engineering problems. Vector methods are covered.

Prerequisite: C or higher in EGR 2211

Previous EGR* 212

EGR 2215 - Thermodynamics I

Credits: 4

This course is designed to introduce students to the First and Second Laws of Thermodynamics. Topics include: energy concepts and balances, thermodynamic properties of pure substances and ideal gases, and analysis of ideal and real processes including turbines, pumps, heat exchangers, and compressors.

Prerequisite: CHEM 1210, MATH 2600, and PHYS 2201.

Prerequisite/Corequisite: MATH 2600

Previous EGR* 215, EGR* 214

EGR 2221 - Introduction to Electrical Circuit Analysis

Credits: 4

An introduction to the techniques of analog circuit analysis. Topics include voltage, amperage, capacitance, inductance, node-voltage analysis, mesh-current analysis. Essential electrical components such as resistors, diodes, capacitors, inductors and operational amplifiers will be introduced and explored as well. The course will be supported by the use of the computer simulation programs and with lab work covering introductory circuit analysis.

Prerequisite/Corequisite: C or higher in PHYS 2202, MATH 2622

Course Fees: Supplemental Fee Level 2

Previous EGR* 221

EGR 2230 - C++ for Engineering

Credits: 3

This course approaches the C++ programming language using structured and object-oriented programming methods to examine and solve a variety of engineering problems. The course will include the use of abstract data types in solving classical engineering problems.

Prerequisite/Corequisite: C or higher in PHYS 2202 may be taken concurrently, MATH 2622 and PHYS 2202 if not taken previously

Previous EGR* 230

EGR 2250 - Computation Methods for Engineering

Credits: 3

This course introduces students to the application of industry standard computational tools for problem solving, graphing and analyzing engineering data, and programming of formulae, procedures, and macros.

Prerequisite/Corequisite: EGR 1110 and MATH 2600

Previous EGR* 250

EMS 1001 - Emergency Medical Service Education

Credits: 9

The course will provide the principles, practices and procedures to assist the participant to become a quality instructor, thus ensuring the administration of quality patient care. It will also assist the instructor in the transition from clinician to educator. The course follows a logical progression beginning with the theory of the educational process, the methods of teaching, and finally; evaluative and administrative functions of the instructor. With special emphasis on vocational/technical training, this course is an investigation of Malcom Knowles' theory of education and is devoted to the learning styles of adult students. It will focus on ways they process information, retain, and utilize new concepts and strategies. Specific techniques will be employed that identify theories associated with cognitive, psychomotor and affective domains of learning. General theories and concepts of education will be presented, with an emphasis placed on the allied health professions. There is a computer-based component to this course and students will need access to a computer and email. Students will be required to complete a minimum of 25 hours of student teaching under the supervision of an experienced emergency medical services (EMS) instructor.

Prerequisite: Current CT Emergency Medical Technician (EMT) certification, Advanced Emergency Medical Technician (AEMT) certification, or paramedic licensure

Additional Info: This course meets the educational requirements for certification by the State of Connecticut Department of Public Health as an EMS Instructor. **Previous** EMS* 101

EMT 1000 - Emergency Medical Technician*Credits: 6*

This course includes classroom and clinical experiences and provides students the opportunity to develop the knowledge and skills required for EMT National Certification. Emphasis is placed on patient assessment, clinical signs & symptoms, pathophysiology and pre-hospital care of patients. Areas of instruction include CPR, airway essentials, assessment and care of trauma & medical patients including infants, children and the elderly, rescue operations, hazardous materials and pharmacological interventions.

Prerequisite: FTAD 1001 OR Permission of Program Coordinator

Previous EMT* 100

ENG 0910 - Composition Workshop*Credits: 3*

This is a linked section for students enrolled in ENG 1010 Composition. Students will receive additional instruction in support of English 1010 outcomes, specifically critical reading, thinking, and writing; crafting logical arguments; using language effectively; and engaging credible, college-level sources.

Prerequisite: As determined by placement

Prerequisite/Corequisite: ENG 1010

Elective Code(s): DEVL, EMBD

Previous new

ENG 0930 - Introduction to College Reading and Writing*Credits: 3*

This course prepares students for the reading and writing demands in Composition and other college-level courses by integrating reading, writing, and critical thinking. Student writing will focus on understanding, reporting on, reacting to, and analyzing the ideas of others. Texts will serve as models and sources for students to refine their skills in exposition, interpretation, and argumentation. This course does not satisfy an English requirement or an elective in any degree program, nor do its credits count toward graduation.

Prerequisite: Placement determined by placement process.

Elective Code(s): DEVL

Previous ENG* 093

ENG 0940 - Introduction to Advanced Reading and Writing*Credits: 4*

This course prepares students for the reading and writing demands in Composition and other college-level courses by integrating reading, writing, and critical thinking. Student writing will focus on understanding, reporting on, reacting to, and analyzing the ideas of others. Texts will serve as models and sources for students to refine their skills in exposition, interpretation, and argumentation.

Prerequisite: Placement determined by placement process.

Elective Code(s): DEVL

Additional Info: This course does not satisfy an English requirement or an elective in any degree program, nor do its credits count toward graduation. **Previous** ENG* 094

ENG 0960 - Introduction to College English*Credits: 6*

This course prepares students for the reading and writing demands in Composition and other college-level courses by integrating reading, writing, and critical thinking. Student writing will focus on understanding, reporting on, reacting to, and analyzing the ideas of others. Texts will serve as models and sources for students to refine their skills in exposition, interpretation, and argumentation.

Prerequisite: Placement determined by placement process.

Elective Code(s): DEVL, INTN

Additional Info: This course does not satisfy an English requirement or an elective in any degree program, nor do its credits count toward graduation. **Previous** ENG* 096

ENG 1009 - Grammar for College and Professional Writing*Credits: 1*

Grammar for College and Professional Writing offers focused instruction in English grammar as it applies to writing situations. Students learn to identify parts of speech and sentence structure; avoid common errors by correctly applying grammar rules; identify commonly confused words and idiomatic expressions; and edit for conciseness and accuracy. Emphasis is placed on building knowledge and skills in the context of actual writing tasks. Graded on a Pass/Fail basis.

Prerequisite: None

Previous ENG*109

ENG 1010 - Composition*Credits: 3*

Composition focuses on the study and practice of effective written communication across a variety of rhetorical situations. The course develops skills in applying language conventions, engaging with and using authoritative sources, and crafting logical arguments.

Prerequisite: Successful completion of ENG 0930 OR ENG 0960 with a C or higher, or as determined by the placement process.

Prerequisite/Corequisite: none

Corequisite: none

Previous ENG* 101

ENG 1010H - Composition Honors*Credits: 3*

Composition focuses on the study and practice of effective written communication across a variety of rhetorical situations. The course develops skills in applying language conventions, engaging with and using authoritative sources, and crafting logical arguments. Students in Honors Composition should expect additional emphasis on research and its application.

Prerequisite: Placement as determined by placement process and by permission of the Honors Program Coordinator.

Previous ENG* 101H

ENG 1020 - Composition II and Literature*Credits: 3*

This course continues the reading, writing, critical thinking skills developed in ENG 1010 through an introductory study of literature including fiction, poetry, and drama that reflect multiple and diverse perspectives. Students will receive further instruction in writing text-based, analytical essays that incorporate research.

Prerequisite: ENG 1010 with a C or higher

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Written Communication II (WRIX)

Elective Code(s): HUM, LART

Previous ENG* 102, ENG* 110

ENG 1020H - Composition II and Literature Honors*Credits: 3*

English 1020H continues the reading, writing, critical thinking skills developed in ENG 1010 through an introductory study of literature including fiction, poetry, and drama that reflect multiple and diverse perspectives. Students will receive further instruction in writing text-based, analytical essays that incorporate research and will complete a substantial literary research project.

Prerequisite: ENG 1010 or ENG 1010H with a C or higher and permission of the Honors Program Coordinator.

General Education Code: Written Communication II (WRIX)

Elective Code(s): HUM, LART

Previous ENG* 102H, ENG* 110H

ENG 1030 - Composition II and Non-fiction Texts*Credits: 3*

This course continues the reading, writing, and critical thinking skills developed in ENG 1010 through a study primarily of essays and other non-fiction texts reflecting multiple and diverse perspectives. Students will receive further instruction in writing text-based, analytical essays that incorporate research.

Prerequisite: ENG 1010 with a C or higher

General Education Code: Written Communication II (WRIX)

Elective Code(s): HUM, LART

Previous ENG* 103, ENG* 200

ENG 1030H - Composition II and Non-fiction Texts Honors*Credits: 3*

This course continues the reading, writing, and critical thinking skills developed in ENG 1010 through a study primarily of essays and other non-fiction texts reflecting multiple and diverse perspectives. Students will receive further instruction in writing text-based, analytical essays that incorporate research and will complete a substantial research project.

Prerequisite: ENG 1010 or ENG 1010H with a C or higher and permission of the Honors Program Coordinator.

General Education Code: Written Communication II (WRIX)

Elective Code(s): HUM, LART

Previous ENG* 103H, ENG* 200H

ENG 1080 - Composition II: Technical Writing and Presentations*Credits: 3*

A course in developing the skills needed for technical communication in its various forms. Students will study how audience, purpose, and context shape the process and production of texts in the fields of business, science, technology, and industry.

Prerequisite: ENG 1010 with a C or higher, or permission of instructor

General Education Code: Written Communication II (WRIX)

Elective Code(s): HUM, LART

Previous ENG* 202

ENG 1250 - Introduction to Children's Literature*Credits: 3*

This course examines literature for all children from infancy to young adulthood, including critical study of the various forms of literature, exemplary authors and illustrators, historical/social contexts, trends/issues, and the role of literature in children's education.

Prerequisite: ENG 1010 or permission of the instructor

Elective Code(s): HUM, LART

Cross-listed: ECED 1031 - Introduction to Children's Literature

Previous ENG* 114

ENG 2100 - Creative Writing*Credits: 3*

This course is a workshop experience focusing on multiple creative genres, such as fiction, nonfiction, drama, and poetry. Students will study form and technique, engage in the creative process of drafting and revising, and provide feedback to their peers.

Prerequisite: ENG 1010 with a C or higher, or permission of the instructor

Elective Code(s): HUM, CRTY, LART

Previous ENG* 281

ENG 2101 - Creative Writing: Nonfiction*Credits: 3*

This course is a workshop experience in which students study creative nonfiction with a focus on form and technique, engage in the creative process of drafting and revising, and provide feedback to their peers.

Prerequisite: ENG 1010 with a C or higher, or permission of the instructor.

Elective Code(s): HUM, CRTY, LART

Previous ENG* 280

ENG 2102 - Creative Writing: Memoir*Credits: 3*

This course is a workshop experience in which students will study memoir with a focus on form and technique, engage in the creative process of drafting and revising, and provide feedback to their peers.

Prerequisite: ENG 1010 with a grade of C or higher, or permission of the instructor

Elective Code(s): HUM, CRTY, LART

Previous ENG* 285

ENG 2103 - Creative Writing: Poetry*Credits: 3*

This course is a workshop experience in which students will study poetry with a focus on form and technique, engage in the creative process of drafting and revising, and provide feedback to their peers.

Prerequisite: ENG 1010 with a C or higher, or permission of the instructor.

Elective Code(s): HUM, CRTY, LART

Previous ENG* 282

ENG 2104 - Creative Writing: Fiction*Credits: 3*

This course is a workshop experience in which students will study fiction with a focus on form and technique, engage in the creative process of drafting and revising, and provide feedback to their peers.

Prerequisite: ENG 1010 with a C or higher, or permission of the instructor

Elective Code(s): HUM, CRTY, LART

Previous ENG* 283

ENG 2126 - Creative Writing: Novel*Credits: 3*

Creative Writing: Novel is a continuation of writing skills begun in Creative Writing: Fiction. The focus, however, is exclusively on the techniques of writing extended pieces of fiction (novels/novellas). Students will work on their own manuscripts, participate in peer review workshops, and discuss elements of the craft such as character and conflict, dialogue and point of view, pacing and plot.

Prerequisite: Successful completion of ENG 2104 - Creative Writing: Fiction, or permission of the instructor.

Previous ENG* 287

ENG 2127 - Creative Writing: Mixed Genre*Credits: 3*

This course is a continuation of work on creative writing skills begun in ENG 2100 Creative Writing. The focus in this course is exclusively on the techniques of writing mixed genre work. In the mixed or multi-genre writing, authors aren't writing within a particular genre, such as poetry or fiction or non-fiction, but instead using elements of multiple genres to tell their stories. Authors might include photographs, drawings, electronic elements, or music, as well as the various literary genres to tell their story or generate their experience. This course would introduce students to the exciting possibilities inherent in writing this way. Students will work on their own pieces while studying examples of the form and discussing such elements of craft as character and conflict, dialogue, point of view, and the relationship between the different genres included in the work.

Prerequisite: ENG 2100 - Creative Writing or permission of the instructor

Previous ENG* 201

ENG 2150 - Literary Magazine Production I*Credits: 3*

This course focuses on developing the literary, editorial, and professional skills to produce a professional print/online literary journal. Students will solicit submissions to the journal and make preliminary evaluations of submissions. Students will also participate in planning on-campus, online, and/or community-based literary events.

Prerequisite: B or higher in ENG 1010 and Instructor Permission

Elective Code(s): HUM, LART

Previous ENG* 206

ENG 2151 - Literary Magazine Production II*Credits: 3*

This course focuses on developing the literary, editorial, and professional skills to produce a professional print/online literary journal. Students will make final evaluations of submissions and produce and publicize the journal. Students will also participate in planning on-campus, online, and/or community-based literary events.

Prerequisite: B or higher in ENG 1010 and Instructor Permission

Elective Code(s): HUM, LART

Previous ENG* 207

ENG 2201 - Fiction*Credits: 3*

This course surveys the elements, structure, technique and evolution of fiction in its various forms.

Prerequisite: ENG 1020 or ENG 1030, or permission of instructor.

General Education Code: Arts and Humanities (ARHX)

Previous ENG* 210

ENG 2202 - Short Story*Credits: 3*

This course is an introduction to the unique elements of the short story form, its historical and artistic development, and the stories of exemplary writers.

Prerequisite: ENG 1020 or ENG 1030, or permission of instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 211

ENG 2210 - Poetry*Credits: 3*

This course is an introduction to poetry as a literary genre, featuring works from different historical periods and cultures.

Prerequisite: ENG 1020 or ENG 1030, or permission of instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 213

ENG 2230 - Drama*Credits: 3*

This course is an introduction to drama as a literary genre, featuring works from different historical periods and cultures. Students will study comedy, tragedy, and other dramatic forms and theatrical conventions.

Prerequisite: ENG 1020 or ENG 1030, or permission of instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 214

ENG 2240 - Crime and Detective Fiction*Credits: 3*

A study of the development and history of crime and detective fiction from its early nineteenth century inception to the present day.

Prerequisite: ENG 1020 or ENG 1030, or permission of instructor.

Elective Code(s): HUM, LART

Previous ENG* 212

ENG 2245 - Science Fiction and Society*Credits: 3*

A study of the development and history of science fiction from its early inception to the present day.

Prerequisite: ENG 1020 or ENG 1030 or permission of the instructor

Elective Code(s): HUM, LART

Previous ENG* 277

ENG 2250 - Studies in Children's Literature*Credits: 3*

An advanced critical study of literature for children, from infancy to pre-adolescence, including selection, analysis, and evaluation of its various forms, its scholarship, its exemplary authors and illustrators, its historical/social contexts, and its trends/issues.

Prerequisite: ENG 1250 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 215

ENG 2251 - Studies in Young Adult Literature*Credits: 3*

An advanced critical study of literature for adolescents and young adults (ages 12-18) including selection, analysis, and evaluation of its various forms, scholarship, exemplary authors and illustrators, historical/social contexts, and trends/issues.

Prerequisite: ENG 1250 or permission of instructor

Elective Code(s): HUM, LART

Additional Info: English courses may include opportunities to visit museums, attend plays, etc., that could incur additional costs. **Previous ENG* 269**

ENG 2260 - Graphic Novel*Credits: 3*

This course is an introduction to the graphic novel as a literary genre, exploring how the combination of words and graphic images creates effective storytelling. Both contemporary and historic examples of graphic novels (fiction, non-fiction, and memoir).

Prerequisite: ENG 1020 or ENG 1030, or permission of instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 274

ENG 2288 - Film and Literature*Credits: 3*

A study of literature and its adaptation to film, including its historical and theoretical relationship.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 271

ENG 2300 - Studies in World Literature*Credits: 3*

A study of the literature of the world, beyond British and American works. The readings emphasize the connections between culture, history, and literary works.

Prerequisite: ENG 1020 or ENG 1030, or permission of instructor.

Elective Code(s): HUM, LART

Previous ENG* 240

ENG 2301 - Mythology*Credits: 3*

A study of world mythology from ancient to modern periods from a literary and cultural perspective.

Prerequisite: ENG 1020 or ENG 1030, or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 291

ENG 2302 - Biblical and Classical Literature*Credits: 3*

A study of key texts in the early development of Western literature, including works of the Old and New Testaments, Greek and Roman texts (including plays, epics, philosophy, and history), and older literature on which the above are based.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

Elective Code(s): HUM, LART

Previous ENG* 275

ENG 2320 - World Literature I*Credits: 3*

A study of world literature from the ancients to seventeenth century, beyond British and American works. The readings emphasize the connections between culture, history, and literary works.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 241

ENG 2340 - World Literature II*Credits: 3*

A study of world literature from the seventeenth century to the present, beyond British and American works. The readings emphasize the connections between culture, history, and literary works.

Prerequisite: ENG 1020 or ENG 1030

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, GLKY, LART

Previous ENG* 242

ENG 2360 - Contemporary Literature*Credits: 3*

A study of the dominant themes and literary movements that have shaped contemporary fiction and non-fiction from World War II through the present.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 278

ENG 2361 - Contemporary Fiction*Credits: 3*

A study of the dominant themes and literary movements that have shaped contemporary fiction, both western and nonwestern, from World War II through the present.

Prerequisite: ENG 1250 or permission of instructor

Elective Code(s): HUM, LART

Previous ENG* 216

ENG 2420 - Early Western Literature*Credits: 3*

A study of major literary works of the Western world from antiquity to the Renaissance. The texts emphasize the connections between culture, history, and literary works.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 245

ENG 2440 - Modern Western Literature*Credits: 3*

A study of major literary works of the Western world from the Renaissance to the present. The texts emphasize the connections between culture, history, and literary works.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 246

ENG 2461 - International Short Story*Credits: 3*

This class will concentrate on short fiction (often in translation) by writers from around the world and outside the United States and Great Britain. The stories included will stem from Europe, South and East Asia, Africa, the Caribbean, South and Central America, and the Middle East. The focus will be on contemporary international tales written usually in the 20th and 21st century and often connected to the Non-Western or Post-Colonial worlds.

Prerequisite: ENG 1020 - Composition II and Literature or ENG 1030 - Composition II and Non-fiction Texts or permission of the instructor

Previous ENG* 239

ENG 2520 - British Literature to 1798*Credits: 3*

This course surveys British literature from the Anglo-Saxon period through the eighteenth century. The readings emphasize the connections between culture, history, and literary works.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 231

ENG 2540 - British Literature from 1798*Credits: 3*

A study of British literature from the Romantics through the present. The readings emphasize the connections between culture, history, and literary works.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 232

ENG 2560 - Shakespeare*Credits: 3*

A study of the work of William Shakespeare, his time period, and his contributions to literature through an exploration of poetry and dramatic works.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 233

ENG 2600 - Studies in American Literature*Credits: 3*

An examination of American literary works from pre-colonial times to the present. The course may focus on one or more American authors or on a significant element of American literature such as an era, topic, geographical location, or literary movement.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

Elective Code(s): HUM, LART

Previous ENG* 220

ENG 2620 - American Literature to 1865*Credits: 3*

A study of the dominant themes and literary movements that have shaped American literature from the early Colonial period through the Civil War. The readings emphasize the connections between culture, history, and literary works.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 221

ENG 2640 - American Literature from 1865*Credits: 3*

A study of the dominant themes and literary movements that have shaped American literature from the Civil War through the present. The readings emphasize the connections between culture, history, and literary works.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 222

ENG 2660 - Contemporary American Literature

Credits: 3

A study of exemplary American texts from World War II through the present. Readings will explore a variety of literary modes and genres and emphasize connections between literary movements and their sociohistorical contexts.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 223

ENG 2680 - African American Literature

Credits: 3

A survey of African American literature from its origins in the oral traditions of the Americas to contemporary literary and cultural expressions.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 251

ENG 2700 - Studies in Ethnic Literature

Credits: 3

A study of literature by various ethnicities in America, such as Native Americans, European immigrants, and African, Latinx, and Asian Americans. The complex relationship between ethnic literature and the dominant literary establishment and issues concerning assimilation, identity, and multiculturalism will be examined.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 250

ENG 2711 - Contemporary Latin American Literature

Credits: 3

The course examines the historical, cultural, and literary elements in the works of a variety of contemporary Latin American writers from South and Central America and the Spanish Caribbean, focusing primarily on writers from the late 20th century and early 21st century.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 247

ENG 2712 - Literature of the Caribbean

Credits: 3

A study of the literature of the Caribbean from the nineteenth century to contemporary times.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

Elective Code(s): HUM, LART

Previous ENG* 248

ENG 2713 - Latino and Latina Literature

Credits: 3

This class will explore representative stories, novels, plays, and poems written by Latinos/Latinas. Focusing primarily upon 20th and 21st century literary works by mainland Puerto Rican, Brazilian-American, Dominican-American, Cuban-American and Chicano and Chicana writers, we will examine cultural and linguistic elements that make Latino and Latina literature a vital part of American Literature today.

Prerequisite: ENG 1020 - Composition II and Literature or ENG 1030 - Composition II and Non-fiction Texts or permission of the instructor

Previous ENG* 253

ENG 2801 - Studies in Women's Literature

Credits: 3

This course is a study of traditional and non-traditional representations of women in literature by women. Emphasis is given to how gender roles develop and change and how women's views of themselves are reflected in their writing.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

Elective Code(s): HUM, LART

Previous ENG* 260

ENG 2802 - Women in Literature*Credits: 3*

This course explores the variety and complexity of the female experience by reading and analyzing texts in various genres portraying women.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

Elective Code(s): HUM, LART

Previous ENG* 262

ENG 2803 - Women Writers Across Cultures*Credits: 3*

This course is intended to broaden students' knowledge of literary traditions and themes of women's writing through a non-western and multicultural approach, including the influence of geography, history, and social environments in shaping such writing.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 261

ENG 2804 - Contemporary Women in Poetry*Credits: 3*

This course is a seminar on the lives and work of women poets from 1950 to present. Students will read exemplary texts, such as essays, criticism, and poetry. Students will analyze poems and explore how they reflect the life and times of the author. Students also will learn to analyze poems with a focus on form and technique.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

Elective Code(s): HUM, LART

Previous ENG* 263

ENG 2850 - LGBTQ+ Literature*Credits: 3*

This survey course examines LGBTQ+ literature to explore the relationship between literary expression, gender identity, and sexuality. Readings include a variety of LGBTQ+ representations and themes in fiction, non-fiction, poetry, and drama.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous ENG* 267

ENG 2995 - English Practicum*Credits: 3*

This course is designed to offer motivated students a practicum experience working intensively with a faculty

member in one of four areas: Writing Practicum (linked to a writing class), Literature Practicum (linked to a literature class), Tutoring Practicum (linked to the college academic support center / tutoring center / writing center), or Research Practicum (linked to curriculum design and delivery).

Prerequisite: Students will need the permission of the instructor of record to register. To be eligible, students should have COMM 1010 and either ENG 1020 or ENG 1030, and should have a GPA of at least 3.0.

Elective Code(s): HUM, LART

Previous ENG* 294

ENG 2998 - Special Topics in English*Credits: 3*

This course covers topics of special interest in English. Topics vary by campus and semester but focus on literature and/or literature in a larger cultural context.

Prerequisite: ENG 1020 or ENG 1030 or permission of instructor

Elective Code(s): HUM, LART

Previous ENG* 298

ENV 1000 - Exploring Environmental Careers*Credits: 1*

This 1 credit course is an introduction to environmental science career pathways and is suitable for science and non-science majors. Profiles of careers in the environmental field, including non-profit, industry, government, and education will include descriptions of the work and the skills and tools needed to be successful. The course will focus on environmental work in New England with connections to broader trends nationally and globally. Online discussions and assignments will accompany the materials presented. Open to anyone interested in environmental issues, sustainability, and career opportunities.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Additional Info: Required for Natural Resources majors.

Previous EVS* 135

ENV 1010 - Introduction to Environmental Science*Credits: 3*

This 3-credit, non-lab introductory environmental science course is suitable for science and non-science majors. Students will survey natural systems, humans' impacts on natural systems, and potential solutions to current and future environmental issues on global, regional, and local scales. Embedded in the course are explorations of interdisciplinary topics including, but not limited to, process of science; environmental ethics, attitudes, and laws; resource consumption; climate change; biodiversity loss; forests and soils; food systems, agriculture, and fisheries; land use planning; pollution and toxicology; mining and energy; water

and waste management; sustainable development; ecological economics; and environmental justice. Active learning is an essential component of this course.

Prerequisite: Eligibility for ENG 1010 with workshop

General Education Code: Scientific Knowledge (SCKX)

Elective Code(s): GLKY, LART, SCI

Additional Info: *When taken with the lab (ENV 1010L) fulfills the Scientific Reasoning (SCRX) general education requirement.*

Required for Environmental Biology, Environmental Engineering Technology, Environmental Science: Sustainability, Environmental Science and Toxicology, Natural Resources and Technology Studies: Environmental Science majors.

Previous ENV* 101, EVS* 100, BIO*180, EVS*114, BIO* 181

ENV 1010H - Introduction to Environmental Science Honors

Credits: 3

This 3-credit, non-lab introductory environmental science course is suitable for science and non-science majors. Students will survey natural systems, humans' impacts on natural systems, and potential solutions to current and future environmental issues on global, regional, and local scales. Embedded in the course are explorations of interdisciplinary topics including, but not limited to, process of science; environmental ethics, attitudes, and laws; resource consumption; climate change; biodiversity loss; forests and soils; food systems, agriculture, and fisheries; land use planning; pollution and toxicology; mining and energy; water and waste management; sustainable development; ecological economics; and environmental justice. Active learning is an essential component of this course. As this is an Honors course, students will be required to complete additional readings and a research paper or project. Permission of Honors Program Coordinator needed.

Prerequisite: Eligibility for ENG 1010 and permission of Honors Program Coordinator

General Education Code: Scientific Knowledge (SCKX)

Elective Code(s): GLKY, LART, SCI

Additional Info: *When taken with the lab (ENV 1010L) fulfills the Scientific Reasoning (SCRX) general education requirement.*

Required for Environmental Biology, Environmental Engineering Technology, Environmental Science: Sustainability, Environmental Science and Toxicology, Natural Resources and Technology Studies: Environmental Science majors.

ENV 1010L - Introduction to Environmental Science Lab

Credits: 1

This 1-credit natural science laboratory course accompanies ENV 1010 for majors or non-majors.

Laboratory exercises and case studies will relate to core concepts learned in lecture and may include topics such as environmental chemistry, biodiversity, water and air pollution, soil composition, and energy. Some field labs may be required.

Prerequisite: ENV 1010 with C or higher or concurrent

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Science and Toxicology and Technology Studies: Environmental Science Option **Course Fees:** Supplemental Fee Level 2 and Materials Fee

ENV 1100 - Environmental Regulations

Credits: 3

This 3-credit, majors-level course provides a broad view of federal, state, and municipal environmental regulations as they apply to industry, commercial establishments, local governmental facilities, and the individual citizen. It provides a practical approach to regulatory understanding to enable one to plan an effective and economically sound compliance program. Course topics include the Clean Air Act (CAA), Clean Water Act (CWA), 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 specific hazardous materials such as asbestos and PCBs.

Prerequisite: ENV 1010 with C or higher

Elective Code(s): LART

Additional Info: Required for Environmental Health and Safety and Environmental Engineering Technology majors.

Previous ENV* 110

ENV 1120 - Environmental and Energy Law and Regulations*Credits: 3*

This 3-credit course discusses environmental and energy laws and regulations at various scales and how they are applied to a variety of sectors, from commercial establishments, industry to government and private citizens. Topics will include covering important federal, state, and local laws as they pertain to energy production and use, pollution, endangered species, toxins and hazardous waste, and others. Practical regulatory approaches are presented for those looking to pursue further study in compliance. Required by the Water Management Certificate of Achievement, Clean Water Management Certificate of Achievement and the Public Utility Management A.S. Degree Programs.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** LART, SCI**Previous EVS*** 112**ENV 1800 - Sustainable Energy and the Environment***Credits: 3*

This 3-credit course is suitable for science and non-science majors and is an introduction to the study of energy for electrical power generation and transportation, including sustainable and non-sustainable energy sources. This course investigates the relationship between population and consequences of increased energy demand, reliance on fossil fuels, anthropogenic climate change, and other impacts. Included is an examination of energy types including fossil fuels and nuclear power, as well as sustainable and renewable energy sources such as wind, solar, hydropower, geothermal, biofuels, fuel cells, and others. Electrical conservation and efficiency will be investigated. The social, economic and environmental impacts and effectiveness of these alternatives will be evaluated.

Prerequisite: Placement into MATH 1600**Elective Code(s):** LART, SCI**Additional Info:** Required for Environmental Science: Sustainability majors. **Previous EVS*** 130**ENV 2200 - Toxicology***Credits: 3*

This 3-credit course focuses on toxicological principles, including FDA requirements relating to new drugs. It addresses environmental and other factors affecting the toxicity of therapeutic agents, mechanisms to toxicity and clinical applications. Students will gain a broad base of scientific knowledge and methodologies in toxicology. Required for Environmental Science and Toxicology majors.

Prerequisite: ENV 1010 with a C or higher**Elective Code(s):** LART, SCI**Additional Info:** Required for Environmental Engineering Technology majors. **Previous ENV*** 200**ENV 2295 - Environmental Science and Toxicology Internship***Credits: 3*

This course places students in a suitable, supervised internship in an industry of interest for a minimum of 150 hours of internship work.

Elective Code(s): LART, SCI**Previous ENV*** 296**ENV 2990 - Environmental Issues Seminar***Credits: 3*

This 3-credit, non-lab introductory environmental science and environmental engineering technology course is suitable for science and non-science majors. Students will survey natural systems, and potential solutions to current and future environmental issues on global, regional, and local scales. Embedded in the course are explorations of interdisciplinary topics including, but not limited to, process of science; environmental ethics; attitudes and laws; resource consumption; climate change; biodiversity loss; forests and soils; food systems; agriculture, and fisheries; land use planning; pollution and toxicology; mining and energy; water and waste management; sustainable development; ecological economies; and environmental justice. Active learning is an essential component of this course.

Prerequisite: ENG 1010 or permission of instructor**Cross-listed:** ENVE 2990**Previous BIO*** 289**ENV 2995 - Environmental Science Internship***Credits: 1-6*

This course provides students the opportunity to apply classroom theory in an actual work setting. Credits will be determined based on the number of hours of on-site work. Students may choose to be placed in a variety of work settings as related to their program of study.

Prerequisite: Permission of faculty advisor and ENV 1010 with C or higher**Elective Code(s):** LART, SCI**Previous ENV*** 297

ENV 2998 - Special Topics in Environmental Science*Credits: 3-4*

This course will feature select topics in environmental science, sustainability, and natural resources. Topics will change by semester.

Prerequisite: Permission of instructor and ENV 1010 with C or higher

Elective Code(s): LART, SCI

Previous EVS* 298

ENVE 1010 - Introduction to Environmental Science*Credits: 3*

This 3-credit, non-lab introductory environmental science course is suitable for science and non-science majors. Students will survey natural systems, humans' impacts on natural systems, and potential solutions to current and future environmental issues on global, regional, and local scales. Embedded in the course are explorations of interdisciplinary topics including, but not limited to, process of science; environmental ethics, attitudes, and laws; resource consumption; climate change; biodiversity loss; forests and soils; food systems, agriculture, and fisheries; land use planning; pollution and toxicology; mining and energy; water and waste management; sustainable development; ecological economics; and environmental justice. Active learning is an essential component of this course.

Prerequisite: eligibility for ENG 1010 with ENG 0910 (workshop)

General Education Code: SCKX

Elective Code(s): GLKY, LART, SCI

Additional Info: ENVE 1010 alone fulfills the General Education requirement Scientific Knowledge and Understanding. Taken with the lab (ENV 1010L), it fulfills the Scientific Reasoning requirement. **Previous EVS***100, BIO*180, EVS*114, BIO*181

ENVE 1010H - Introduction to Environmental Science Honors*Credits: 3*

This 3-credit, non-lab introductory environmental science course is suitable for science and non-science majors. Students will survey natural systems, humans' impacts on natural systems, and potential solutions to current and future environmental issues on global, regional, and local scales. Embedded in the course are explorations of interdisciplinary topics including, but not limited to, process of science; environmental ethics, attitudes, and laws; resource consumption; climate change; biodiversity loss; forests and soils; food systems, agriculture, and fisheries; land use planning; pollution and toxicology; mining and energy; water and waste management; sustainable development; ecological economics; and environmental justice. Active learning is an essential component of this course. As this is an Honors

course, students will be required to complete additional readings and a research paper or project. Permission of Honors Program Coordinator needed.

Prerequisite: Eligibility for ENG 1010 and permission of Honors Program Coordinator

General Education Code: Scientific Knowledge (SCKX)

Elective Code(s): GLKY, LART, SCI

Additional Info: When taken with the lab (ENV 1010L) fulfills the Scientific Reasoning (SCRX) general education requirement.

Required for Environmental Biology, Environmental Engineering Technology, Environmental Science: Sustainability, Environmental Science and Toxicology, Natural Resources and Technology Studies: Environmental Science majors.

ENVE 1100 - Environmental Regulations*Credits: 3*

This 3-credit, majors-level course provides a broad view of federal, state, and municipal environmental regulations as they apply to industry, commercial establishments, local governmental facilities, and the individual citizen. It provides a practical approach to regulatory understanding to enable one to plan an effective and economically sound compliance program. Course topics include the Clean Air Act (CAA), Clean Water Act (CWA), 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 specific hazardous materials such as asbestos and PCBs.

Prerequisite:

ENVE 1010 with a C or higher

Elective Code(s): LART

Cross-listed: ENV 1100

Additional Info: Required for Environmental Health and Safety and Environmental Engineering Technology majors.

Previous ENV*110

ENVE 1200 - Occupational Safety & Health*Credits: 3*

This 3-credit course is an introduction to Occupational Safety & Health in the workplace. Students are introduced to the safety and health field, the application of engineering, management principles, and techniques to safety, health, and loss control. Topics include general safety, health, and risk assessment concepts and terms. Discussions will include historical developments, program management, problem identification, engineering assessment, hazard recognition, evaluation, and control. Coursework will also introduce students to measurement and evaluation systems, legal and regulatory requirements, environmental health and safety, industrial hygiene, safety engineering, product safety and public health, risk assessment analysis and management,

accident investigation, ergonomics, and ethics and professionalism. A field visit is required.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Health and Safety majors. **Previous** ENV* 131

ENVE 1500 - Geomatics Spatial Analysis

Credits: 3

This 3-credit course will provide students with the fundamentals of the discipline of Geomatics, a blending of the sciences of geography, measurement, and mapping. Coursework will include exercises utilizing geographic information systems (GIS) software, global navigation satellite systems (commonly GPS) mobile units, and more traditional measurement surveying tools. Students will also be introduced to the concept of three-dimensional modeling and develop simple and complex spatial models for multifaceted environmental processes and relationships.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Previous** ENV* 163

ENVE 1700 - Environmental Research Project I

Credits: 1

This 1 credit course introduces and develops skills in microscopy techniques, field research, literature searches, monitoring equipment usage, and teamwork, and provides hands-on experience in the field and laboratory. Field labs are required.

Prerequisite/Corequisite: ENVE 1010 If taken in prior semester a grade of C or higher is required.

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Previous** ENV* 172

ENVE 2210 - HAZWOPER (Hazardous Waste Operations Emergency Response)

Credits: 3

This 3-credit course covers Hazardous Waste Operations Emergency Response (HAZWOPER). Topics are specifically designed for workers who are involved in agency clean-up operations; voluntary clean-up operations; emergency response operations; storage, disposal, or treatment of hazardous substances; and treatment of uncontrolled hazardous waste sites. It is mandatory for students to perform an off-site field exercise. This course meets the requirements of OSHA Standard 29 CFR 1910.120.

Prerequisite: Recommended: CHEM 1110 OR CHEM 1210 with C or higher

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology and Environmental Health and Safety Management majors. **Previous** ENV* 220

ENVE 2300 - Long Island Sound Conservation

Credits: 3

This 3-credit course is an environmental, ecological, and cultural study of the changes of Long Island Sound, experienced from societal, economic and physical influences. The course explores environmental impacts from pre-colonial development to the industrialized twenty-first century. The course will investigate the anthropogenic impacts from nonpoint source pollution, stormwater runoff to climate change and other human caused factors that affect Long Island Sound's marine organisms and natural resources. The course concludes with examining how environmental engineering, and environmental laws and policies can protect our natural resources through conservation, and remediation created by the CWA, Long Island Sound Study (LISS) and Long Island Sound (LIS) Blue Plan. Field trips are required.

Prerequisite: ENVE 1010 with a C or higher

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Previous** ENV* 208

ENVE 2400 - Hydrology

Credits: 3

This 3-credit course features an emphasis on groundwater. Topics covered include weather as it affects water resources, precipitation, stream flow, stream flow hydrographics, rainfall run-off relationships, the impact of natural and anthropocentric phenomena on water resources, and ground water hydrology.

Prerequisite: MATH 1600 and ENVE 1010 , both with C or higher

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Previous** ENV* 242

ENVE 2410 - Water Resources Engineering with Lab*Credits: 4*

This 4-credit lab course introduces methodology used in determining storm water runoff for small urban areas. The theory and logic of both the Rationale Method and the Soil Conservation Services TR-55 are studied in detail. The quantity computations are covered, as well as the understanding of gutter analysis. As part of the lab, the student will design a storm drain system, including a cost estimate for the project.

Prerequisite: MATH 1600 and ENVE 1010, both with a C or higher

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Course Fees:** Supplemental Fee Level 2 and Materials Fee

Previous ENV* 245

ENVE 2500 - Geomatics*Credits: 4*

This 4-credit course offers students applications of Geographical Information Systems(GIS), GPS, spatial analyzes, photogrammetry & cartography providing understanding and field experience. Geomatics is increasingly used to evaluate the various data models and structures used in the input management analysis and output of geographic data used in the sciences, environmental sciences and engineering and natural resources management. Cartography is used in the area pertaining to preserving indigenous lands and documenting water and land rights, urban and transportation planning, wildlife habitat preservation and environmental impact analysis. Geomatics can be used to evaluate many issues, but not limited to natural sciences and the environment. Research and modeling will be essential in the development, design and performance monitoring of a wide variety of spatial data. This Geomatics class supports the new paradigm for a renewed effort in geospatial analyzes for charting and measuring the world.

Prerequisite: ENVE 1500 with a C or higher

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Course Fees:** Supplemental Fee Level 1

Previous ENV* 260

ENVE 2600 - Fundamental Measurements and Applications*Credits: 3*

This 3-credit course will familiarize students with environmental analysis, instrumentation, and sampling methods. Students will have hands-on training and experience with various sampling analysis equipment and techniques as well as software applications. Fieldwork is required.

Prerequisite: MATH 1600 and ENVE 1010 , both with a C or higher

High school chemistry OR CHEM 1110 with a C or higher recommended

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors.

Previous ENV* 265

ENVE 2694 - Environmental Engineering Technology Co-op*Credits: 1*

The Environmental Co-op allows students to receive college credit (typically 1-4 semester hours) for appropriate work experience. The student must spend at least 225 documented hours for 4 credits on the work for which credit is granted. The work should accomplish some project of educational value and can be paid or unpaid. Students are expected to help arrange their own co-op placements. There will be someone at the workplace who is willing to supervise the student and evaluate the quality of the student's work.

Elective Code(s): LART, SCI

Previous ENV* 291

ENVE 2700 - Environmental Research Project II*Credits: 1*

This 1-credit course introduces and develops skills in microscopy techniques, field research, literature searches, monitoring equipment usage, and teamwork, and provides hands-on experience in the field and laboratory. Students will mentor new students. Field labs are required.

Prerequisite: ENVE 1700 with a C or higher

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Course Fees:** Supplemental Fee Level 1

Previous ENV* 277

ENVE 2701 - Environmental Research Project III*Credits: 1*

This 1-credit course introduces and develops skills in microscopy techniques, field research, literature searches, monitoring equipment usage, and teamwork, and provides hands-on experience in the field and laboratory. Students will

mentor returning students and continue to mentor new students. Field labs are required.

Prerequisite: ENVE 2700 with C or higher

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Course Fees:** Supplemental Fee Level 1
Previous ENV* 278

ENVE 2702 - Environmental Research Project IV

Credits: 1

This 1-credit course introduces and develops skills in microscopy techniques, field research, literature searches, monitoring equipment usage, and teamwork, and provides hands-on experience in the field and laboratory. Students will mentor returning students and continue to mentor new students. Field labs are required.

Prerequisite: ENVE 2701 with C or higher

Elective Code(s): LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Course Fees:** Supplemental Fee Level 1
Previous ENV* 279

ENVE 2990 - Environmental Issues Seminar

Credits: 3

In this 3-credit course, students develop their knowledge of current environmental issues through expert guest lectures, research, and assigned readings. Students explore a variety of global and local environmental topics that may include one or more of the following: environmental trends and issues, global climate change, human impacts on our oceans and land, federal and state regulations, solid, municipal and hazardous waste management, environmental restoration and remediation, wildlife management, alternative and renewable energy, sustainable landscape management, sustainable agriculture, GMOs, conservation, stewardship, land use, water quality, and/or stormwater management.

Prerequisite: ENVE 1010 and ENG 1010, both with C or higher

Elective Code(s): GLKY, LART, SCI

Additional Info: Required for Environmental Engineering Technology majors. **Previous ENV* 295**

ERTH 1010 - Earth Science

Credits: 3

This 3-credit, non-laboratory natural science is suitable for science, education, and non-science majors. This course provides an exploration of the basic processes that have formed and continue to form our planet. Included in the content is an astronomical history of the Earth and universe; basic geology including: the geologic time scale, the rock cycle, plate tectonics, earthquakes, volcanoes, mountain building, and erosional forces. Other topics included will be atmospheric processes and trends, weather patterns, global and regional climate change, ocean tides and currents, and

ecosystems. Current environmental and global issues as they relate to Earth Science will be discussed.

Prerequisite: Eligibility for ENG 1010

General Education Code: Scientific Knowledge & Understanding (SCKX)

Elective Code(s): LART, SCI

Previous EAS* 102

ERTH 1020 - Natural Disasters

Credits: 3

This 3-credit non-laboratory natural science course introduces the causes, occurrence, and consequences of natural disasters. Suitable for non-science majors. Students will analyze the physical causes as well as the distribution and frequency of disasters such as earthquakes, volcanoes, hurricanes, floods, and extraterrestrial impacts. Case studies will include local and regional examples of historical and recent disasters. The course will focus on naturally occurring disasters but will also consider the role of human activities in both contributing to and mitigating natural disasters.

Prerequisite: Eligibility for ENG 1010

General Education Code: Scientific Knowledge & Understanding (SCKX)

Elective Code(s): LART, SCI

Previous EAS* 106

ERTH 1030 - Earth Sciences with Lab

Credits: 4

This 4-credit laboratory natural science introduces the four main branches of Earth Science: Geology, hydrology and Oceanography, Meteorology and Climatology, and Astronomy. Students will investigate the dynamic nature of earth processes to understand human beings' place in the universe. Some field labs may be required. Required for the Environmental Science and Toxicology AS Degree.

Prerequisite: Eligibility for ENG 1010

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Scientific Reasoning (SCRX)

Elective Code(s): LART, SCI

Course Fees: Supplemental Fee Level 2 and Materials Fee
Previous EAS* 110

ESOL 0902 - Integrated Skills I: High Beginning

Credits: 6

Students entering this high beginning level course will already have a basic knowledge of English. Through reading, listening, and discussion activities, students focus on fluency in oral and written communication skills. Extensive reading forms the basis of individual writing assignments as well as small group and class discussions. Work on grammatical principles, sentence structures, and organizational skills leads to effective paragraphs and/or short writings. Structured

listening and speaking activities enhance students' listening comprehension and oral communication skills.

Prerequisite: Placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Additional Info: This course does not count toward graduation. It does receive institutional credit. **Previous** ESL* 022

ESOL 0905 - Grammar I: High Beginning

Credits: 3

A basic knowledge of English is required for this high beginning level course. Basic patterns and rules of grammar structures will be introduced, practiced, and applied in a meaningful context. Structures are learned in context through readings, discussions, oral practice, formal exercises, and particularly through writing. The targeted language structures are practiced in small group and whole class activities. The focus and emphasis of this course will be to use the grammatical structures in a natural and authentic settings.

Prerequisite: Placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 025

ESOL 0907 - Communications I: High Beginning

Credits: 3

In this high beginning course, students will improve their communication skills. Extensive listening and speaking practice and vocabulary development will increase competency in oral fluency. Activities may include extensive and intensive listening, comprehension exercises, vocabulary work, role-playing, interviewing, class and small group discussions and short, informal oral presentations.

Prerequisite: Placement into ESOL 0902, or through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 017

ESOL 0912 - ESOL Composition Support

Credits: 3

This is a linked support section for advanced multilingual language learners enrolled in English 1010: Composition ESOL ALP (Accelerated Language Program). Students will receive additional instruction in support of achieving English 1010 outcomes. Reinforcement will be provided in critical reading, thinking, and writing using credible college-level sources while specifically honing academic vocabulary, grammar, and editing skills to reflect appropriate rhetorical diction and tone of college level academic English.

Prerequisite: ESOL 1402 with a C grade or higher or placement into the level through ESOL multiple measure placement method or permission of coordinator/ department chair.

Corequisite: ENG 1010

Elective Code(s): DEVL, EMBD

Previous ESL*169 ALP

ESOL 1202 - Integrated Skills II: Low Intermediate

Credits: 6

In this low intermediate course, students begin to learn reading strategies and writing conventions appropriate for an academic environment. They also improve written and spoken language skills through extensive reading and vocabulary development. Students continue to work on grammatical principles, effective sentence structures, development and organizational skills in paragraphs and short essays. Small group and class discussions prepare students to communicate more effectively in formal and informal settings.

Prerequisite: ESOL 0902 with a C grade or higher or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Additional Info: This course can count towards graduation as a Humanities elective. It may also be offered in an accelerated format. **Previous** ESL* 132

ESOL 1205 - Grammar II: Low Intermediate

Credits: 3

In this low intermediate course, students will study fundamental patterns and rules of grammar structures including compound and complex sentences and perfect verb tenses. Structures are learned in context through readings, discussions, oral practice, formal exercises, and particularly through writing. The targeted language structures are practiced in small group and whole class activities. The focus and emphasis of this course will be to use the grammatical structures in a natural and authentic settings.

Prerequisite: C or higher in ESOL 0905 or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair

Elective Code(s): DEVL

Previous ESL* 135

ESOL 1207 - Communications II: Low Intermediate

Credits: 3

In this low intermediate course, multilingual learners will improve their oral communication skills, reading fluency, and vocabulary knowledge. Extensive reading and vocabulary development will improve reading speed and accuracy and increase self-confidence and competency in oral communication. Activities will include extensive reading,

developing reading strategies, expanding vocabulary, as well as small group discussions and oral reports in an interactive class.

Prerequisite: C or higher in ESOL 0907 or through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 137

ESOL 1209 - Pronunciation II: Low Intermediate

Credits: 3

This course will provide extensive, in-depth practice in English pronunciation with special focus on rhythm, stress, and intonation. Basic features of English phonology will be reviewed. Students will learn to evaluate their own speech in order to become more competent, self-assured speakers. This course will help multilingual learners communicate more effectively in everyday situations and in academic settings with a focus on developing greater clarity and fluency in spoken English.

Prerequisite: C or higher in ESOL 0902 - Integrated Skills I: High Beginning or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): DEVL

Previous ESL* 139

ESOL 1212 - Integrated Skills II: Accelerated Low Intermediate

Credits: 4

This low intermediate course is designed for multilingual writers who wish to improve their academic English skills to advance to a high-intermediate level. Students will engage in content-based writing of paragraphs and essays while focusing on grammatical accuracy. Readings will include authentic academic texts to improve fluency and expand vocabulary. Listening journals and oral presentations on various academic topics will further strengthen student's ability to read, write, speak, and listen. This course is only offered as part of an accelerated sequence. This course can count towards graduation as a Humanities elective.

Prerequisite: ESOL 0902 - Integrated Skills I: High Beginning with a C grade or higher or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 163

ESOL 1302 - Integrated Skills III: High Intermediate

Credits: 6

In this high intermediate course, students continue to develop reading strategies and writing conventions appropriate for an academic environment. Through extensive reading and vocabulary development, students further strengthen written and spoken fluency. Students continue to work on grammar, sentence structure, and development and organization of paragraphs and multiple-draft essays of limited length. Assigned extended readings and student writing form the basis of small group and class discussions. Listening and speaking activities develop students' ability to comprehend and communicate more effectively in formal and informal settings.

Prerequisite: ESOL 1202 with a C grade or higher or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Additional Info: This course may count towards graduation as a Humanities elective. It may also be offered in an accelerated format or a learning community with other college core courses. **Previous** ESL* 142

ESOL 1305 - Grammar III: High Intermediate

Credits: 3

In this high intermediate course, students will further develop proficiency in the use of more complex grammar structures including sentence variety and more consistent control of verb tenses. Structures are learned in context through readings, discussions, oral practice, formal exercises, and particularly through writing. The targeted language structures are practiced in small group and whole class activities. The focus and emphasis of this course will be to use the grammatical structures in a natural and authentic settings.

Prerequisite: C or higher in ESOL 1202 or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 145

ESOL 1307 - Communications III: High Intermediate*Credits: 3*

In this high intermediate course, students will further develop their academic reading fluency, vocabulary knowledge, and communication skills. Through extensive reading and discussion, students improve fluency and increase self-confidence and competency in oral communication.

Activities may include reading strategy development, vocabulary study, debates, whole class and small group discussions, and oral reports.

Prerequisite: C or higher in ESOL 1202 or through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 147

ESOL 1309 - Pronunciation III: High Intermediate*Credits: 3*

This course is designed to help students improve features of their American English pronunciation that could confuse or distract listeners and interfere with understanding. By learning how the sounds of English are produced and how authentic rhythm, stress and intonation are expressed, students will increase the accuracy and clarity of their English pronunciation and speaking ability. Students will learn how to evaluate their own speech in order to become more competent, self-assured speakers.

Prerequisite: C or higher in ESOL 1202 or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 149

ESOL 1312 - Integrated Skills III: Accelerated High Intermediate*Credits: 4*

This course is designed for multilingual writers at the high-intermediate language proficiency level. Students will engage in rigorous practice of grammar, sentence structure, and writing of paragraphs and essays of limited length to strengthen their academic reading and writing skills. Students will expand their academic vocabulary, read authentic texts, keep listening journals, deliver oral presentations, and participate in small-group and class discussions. This course will help students reinforce their ability to comprehend and communicate more effectively in both academic and informal settings. This course may count towards graduation as a Humanities elective. This course is only offered in an accelerated format.

Prerequisite: ESOL 1202 with a C grade or higher or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 164

ESOL 1402 - Integrated Skills IV: Low Advanced*Credits: 6*

In this low advanced course, students develop deeper fluency in English language skills with an emphasis on academic reading and writing appropriate for the level. Students continue to refine reading, writing, listening and speaking skills as well as grammatical accuracy. Assigned college level readings, which may include whole works, form the basis for small and whole class discussions and student writing assignments appropriate for academic study. Students further develop linguistic clarity and accuracy, critical thinking, and development and organization of ideas in preparation for academic study in English.

Prerequisite: ESOL 1302 with a C grade or higher or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): DEVL, FLNG

Additional Info: This course can count towards graduation as a Humanities elective. It may also be offered in an accelerated format or a learning community with other college core courses. **Previous** ESL* 152

ESOL 1405 - Grammar IV: Low Advanced*Credits: 3*

In this low advanced course, students study, review, and develop competency in the use of advanced grammatical structures including conditional clauses, reported speech and complex syntax. The course provides additional opportunities to master these structures through short readings, group

discussion, oral practice, and formal exercises, and particularly through writing. The targeted language structures are practiced in small group and whole class activities. The use of grammar structures in authentic contexts will be emphasized.

Prerequisite: C or higher in ESOL 1302 or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 155

ESOL 1407 - Communications IV: Low Advanced

Credits: 3

This course is designed to increase students' confidence and ability in understanding extended discourse and academic lectures, discussing issues raised by the lectures, and presenting their own ideas to the class. Focused listening activities as well as work with academic vocabulary will help students develop strategies for understanding lectures and responding to information presented in them. Students will practice presentation skills in small group and whole class settings. Out of class assignments, as well as some independent research will prepare students for in-class speaking tasks. Presentations will include adequate audio-visual support, using presentation software.

Prerequisite: ESOL 1307 with a C grade or higher or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

Elective Code(s): DEVL

Previous ESL* 157

ESOL 1470 - Grammar/Writing Workshop

Credits: 3

This course is designed to help students at the high intermediate and advanced levels, develop more fluency in the English language. Students will also develop a stronger foundation in the grammar and writing skills necessary for academic writing. Short readings and writings will expand academic vocabulary in a meaningful context and form the basis for class discussions and the review of essential grammar rules. Special attention will be paid to the syntactic elements of sentence construction. In addition, special attention will be paid to the combination of sentences needed to develop good paragraph structure to compose well-written, effective essays. Students will become more aware of the grammar errors most commonly made by English language learners, and use this knowledge to strengthen their ability to revise and edit their work.

Elective Code(s): DEVL

Previous ESL 170 (NCC)/ ESL 141 (NVC)

ESOL 1502 - Integrated Skills V: High Advanced

Credits: 6

In this high advanced course, students continue to develop deeper fluency in English language skills with an emphasis on academic reading and writing. Students continue to refine reading comprehension, writing proficiency, listening and speaking skills, and grammatical accuracy. Assigned college level readings which may include whole works and academic writings, form the basis for small and whole class discussions and student writing assignments. Students learn to appropriately integrate multiple sources into a research-based paper. Collaborative activities help students further develop linguistic clarity and accuracy, academic vocabulary, critical thinking, and development of ideas appropriate for academic study in English.

Prerequisite: ESOL 1402 with a C grade or higher or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, DEVL, ARHX

Additional Info: This course can count toward graduation as a Humanities elective. It may also be offered in an accelerated format or in a learning community with other college core courses **Previous** ESL* 162, ESL* 161, ESL* 151

ESOL 1512 - Integrated Skills V: Accelerated High Advanced

Credits: 4

In this intensive version of the high advanced course, multilingual writers continue to develop deeper fluency in English language skills with an emphasis on academic reading and writing. Students continue to refine reading comprehension, writing proficiency, listening and speaking skills, and grammatical accuracy. Assigned college level readings, which may include whole works and academic writings, form the basis for small and whole class discussions and student writing assignments. Students learn to appropriately integrate multiple sources into a research-based paper. Collaborative activities help students further develop linguistic clarity and accuracy, academic vocabulary, critical thinking, and development of ideas appropriate for academic study in English. This course can count towards graduation as a Humanities elective. It is offered as a component of an accelerated learning community with other college core courses. After successful completion of this course, students may enroll in most other college level classes including ENG 1010.

Prerequisite: ESOL 1402 with a C grade or higher or placement into the level through ESL multiple measure placement method or permission of coordinator/ department chair.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, DEVL, ARHX

Previous ESL* 192

ESOL 2500 - TESOL Methodology*Credits: 3*

In this class, participants will integrate language learning theory and the approaches of teaching English as a Second/Foreign Language into effective classroom practices. The students will develop instructional techniques and survey the latest materials for promoting language skills and cultural awareness. This 3-credit course is accepted by the state of Connecticut as meeting one of the requirements for the Adult Education Certification for teachers of ESL.

Prerequisite: ENG 1010 or permission of instructor**Elective Code(s):** DEVL**Previous** ESL* 250**EXSC 1001 - Introduction to Exercise Science***Credits: 3*

This course is designed to be an introduction to the professional field of Exercise Science and the five components of physical fitness. This course relates the human anatomy and physiology, an understanding of exercise and lifestyle to improve one's overall wellness.

Prerequisite/Corequisite: ENG 1010**Previous** HPE* 105, EXS* 101**EXSC 2010 - Sports Nutrition***Credits: 3*

This course explores concepts related to nutrition and conditioning for physically active individuals. The nutrition component of the course will include such topics as: micro and macro nutrients, dietary planning (pre/post competition meals/ appropriate caloric intake), body composition and endurance/strength training, as well as designing individualized fitness programs.

Prerequisite: BIO 1011**Previous** HPE* 210**EXSC 2030 - Exercise Testing and Program Design***Credits: 4*

Students will be introduced to the general theories and fundamentals of exercise testing and prescription. This course will allow students to administer safe and efficient health risk assessments and test procedures for the health-related components of fitness (aerobic, strength, flexibility, and body composition). Students will also be able to interpret test data and apply it to safe and effective exercise prescription.

Prerequisite: EXSC 1001 or by permission of program coordinator**Course Fees:** Supplemental Fee Level 2**Previous** EXS* 227, HPE* 245**EXSC 2031 - Exercise Programming for Clinical Populations***Credits: 3*

This course is designed to introduce students to theories and techniques of exercise prescription for a variety of special populations (obese, diabetic, arthritic, pregnant, elderly, and the widely symptomatic). Guidelines for appropriate cardiovascular and resistance training for these groups will be discussed in detail. Protocols for prevention, diagnosis, treatment and rehabilitation will be stressed.

Prerequisite: EXSC 2030**Previous** EXS* 230, HPE* 246**EXSC 2032 - Aspects of Strength and Conditioning***Credits: 3*

This course will offer the student an understanding of physiological adaptations seen with functional resistance and anaerobic exercise to improve daily function and skill-related health components (power, speed, agility, coordination and balance). Students will be exposed to a variety of scientific principles associated with resistance training design, periodization and functional training. New training methods and equipment will also be discussed as part of the special topics' component of this course.

Prerequisite: Completion of EXSC 2030 or permission of the program coordinator**Previous** EXS* 225, HPE* 247**EXSC 2040 - Exercise Physiology with Lab***Credits: 4*

The purpose of this course is to increase the student's knowledge and understanding about exercise physiology and the adaptations that occur during exercise. An understanding of how multiple systems of the body respond to acute and chronic exercise. Emphasis is placed on bioenergetics as well as the circulatory, respiratory, endocrine, metabolic and neuromuscular responses of exercise.

Prerequisite: EXSC 2030 and BIO 2111**Course Fees:** Supplemental Fee Level 2**Previous** EXS* 235, HPE* 241**EXSC 2050 - Kinesiology with Lab***Credits: 4*

This course is designed to give the student a broader understanding of the study of human movement, through application. Students will explore the anatomical structure of each muscle and joint of the body as well as positioning variables, range of motion, and kinematics.

Prerequisite: EXSC 1001, BIO 2111**Course Fees:** Supplemental Fee Level 2**Previous** EXS* 229, HPE* 243

EXSC 2095 - Field Placement in Exercise Science*Credits: 3*

This course is designed to combine classroom seminar with student experiences in a fitness setting within the community. Students will learn and experience facility management, assessments, individual and group training sessions, and exercise prescription during clinical hours. The seminar session will cover work-related problem solving, career development, administrative issues and other career related issues in the health fitness industry.

Prerequisite: EXSC 2030 - Exercise Testing and Program Design

Previous EXS*212, HPE* 295

FREN 1000 - Getting Started in French*Credits: 1*

This course introduces students to the essentials of the French language. This course will expose students to basic speaking and listening skills. Vocabulary needed to interact in French using simple phrases and common expressions is presented.

Additional Info: Not intended to complete General Education, LAS, or Program Language requirements.

FREN 1011 - Elementary French I*Credits: 4*

An introduction to the French language and French-speaking cultures with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous FRE* 111

FREN 1012 - Elementary French II*Credits: 4*

A continuation of Elementary French I, this course builds upon previous introduction to the French language and French-speaking cultures with a continued emphasis on the development of the four basic skills: listening, speaking, reading, and writing. This is the second part to the beginning sequence for students who have had some prior study of this language either in high school, Elementary French I or life experience. This is a four-credit course with an embedded language lab component.

Prerequisite: Students must have earned a grade of C- or higher in FREN 1011, complete a Language and Culture placement test, or obtain permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous FRE* 112

FREN 1020 - Beginning French Conversation I*Credits: 3*

This is an introductory course for students who wish to develop basic conversational skills in French. It focuses on everyday situations that students may encounter when living or traveling in French-speaking environments and dealing with French-speaking people in the United States. This is a beginning level course designed for students who have no more than 1 year of elementary French. It emphasizes practical, everyday situations and provides a variety of opportunities to develop listening, speaking, reading, and writing skills while enhancing cultural understanding and appreciation of the French-speaking world.

Previous FRE* 155

FREN 1021 - Beginning French Conversation II*Credits: 3*

This is a second semester introductory course for students who wish to continue developing their basic conversational skills in French. It focuses on everyday situations that students may encounter when living or traveling in French-speaking environments and dealing with French-speaking people in the United States. This is a beginning level course designed for students who have no more than 1 year of elementary French or have completed FREN 1011. It emphasizes practical, everyday situations and provides a variety of opportunities to develop listening, speaking, reading, and writing skills while enhancing cultural understanding and appreciation of the French-speaking world.

Prerequisite: A grade of C- or higher in either FREN 1020 - Beginning French Conversation I, FREN 1011 - Elementary French I, or FREN 1012 - Elementary French II, or permission of instructor.

FREN 1030 - Elementary French Composition I*Credits: 3*

In this high elementary course, students continue to develop writing skills through vocabulary development, spelling exercises, and composition. This course is designed to develop and refine writing skills and analysis through original compositions with attention to common problems of accentuation, punctuation, spelling, and grammar.

Prerequisite: A grade of C- or higher in FREN 1012 or complete a Language and Culture placement test, or permission of the instructor

Elective Code(s): LACU, LART

Previous FRE* 160

FREN 2011 - Intermediate French I*Credits: 4*

This course is for students who have already attained a working knowledge of the language. Students continue to develop and strengthen speaking and listening comprehension and reading and writing skills, as well as learn more about French-speaking cultures. Students are introduced to cultural and literary materials that will develop an appreciation of the arts, history, culture, and the literature of French-speaking peoples and create an awareness of cultural, social, and linguistic differences and similarities. Instruction focuses on oral and written communication. This is a four-credit course with an embedded language lab component.

Prerequisite: A grade of C- or higher in FREN 1012, or complete a Language and Culture placement test, or permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous FRE* 211

FREN 2012 - Intermediate French II*Credits: 4*

This course is for students who have already attained a working knowledge of the language by either completing 4 years of high school French, Intermediate French I, or the equivalent. Students continue to develop and strengthen speaking, listening comprehension, reading, and writing skills, as well as learn more about French-speaking cultures. Students are introduced to cultural and literary materials that will develop an appreciation of the arts, history, culture, and the literature of French-speaking peoples and create an awareness of cultural, social, and linguistic differences and similarities. Instruction focuses on oral and written communication. This is a four-credit course with an embedded language lab component.

Prerequisite: A grade of C- or higher in FREN 2011, placement test, or permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous FRE* 212

FREN 2030 - Intermediate French Composition I*Credits: 3*

In this high intermediate course, students continue to develop deeper fluency in French language skills with an emphasis on academic reading and writing. Students continue to refine reading comprehension, writing proficiency, listening, and speaking skills, and grammatical accuracy. Assigned college level readings, which may include whole works and academic writings, form the basis for small and whole class discussions and writing assignments. Students learn to appropriately integrate multiple sources into a research-based paper. Collaborative activities help students further develop linguistic clarity and accuracy, academic vocabulary, critical thinking, and development of ideas appropriate for academic study in French.

Prerequisite: A grade of C- or higher in FREN 2012 or complete a Language and Culture placement test, or permission of the instructor.

Elective Code(s): LACU, LART

Previous new course

FREN 2198 - Special Topics in French*Credits: 3*

This course covers topics of special interest in French. Topics vary by campus and semester but focus on literature and/or cultural study.

Prerequisite: FREN 2012 or permission of Instructor

Elective Code(s): LACU, LART

Previous FRE* 298

FREN 2199 - Independent Study in French*Credits: 1-3*

Students will have the opportunity to pursue with greater depth a topic within the French discipline guided by a faculty member. Students should have a high academic standing in French language.

Prerequisite: Permission of the Supervising Faculty All Independent studies must be arranged in the semester prior to registration, with advance departmental approval and the permission of a full-time Language and Culture faculty member.

Elective Code(s): LACU, LART

Previous FRE* 299

FTAD 1000 - Fitness & Health for Firefighters*Credits: 3*

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: M.D. Physical & Clearance to participate in physical fitness activities

Previous FTA* 100

FTAD 1001 - Fundamentals of Firefighting I*Credits: 9*

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. This Certification program is designed to meet all requirements of the State of CT Commission of Fire protection, firefighter I certification.

Prerequisite: Acceptance into the CT State CC Firefighting I & II Certification Academy - Gateway Campus; M.D. physical and clearance to participate in physical activities, lifting, bending, and carrying up to 30 lbs.

Previous FTA* 101

FTAD 1002 - Civil Service Test Preparation*Credits: 1*

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: FTAD 1001

Previous FTA* 103

FTAD 1010 - Fire Ground Hydraulics*Credits: 3*

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: FTAD 1001

Previous FTA* 110

FTAD 1012 - Introduction to Fire Technology*Credits: 3*

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.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous FTA* 112

FTAD 1016 - Building Construction*Credits: 3*

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.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous FTA* 116

FTAD 1018 - Fire Prevention & Inspection*Credits: 3*

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: FTAD 1012

Previous FTA* 118

FTAD 1022 - Fire Behavior & Combustion*Credits: 3*

Explores the theories and fundamentals of how and why fires start, spread, and are controlled.

Prerequisite: FTAD 1012**Previous FTA* 122****FTAD 1026 - Safety & Survival***Credits: 3*

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: FTAD 1012**Previous FTA* 126****FTAD 1101 - Fundamentals of Firefighting II***Credits: 3*

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. This Certification program is designed to meet all requirements of the State of CT Commission of Fire protection, firefighter I and II certification.

Prerequisite: FTAD 1001**Prerequisite/Corequisite:** none**Corequisite:** none**Previous FTA* 102****FTAD 2010 - Water Supply & Hydraulics***Credits: 3*

Provides a foundation of theoretical knowledge in order to understand the principles to analyze and solve water supply problems.

Prerequisite: FTAD 1012 and MATH 1002 or higher**Previous FTA* 210****FTAD 2012 - Legal Aspects of Emergency Services***Credits: 3*

Addresses the federal, state, and local laws that regulate emergency services and include a review of National standards, regulations, and consensus standards.

Prerequisite: FTAD 1012**Previous FTA* 212****FTAD 2016 - Municipal Fire Administration***Credits: 3*

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: FTAD 1012**Previous FTA* 216****FTAD 2017 - Occupational Safety & Health Administration***Credits: 3*

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: FTAD 1012**Previous FTA* 217****FTAD 2109 - Fire Investigation I***Credits: 3*

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: CHEM 1110 and FTAD 1016**Previous FTA* 219****FTAD 2207 - Fire Protection Systems***Credits: 3*

Provides information relating to the features of design and operation of fire alarm systems, water-based fire protection and portable fire extinguishers.

Prerequisite: FTAD 2010**Previous FTA* 227****FTAD 2209 - Fire Investigation II***Credits: 3*

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: FTAD 2109**Previous FTA* 229****FTAD 2300 - Strategy & Tactics***Credits: 3*

Provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents.

Prerequisite: FTAD 1012**Previous FTA* 230**

GAMD 1009 - Introduction to Games*Credits: 3*

An introduction to the history of games, terminology, and principles of game design and development. Students will learn to analyze, design, prototype and document a variety of games.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** CRTY**Previous DGA* 109****GAMD 1013 - Drawing for Animation and Games***Credits: 3*

This course will introduce students to basic drawing concepts, tools and techniques with a focus on drawing/drafting for animated characters and scenes for use in animated presentations and computer-based gaming. Techniques in line work, linear perspective, volumetric shading and color theory will combine with basic anatomy and caricature styles. The course will include traditional drawing and digital technology.

Elective Code(s): CRTY**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous DGA* 113****GAMD 2001 - World Building***Credits: 3*

In this course, students will learn to create dynamic worlds with diverse populations, mythology, and characters for games and animation. Students will use a variety of techniques and processes to develop and design worlds for their concept. World building gives a rich and dynamic canvas on which to develop characters, obstacles, motivations, macro and micro issues, and conflicts and resolutions. Such practice allows for more robust and consistent worlds in which to set singular or serial events in linear and non-linear ways. Using visual and written content, students will develop characters and environments that are influenced by both created and existing cultural and historical content.

Prerequisite: ENG 1010 with a C or higher**Previous DGA* 201****GAMD 2020 - Visual Storytelling & Sequential Art***Credits: 3*

This course explores visual narrative theories and techniques. Students become familiar with the discipline of sequential art and the various standard tools and techniques involved for composition, panel design and working with scripts to develop for film, games, comics, television and interactive design.

Prerequisite: GAMD 1013 with a C or higher**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous DGA* 220****GAMD 2024 - Digital Painting***Credits: 3*

This course will focus on the utilization of digital software and hardware to design and develop original creative illustrations for films, games, literature, and artistic expression. Students will learn lighting and form rendering, advanced color theory, various techniques in composition, and the design and development process for professional output and presentation.

Prerequisite: GAMD 1013 with a C or higher**Elective Code(s):** CRTY**Previous DGA* 224****GAMD 2063 - Animation Foundations***Credits: 3*

This foundation course is an introduction to the classic 12 principles of animation focusing on traditional production techniques in a digital format. Students learn how to apply core animation principles through classic animation exercises. Principles of timing, arcs, silhouette, anticipation and follow through are manipulated to visually convey weight, force and emotion to bring otherwise inanimate objects to life.

Prerequisite: GAMD 1013 with a C or higher**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous DGA* 263****GAMD 2071 - 3D Modeling I***Credits: 3*

This course is an introduction to designing and developing three-dimensional objects in a virtual space. Students learn how to create polygonal 3D models using industry standard modeling tools as they explore the basics of materials, lighting, texture mapping and rendering.

Prerequisite: GAMD 1013 with a C or higher**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous DGA* 271****GAMD 2072 - Advanced 3D Concepts***Credits: 3*

In this course students will use Industry Standard 3D visualization poly-modeling software to explore advance 3D modeling techniques for Organic Modeling, Hard Surface Modeling, UVW unwrapping of advanced and complex objects and Material construction and design. Students will also explore high poly sculpting and 3D painting using a variety of software packages currently in use by professional studios in the Game Design industry, CGI effects, Visual FX and others. Students will take the foundational material from DGA 271 3D Modeling 1 and apply it across multiple project-based assignments. Student will use techniques discussed in class to design, pre visualize, model, UVW unwrap, 3D sculpt or 3D paint complex 3D characters, environments and assets with an understanding of poly

resource management, rendering engine limitations, real time rendering requirements in game engines and other professional workflow considerations.

Prerequisite: GAMD 2071 with a C or higher

Course Fees: Supplemental Fee Level 2

Previous DGA* 272

GAMD 2075 - 2D Game Level Design

Credits: 3

This course will introduce students to designing and producing computer games in a two-dimensional environment. Students will learn general game theory and level design through analysis of existing games, how to navigate the interface and manipulate basic tools to create interactive levels in the editor of the game engine, and how to manipulate dynamic systems via basic scripting.

Prerequisite: GAMD 1009 with a C or higher

Course Fees: Supplemental Fee Level 2

Previous DGA* 275

GAMD 2090 - Game Studio Capstone

Credits: 3

In this course students will work as part of a team to develop a semester long collaborative time based or interactive project from concept to development and then to completion. Students will utilize skills from all previous courses in documentation, concept development, visual narrative design, animation (where applicable), game level design (where applicable), 3D asset development, project management, asset development, time management and communication skills. Students will work in teams of at least two to develop and create this project over the course of the semester. Students will work independently, outside of the classroom setting and within the classroom workshop time to develop their project. Students will report in on their progress through professional documentation and industry standard project management tools for game development and animation studios. Students will plan out a schedule of deliverables and will meet throughout the semester with the instructor and each of the other teams to give critique on existing assets and the direction of future assets. This course is designed to come near the end of the student's program so that they have the necessary skills to fully avail themselves of the experience.

Prerequisite: Permission of the instructor

Previous DGA* 296

GAMD 2167 - 2D Animation

Credits: 3

An introduction to 2D animation and 2D rigging techniques using digital tools. Techniques include key framing, timing, walk cycles, 2D animation rigs/skeletons, forward and inverse kinematics. These concepts will be taught using industry standard 2D software that will enable students to effectively create appealing objects, scenes and characters.

Prerequisite: GAMD 2063 with a C or higher

Course Fees: Supplemental Fee Level 2

Previous DGA* 267

GAMD 2176 - 3D Animation and Rigging

Credits: 3

An introduction to 3D animation and rigging techniques including key framing, curve editing, timing, squash and stretch, walk cycle, creating bone systems, constraints, skeletons, skinning, Forward Kinematics (FK), Inverse Kinematics (IK) and weight painting. Students will also learn to explore dynamics and particle systems. Students will learn and understand the connection between animation and rigging and specifically how rigging increases quality and productivity in animation production.

Prerequisite: GAMD 2071 with a C or higher

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous DGA* 276

GAMD 2177 - 3D Game Level Design

Credits: 3

This course will introduce students to designing and producing computer games in a three-dimensional environment. The course will involve working with a 3D game engine and will include essential instruction in working in 3D virtual space, working with the game engine programming language, and producing games that are set in 3D space.

Prerequisite: GAMD 2075 with a C or higher

Course Fees: Supplemental Fee Level 2 and Materials Fee

Previous DGA* 277

GEOG 1000 - Introduction to Geography*Credits: 3*

This course introduces some of the many topics geographers examine to explain the relationship between people and place. Topics include the physical earth, e.g. how mountains and lakes form, cultural patterns such as how languages in neighboring countries are related, population analysis, like human migration trends, environmental challenges like water scarcity, and economic analysis including growth and decline of regions. Study of the inter-relationship between the natural world and human landscapes is emphasized. Geographic factors that underlie current social, political, environmental and economic problems will also be explored.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** GLKY, LART, SSCI**Previous GEO* 101****GEOG 1010 - World Regional Geography***Credits: 3*

This course provides the student with a survey of the lands, peoples, and places in the world's major culture regions. Students explore the interaction between the physical environment, cultural, political and economic conditions. The varying patterns of human activity which emerge from this interplay are examined. Examples of regions under study include South and Middle America, South and East Asia, Southwest Asia & North Africa, the Caribbean and Eurasia.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** GLKY, LART, SSCI**Previous GEO* 111****GEOG 1020 - Introduction to Human Geography***Credits: 3*

This course provides an introduction to Human Geography by exploring the ways people shape the world in which they live. It will focus on the geographic aspects of cultural diversity, population trends, social identity, resource utilization, regional integration, urbanization, social challenges and justice, globalization and human impacts on the environment. The themes and concepts of human geography will be studied and explored through current issues and the larger questions which guide them.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** LART, SSCI**Previous GEO* 102****GEOG 1070 - This Fragile Planet: Environmental Geography***Credits: 3*

This course provides an introduction to current environmental issues and challenges from the uniquely integrative perspective of geography. Topics include the basic processes underlying environmental concerns at local, regional, and global scales ranging from the global issue of the climate crisis, to the local-scale impacts of drinking water contamination. The interactions of geography, history, politics, economics, culture and environmental science when dealing with environmental issues will be explored. Some of the initiatives underway/proposed to secure a path toward sustainable accommodation & development of the world's growing population will also be addressed.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** LART, SSCI**Previous GEO* 203****GEOG 1200 - Urban Geography***Credits: 3*

This course surveys urban geographical analysis and the development of the world's cities. Theoretical and methodological approaches of urban geography are used to explore cities as they shape and are shaped by their social, cultural, economic, and physical contexts. Topics include pre-industrial and industrial cities, the evolution of American cities, the role of globalization in urbanization, and new geographical patterns forming within and between cities. Contemporary urban issues both domestically and in Asia, Africa, and Middle and South America as they have developed from traditional forms to modern metropolises housing the majority of the world's urban dwellers will also be discussed.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** LART, SSCI**Previous GEO* 201**

GEOG 1300 - Introduction to Geographic Information Systems*Credits: 3*

Students will learn the basic principles of Geographic Information Systems (GIS), and explore and evaluate the various data models and structures used in the input management, analysis and output of geographic data. Students will develop hands-on experience through use of a microcomputer based GIS system, and examine how the nature and character of spatial data can be used in studies of natural and socio-economic environments. Basics within the fields of geography, cartography, spatial statistics, remote sensing, and Global Positioning Systems (GPS) and their roles within a GIS will be introduced.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** LART, SSCI**Previous GEO*** 246**GEOG 1330 - The Geography of the United States and Canada***Credits: 3*

This course introduces students to the human and physical landscapes of the US and Canada. A regional study of the environmental, cultural, demographic, political, and economic patterns that give character to the different parts of the US and Canada will be explored. Historical and contemporary factors are considered to determine the place of this region in the modern world, with focus on the changing role of the US on the global stage, and in the global marketplace.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** LART, SSCI**Previous GEO*** 202**GEOG 2900 - Geography and Tourism Development***Credits: 3*

The course introduces the tourism field, enumerates the goals of the profession and provides a guideline for building individual and collective successes within it. Need/want satisfiers and motivators associated with travel, intrinsic and extrinsic influences of the buying process, accommodations, support industries, regulation, development, and marketing will be covered. Spatial analysis of tourist flows, modes of transportation, effects on regional economies, and impacts on cultures and environments will also be discussed.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** LART, SSCI**Previous GEO*** 204**GEOL 1200 - Introduction to Physical Geology***Credits: 4*

This 4-credit laboratory natural science is suitable for science and non-science majors. This course serves as an introduction to the principles governing the composition and structure of the Earth, and the study of landforms and dynamic geological processes. Topics include minerals, rocks, fossils, glaciers, climate change, rivers, hydrology, erosion, beaches, earthquakes, volcanoes, plate tectonics, and mountain building. Students will investigate the geologic history of Connecticut. Some field labs are required.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Scientific Reasoning (SCRX)**Elective Code(s):** LART, SCI**Additional Info:** Required for Environmental Biology, Environmental Science: Sustainability, and Technical Studies: Environmental Science majors. **Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous GLG*** 121**GERM 1011 - Elementary German I***Credits: 4*

An introduction to the German language and German-speaking cultures with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the instructor.**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** FLNG, LACU**Previous GER*** 111

GERM 1012 - Elementary German II*Credits: 4*

A continuation of Elementary German I, this course builds upon previous introduction to the German language and German-speaking cultures with a continued emphasis on the development of the four basic skills: listening, speaking, reading, and writing. This is the second part to the beginning sequence for students who have had some prior study of this language either in high school, Elementary German I or life experience. This is a four-credit course with an embedded language lab component.

Prerequisite: Students must have earned a grade of C- or higher in GERM 1011, or complete a Language and Culture placement test, or permission of the instructor.

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous GER* 112

GERM 2011 - Intermediate German I*Credits: 4*

This course is for students who have already attained a working knowledge of the language. Students continue to develop and strengthen speaking and listening comprehension and reading and writing skills, as well as learn more about German-speaking cultures. Students are introduced to cultural and literary materials that will develop an appreciation of the arts, history, culture, and the literature of German-speaking peoples and create an awareness of cultural, social, and linguistic differences and similarities. Instruction focuses on oral and written communication. This is a four-credit course with an embedded language lab component.

Prerequisite: A grade of C- or higher in GERM 1012, or complete a Language and Culture placement test, or permission of the instructor.

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous GER* 211

GERM 2012 - Intermediate German II*Credits: 4*

This course is for students who have already attained a working knowledge of the language by either completing 4 years of high school German, Intermediate German I or the equivalent. Students continue to develop and strengthen speaking, listening comprehension, reading, and writing skills, as well as learn more about German-speaking cultures. Students are introduced to cultural and literary materials that will develop an appreciation of the arts, history, culture, and the literature of German-speaking peoples and create an

awareness of cultural, social, and linguistic differences and similarities. Instruction focuses on oral and written communication. This is a four-credit course with an embedded language lab component.

Prerequisite: A grade of C- or higher in GERM 2011 or complete a Language and Culture placement test, or permission of the instructor.

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous GER* 212

GRA 1101 - Introduction to Computer Graphics*Credits: 3*

This foundation course is an introduction to creating digital art using industry standard software and hardware tools. Students are introduced to image manipulation, vector design, and 3D visualization. An introduction to the computer as a graphic design and artist's tool. Using Adobe Cloud, students learn basic use and application of vector illustration (Adobe Illustrator), raster image (Adobe Photoshop), and scanning software programs to the art and design process. Emphasis is on "hands on" use of the computer, and how the computer can aid the artist's and designer's problem-solving process through interactive visual alternatives.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): CRTY

Previous DGA* 111, GRA* 149, GRA* 110, DGA 1101

GRA 1501 - Graphic Design I*Credits: 3*

This course is designed to introduce students to visual communication through graphic design. Students practice basic studio skills with an emphasis on developing the ability to convert creative concepts into a visual medium. Topics include: proper file management, computer navigation basics, fundamental techniques of the design process, and digital plagiarism. Students will learn to create a graphic identify through proper typography, image editing, page layout, portfolio development and mechanical preparation.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): CRTY

Course Fees: Supplemental Fee Level 2

Previous GRA*150, GRA*151

GRA 2001 - Typography*Credits: 3*

This course focuses on the exploration and application of typography in graphic design. Lectures and assignments will cover typographic history, fundamentals, principles, as well as demonstrate the creative and pragmatic application of typography using traditional and contemporary tools.

Prerequisite: C- or higher in GRA 1501**Elective Code(s):** LART**Course Fees:** Supplemental Fee Level 2**Previous GRA*** 201**GRA 2090 - Graphic Design Capstone***Credits: 3*

This course is designed to train students to produce various on-campus and off-campus professional publications. This involves researching, interviewing, writing, editing, photography, and proofreading. It also includes all the design work primarily using Adobe CC. Advertising (sales and design) is also part of this course. Students are expected to complete portfolio worthy design pieces.

Prerequisite: GRA 2502 or permission of the graphic design program coordinator**Elective Code(s):** LART**Course Fees:** Supplemental Fee Level 2**Previous GRA*** 295**GRA 2095 - Graphic Design Internship***Credits: 3*

This course provides students with practical, on the job experience in preparation for a successful career in the graphic design field. It is meant to add a new dimension and relevance to the student's education experience. The objective is for the student to secure a position within the business community that can and will provide them with an opportunity to experience the business world. This experience will validate and extend their classroom learning and prepare them even more for their future career. The program coordinator is available to aid in securing such positions, but the responsibility is on the student. An exit portfolio review is scheduled at the completion of the course. In the case of an operational Career Placement and Coop Office on campus, the Director of Coop Education does internship placement: This course provides students with the opportunity to apply classroom theory in an actual work setting, in paid and unpaid supervised positions, related to their majors. Completion of approximately 15-20 hours per week of work (150 hours for unpaid placements, depending on major; 300 hours for paid placements) and participation in Cooperative Education Online are required. In addition to the work placement, students are required to attend and complete classroom work (online) to enhance their cooperative education work experiences.

Prerequisite: Student must have a minimum of 15 program credits and permission of coordinator/chair**Elective Code(s):** LART**Previous GRA*** 296**GRA 2098 - Special Topics: Graphic Design***Credits: 3*

A faculty-developed studio or digital computer graphic course that focuses on exploring a media or creative process that is outside the current courses that are offered in the Graphic Design program. This course is designed to provide our students with an opportunity to pursue an area of study that is of interest to a large group. The program coordinator and department chairperson will approve the area of study.

Prerequisite: GRA 1501 or GRA 1101 or permission of the Coordinator**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** LART**Cross-listed:** DGA 2098**Previous DGA*** 298, DGA 2098**GRA 2099 - Independent Study in Graphic Design***Credits: 1-3*

Graphic Design majors who have completed a range of program requirements and are nearing graduation may study a topic or set of topics with the permission of /under the supervision of a full-time graphic design faculty member. Student's written objectives, procedures and credit hours must be approved by the supervising faculty. The faculty member determines if the student is qualified to undertake the project and provides guidance to the student.

Prerequisite: Permission of the supervising faculty. All independent projects must be arranged in the semester prior to registration, with advance approval and with the supervision of one of the full-time Graphic Design faculty members.**Elective Code(s):** LART**Previous GRA*** 299

GRA 2101 - Advanced Computer Graphics*Credits: 3*

Advanced Computer Graphics builds upon GRA 1101 but places a greater emphasis on professional design presentation through the development of more complex digital graphics projects. This class will focus on digital layout using Adobe CC. Students will learn basic design thinking skills, presentation techniques, and digital layout through the use of several software programs. The skillful combining of images and text become the core of this course. It is a working studio class using demonstrations and hands-on work that will teach students to solve visual problems using industry standard graphics creation, page layout software and presentation techniques.

Prerequisite: GRA 1101 or GRA 2300**Elective Code(s):** LART**Previous** DGA* 212, DGA 2101**GRA 2201 - Illustration I***Credits: 3*

A studio course designed to develop fundamental graphic rendering and hand-building skills by utilizing the design and development process for professional output and presentation. The course explores a variety of materials and media through the creation of images. The emphasis is on the translation of concepts into visuals.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** CRTY, LART**Additional Info:** Studio: 6 hours per week. **Course Fees:** Supplemental Fee Level 2**Previous** ART* 215, GRA* 221**GRA 2202 - Illustration II***Credits: 3*

This studio course expands the skills and techniques of translating concepts into visual form that were learned in GRA 2201, with a greater emphasis on project development and professional presentation. Through a series of lectures, demonstrations and projects, the students will and apply the concepts and techniques for creating illustrations as a form of communication and art.

Prerequisite: GRA 2201**Elective Code(s):** LART**Course Fees:** Supplemental Fee Level 2**Previous** GRA* 222**GRA 2207 - Interactive Media***Credits: 3*

This course will introduce the principles and processes used in interactive media specifically for web-based media. It will build on the principles and techniques learned in Graphic Design I & II. Aspects of interactive media to be learned include: HTML & CSS, wireframing, interface design and using CSS and jQuery to create basic animations. Project planning, proper file organization and working with clients will also be discussed.

Prerequisite: GRA 2502 or by permission of the instructor**Elective Code(s):** CRTY, LART**Previous** GRA* 227**GRA 2300 - Digital Imaging I***Credits: 3*

This foundation course in graphic design introduces students to creating various pieces using industry standard software (Adobe CC). Students use the software and computer for image manipulation, vector design and illustration, and page layout. Students will learn and experience the basic design process. Emphasis is on "hands on" use of the computer and software programs and how they aid the designer in real world design situations by teaching them to communicate through visual design.

Prerequisite: Eligible for ENG 1010 or permission of the Graphic Design program coordinator**Elective Code(s):** CRTY, LART**Course Fees:** Supplemental Fee Level 2**Previous** GRA* 230**GRA 2301 - Digital Imaging II***Credits: 3*

This course focuses on the continued use of digital imagery in art and design, by furthering a student's skill in the use of Adobe CC software. The course exploring more advanced electronic image creation, photo retouching and manipulation techniques. Students will study advanced design principles and addresses some technical issues facing a computer artist and graphic designer.

Prerequisite:

GRA 1501 or GRA 2300 or GRA 1101 or permission of the Graphic Design program coordinator or department chair

Elective Code(s): LART**Course Fees:** Supplemental Fee Level 2**Previous** GRA* 231**GRA 2306 - Digital Illustration***Credits: 3*

Students expand upon their skills and knowledge of procedures learned in prerequisite courses. Through lectures, demonstrations, exercises and real-world projects, the focus will be on Adobe Illustrator. Students will learn how to create digital illustrations, develop skills for easy execution of

special imaging and typographic effects, and apply these skills to solve design problems in print and web environments. Students are required to have basic graphic design and computer layout and typography skills before registering for this course.

Prerequisite: GRA 1501, or ART 1110, ART 1210 or permission of graphic design coordinator.

Elective Code(s): LART

Course Fees: Supplemental Fee Level 2

Previous GRA* 236, GRA*I237

GRA 2401 - Digital Page Design

Credits: 3

An exploration of desktop publishing and page-layout programs that enable designers to execute fine control over type and graphic placement. InDesign has become the industry standard among design professionals for desktop publishing. In this course students will acquire the knowledge and practical experience necessary to use this program effectively in a production environment. Projects may include brochures, business cards, letterheads, and the layout and design of the school newspaper.

Prerequisite: GRA 1101 or ART 1210 or permission of instructor

Elective Code(s): LART

Course Fees: Supplemental Fee Level 2

Previous GRA* 241

GRA 2502 - Graphic Design II

Credits: 3

The second level of graphic design builds upon fundamentals covered in GRA 1501 and GRA 1101 but place a greater emphasis on professional design presentation through the development of more complex projects. This class will focus on digital layout using Adobe CC. Students will learn basic design thinking skills, presentation techniques, and digital layout through the use of several software programs. The skillful combining of images and text become the core of this course. It is a working studio class using demonstrations and hands-on work that will teach students to solve visual problems using industry standard page layout software and presentation techniques for print or the web. Topics include are design, page layout, typography, web communication and portfolio development.

Prerequisite: GRA 1501 or GRA 1101

Elective Code(s): CRTY, LART

Course Fees: Supplemental Fee Level 2

Previous GRA* 252

GRA 2503 - Graphic Design III

Credits: 3

This course applies the theory and range of skills learned in the program thus far to advanced projects. This course will emphasize the development of professional-quality portfolio pieces. Classes consist of lecture, demonstration, applied practice, critiques, and class discussions.

Prerequisite: GRA 2502 - Graphic Design II (grade C or higher) and GRA 2401 - Digital Page Design or Permission from the Program Coordinator

GRA 2507 - Motion Graphics and Effects

Credits: 3

This course provides an introduction to creating visual effects for video and animated graphics. Using several production methods students will design and develop 2D and 3D graphics for use in interactive and time-based media such as television, film, game animation, interactive design, and web design.

Prerequisite: GRA 1101 or COMM 1604

Elective Code(s): LART

Previous DGA* 257, DGA* 289, DGA 2507

GRA 2508 - User Experience Design

Credits: 3

This course will explore user needs in relation to designed interfaces. Students will be introduced to the world of user-centered design. Various usability aspects of interaction will be examined to give a broad overview of critical topics within cultural requirements of interfaces and interface design and content management systems. Students will collaborate to develop an interaction model using the foundations of usability and interaction within the context of social media.

Prerequisite: GRA 1101 or permission of the instructor

Elective Code(s): LART

Previous DGA* 258, DGA 2508

GRA 2600 - Web Design

Credits: 3

This course is an introduction to the concepts of professional web site design using Industry-standard website development software. Students will learn the basics of web design templates, Cascading Style Sheets (CSS), image creation and manipulation as well as preparing documents, illustrations, and images for the web. Emphasis will be on site design and management, aesthetics, page development and construction. User Experience Design process will be explored and user needs in relation to designed interfaces. Students will be introduced to the world of user-centered design. The four design principles of contrast, repetition, alignment, and

proximity will be discussed and utilized to create a web site using authoring tools as well as the skills acquired in the prerequisite courses.

Prerequisite: GRA 1101 or CSC 1271 or permission of the graphic design program coordinator/chair

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): CRTY, LART

Course Fees: Supplemental Fee Level 2

Previous GRA* 260

GRA 2601 - Web Design II

Credits: 3

This computer graphics course is a continuation of Web Design I and professional web site development using Industry-standard website development software. Students will be moving on to responsive design techniques found in open-source software like Bootstrap. Students continue to use Cascading Style Sheets (CSS), HTML, and image creation and manipulation techniques of documents, illustrations, and images for the web. Site design and management, aesthetics, page development and construction are emphasized. Students will continue to focus on user-centered design, user experience design and user needs in relation to designed interfaces.

Prerequisite: GRA 2600 or permission of the graphic design program coordinator/chair

Elective Code(s): CRTY, LART

Course Fees: Supplemental Fee Level 2

Previous GRA* 262

GRA 2705 - 3D Computer Modeling

Credits: 3

Students will use computer modeling to explore the principles of 3-dimensional design and techniques of three-dimensional image construction utilizing industry standard software. Projects involving object, character and architectural modeling will emphasize the concepts including spatial proportion, silhouette, negative space, light/shadow and texture through the creation and editing of 3D objects. Topics include environment building, complex object creation, lighting, texture mapping and rendering. The integration of character design, lighting effects, atmospheric conditions and controlling object placement in a three-dimensional context are examined.

Prerequisite: GRA 2502 or permission of the graphic design program coordinator

Elective Code(s): LART

Previous GRA* 275

HIMT 1000 - Medical Terminology

Credits: 3

Designed to teach students to accurately spell, pronounce and define common medical terms related to major disease processes, diagnostic procedures, laboratory tests, abbreviations, drugs, and treatment modalities. Students will be introduced to controlled vocabularies used in electronic health records. Students will recognize the role of medical language in information standardization and communication in the healthcare setting.

Previous HIM* 101

HIMT 1030 - Pharmacology in Health Information

Credits: 1

This course emphasizes the principles of pharmacology, including the classifications of drugs, and the effects of selected medications on the human body. Emphasis is placed on understanding the actions of the drugs, such as absorption, distribution, metabolism, and excretion of drugs by the body, and matching drugs to common conditions and laboratory findings.

Previous HIM* 213

HIMT 1110 - Introduction to Health Information Management

Credits: 3

This course provides students with an introduction to the health information management (HIM) profession. Students will explore the various types of healthcare services and the types of health information produced and maintained in those environments. Students will learn to apply standards for health record documentation. Students will understand the legal environment of healthcare and will apply regulations and standards that protect the privacy and confidentiality of health information. Students will understand the factors in management of a healthcare organization that impact the management of health data.

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM* 105**

HIMT 1410 - Healthcare Access Management

Credits: 3

The Healthcare Access Management (HAM) course covers the processes and skills required of healthcare professionals providing patient access services. Patient access services include scheduling, admissions, registration, pre-certification, financial counseling, benefit verification, and point of service collections. Patient access professionals must have strong telecommunications skills to coordinate service delivery between ordering providers, patients, and third-party payers. Employers include hospitals, skilled nursing facilities, ambulatory care providers, ambulatory surgery centers,

physicians offices, clinics, home health agencies, and more. Topics covered in the course include understanding the HAM role in the revenue cycle, patient scheduling, pre-registration, and admission, the patient and family experience, regulatory compliance, bed management, information systems, and resource management.

Prerequisite: none

Prerequisite/Corequisite: none

HIMT 2010 - Human Diseases and Pathophysiology

Credits: 3

This course introduces the study of pathophysiology and anatomy, the functional and dysfunctional changes that accompany human diseases, the cause and systemic effects of major diseases, and general health management of disease and injuries across the human lifespan. Knowledge of disease processes will be key to keeping pace with the increasing focus on medical decision making and quality measures. The purpose of this course is to supply the student preparing for an administrative healthcare role with basic understanding of common diseases and disorders by body system which will prepare them for the health care setting.

Prerequisite: MDAS 1025 or BOT 1800 or (HIMT 1000 and BIO 1100) and Eligible for ENG 1010

Prerequisite/Corequisite: none

Corequisite: none

Previous HIM*203

HIMT 2110 - Health Information Management Principles

Credits: 3

This course introduces to students the health information management profession and healthcare delivery systems used. Related topics include health care data systems, the patient record, electronic health record (EHR), data management, retention and destruction of medical records, data collection processes, legal aspects of health information management, quality and risk management, and HIPAA regulations related to the medical record.

Prerequisite: eligibility for ENG 1010

Previous HIM* 201

HIMT 2111 - Advanced Coding & Auditing

Credits: 3

This course explores principles of outpatient medical auditing. Students will gain hands-on coding skills assigning International Classification of Disease - Clinical Modification (ICD-CM), Current Procedural Terminology (CPT), and Healthcare Common Procedure Coding System (HCPCS) Level II codes to cases. Students will perform abstraction and auditing of outpatient cases. This course prepares students for the Certified Professional Medical Auditor (AAPC CPMA) certification examination.

Prerequisite: (BOT 1801 and BOT 1802) **OR** (HIMT 2730 and HIMT 2740) and either HIMT 2010 or BIO 2103 all with a "C" or higher.

Prerequisite/Corequisite: none

Corequisite: none

Previous HIM* 211

HIMT 2192 - Clinical Coding Professional Practice Experience I

Credits: 3

Through this course, students will develop an understanding of coding and classification systems to assign valid diagnostic and/or procedure codes. It will include the validation of coded clinical information and case mix/severity of illness data. Students will complete coding case studies utilizing a logic-based encoder and coding references. Medical records coded in this course include cases covering the following body systems and coding categories: integumentary system, musculoskeletal system, digestive system, and respiratory system. Students will identify strategies to ensure data integrity, compliance with documentation requirements, and privacy of health information.

Prerequisite: HIMT 2730, HIMT 2740, **AND** BIO 2103 all with a "C" or higher

Corequisite: HIMT 2392 **AND** HIMT 2792

Additional Info: All three *Clinical Coding Professional Practice Experience* courses are a virtual professional practice experience (PPE), the courses run in 5-week sessions in the same semester. Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM*** 215

HIMT 2350 - Healthcare Informatics

Credits: 3

Students will learn about the role of information technology in the delivery of healthcare services. The course will begin by addressing the hardware and infrastructure to support the use of information technologies. Students will learn about the lifecycle of information systems and the Health Information Management (HIM) professional's role in system selection, design, and support. Students will apply health informatics concepts to the management of health information. The course will address methods for ensuring the privacy and security of health information along with issues of access and usability including health information exchange. The course will include simulation lab practice using an electronic health record.

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM*** 157

HIMT 2380 - Healthcare Statistics*Credits: 3*

Students will learn methods for managing data quality and ensuring the accuracy and integrity of health data. Students will have hands-on practice calculating healthcare statistics and analyzing healthcare data to identify trends. The course will include practice using software to analyze data and create data visualizations. Student will explore publicly available healthcare data complete a research project utilizing the selected data set and statistical tools to analyze data.

Prerequisite: MATH 2200 with a "C" or higher.

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM* 230**

HIMT 2392 - Clinical Coding Professional Practice Experience II*Credits: 3*

Through this course, students will develop an understanding of coding and classification systems to assign valid diagnostic and/or procedure codes. It will include the validation of coded clinical information and case mix/severity of illness data. Students will complete coding case studies utilizing a logic-based encoder and coding references. Medical records coded in this course include cases covering the following body systems and coding categories: infectious and parasitic disease; endocrine diseases; nervous system and sense organs; neoplasm; genitourinary system; pregnancy, childbirth, and the puerperium; congenital abnormalities; signs and symptoms; and mental disorders. Students will identify strategies to ensure security of health information. Students will explore the role of health information professionals in risk management and the impact of policy on healthcare. Students will discover leadership opportunities for health information professionals.

Prerequisite: HIMT 2740 AND BIO 2103 both with a "C" or higher

Corequisite: HIMT 2792

Additional Info: All three *Clinical Coding Professional Practice Experience* courses are a virtual professional practice experience (PPE), the courses run in 5-week sessions in the same semester. Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM* 216**

HIMT 2460 - Healthcare Reimbursement*Credits: 3*

Students will understand the history and development of payment systems and insurance models and their impact on health, access to care, and quality of healthcare. Students will summarize regulatory requirements and reimbursement methodologies for different types of healthcare organizations.

Students will be able to describe components of revenue cycle management and clinical documentation improvement. Students will articulate the impact of health insurance models and payment systems on access to healthcare and health disparities.

Prerequisite: Eligible for MATH 1200

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM* 113**

HIMT 2530 - Compliance in the Outpatient Setting*Credits: 3*

This course explores the components of healthcare compliance programs in the outpatient setting as well as the agencies, laws, policies, and acts that support compliance. Students will identify strategies to ensure data integrity, compliance with documentation requirements, and privacy of health information. Areas explored also include internal and external audits, reporting, and enforcement.

Prerequisite: (HIMT 1110 OR HIMT 2110) AND eligibility for ENG 1010.

Previous HIM*160

HIMT 2540 - Privacy, Security, and Compliance*Credits: 3*

Students will learn about the legal and ethical issues affecting healthcare today, including legislative and regulatory processes. Students will explore the health information management (HIM) professional's role in risk management and organizational compliance. Special attention will be devoted to issues of electronic record systems from the legal and ethical perspective including strategies for applying the Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy and Security Rules. Students will study health information/record laws and regulations (such as retention, patient rights/advocacy, advanced directives, and HIPAA) along with other regulatory standards that affect the healthcare environment and workforce.

Prerequisite: HIMT 1110 with a "C" or higher.

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM* 160**

HIMT 2650 - Quality Management*Credits: 3*

This course covers topics of leadership, supervision, and quality management. Students will learn common quality improvement processes in healthcare organizations, and discuss topics related to accreditation, licensure, teamwork, change management, project management, data analysis and other quality measures. Students will also perform financial management tasks such as budgeting, accounting, and

variance analysis. Employee recruitment and employment law will be explored, along with creating an environment that supports a culture of diversity.

Prerequisite: HIMT 1110 with a "C" or higher.

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous** HIM* 220

HIMT 2730 - Clinical Classification Systems I

Credits: 3

Students will explain the use of classification systems, clinical vocabularies, and nomenclatures in healthcare. Students will apply diagnosis and procedure codes from the current version (and available future releases) of the International Classification of Disease - Clinical Modification (ICD-10-CM), the International Classification of Disease - Procedure Coding System (ICD-10-PCS), the International Classification of Disease for Oncology, 3rd Edition (ICD-O-3), and the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Students will understand coding for cancer registry, abstracting for cancer registry, and cancer staging.

Prerequisite: (BIO 1100/BIO 1100L) **OR** BIO 1111 **OR** BIO 2112 and HIMT 1000 all with a grade of "C" or higher

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous** HIM* 120

HIMT 2740 - Clinical Classification Systems II

Credits: 3

Students will explain the use of classification systems, clinical vocabularies, and nomenclatures in healthcare. Students will apply codes from the current version (and available future releases) of Current Procedural Terminology (CPT) to describe diagnostic and therapeutic procedures and medical and surgical services. Students will apply Healthcare Common Procedure Coding System (HCPCS) Level II codes to report healthcare procedures, supplies, products, and services that are not reportable under the CPT system. Students will apply codes from the Systemized Nomenclature of Medicine-Clinical Terms (SNOMED-CT) to describe diseases, clinical findings, etiologies, procedures, and outcomes. Students will understand the uses of other clinical classifications, terminologies, and codes sets including Logical Observation Identifiers, Names, and Codes (LOINC), International Classification of Functioning, Disability and Health (ICF), Current Dental Terminology (CDT), RxNorm, National Drug Codes (NDC) and nursing terminologies. Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully

online, allowing students to access the program from any location.

Prerequisite: (BIO 1100/BIO 1100L) **OR** BIO 1111 **OR** BIO 2112 and HIMT 1000 all with a grade of "C" or higher

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous** HIM* 121

HIMT 2750 - Medical Coding Case Studies

Credits: 2

Students will participate in simulation lab activities covering advanced coding topics and hands-on activities using health information management software applications.

Prerequisite: BIO 2103, HIMT 2730, and HIMT 2740 all with a grade of "C" or higher

Prerequisite/Corequisite: none

Corequisite: none

Previous new

HIMT 2792 - Clinical Coding Professional Practice Experience III

Credits: 3

Through this course, students will develop an understanding of coding and classification systems to assign valid diagnostic and/or procedure codes. It will include the validation of coded clinical information and case mix/severity of illness data. Students will complete coding case studies utilizing a logic-based encoder and coding references. Medical records coded in this course include cases covering the following body systems and coding categories: circulatory system, injury and poisoning, and factors influencing health status. Students will recommend strategies for compliance with regulatory requirements and managing the revenue cycle.

Prerequisite: HIMT 2730, HIMT 2740, and BIO 2103 all with a grade of "C" or higher

Corequisite: HIMT 2392 AND HIMT 2192

Additional Info: All three *Clinical Coding Professional Practice Experience* courses are a virtual professional practice experience (PPE), the courses run in 5-week sessions in the same semester. Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous** HIM* 217

HIMT 2870 - Coding Specialist Certification Exam Preparation

Credits: 1

Students completing the AHIMA-approved Clinical Coding Certificate at Middlesex are eligible to sit for the American Health Information Management Association (AHIMA) Certified Coding Specialist (CCS) and/or Certified Coding Specialist-Physician-based (CCS-P) certification exams. This

course will prepare students for the CCS/CCS-P certification exams by providing test-taking tips and study strategies. Students will review exam content including data structure, content, and information governance, information protection, informatics, analytics, and data use, revenue cycle management, health law and compliance, and organizational management and leadership. Students will receive assistance in registering for certification exams and will complete practice tests. Students will have the opportunity to explore career goals and prepare a resume.

Prerequisite: Permission of Program Coordinator [based on eligibility for the Certified Coding Specialist (CCS) and/or Certified Coding Specialist-Physician-based (CCS-P) certification exams]

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM* 290**

HIMT 2880 - Registered Health Information Technician Certification Exam Preparation

Credits: 1

Students completing the CAHIIM-accredited HIM associate degree program at Middlesex are eligible to sit for the American Health Information Management Association (AHIMA) Registered Health Information Technician (RHIT) certification exam. This course will prepare students for the RHIT certification exam by providing test-taking tips and study strategies. Students will review exam content including data structure, content, and information governance, information protection, informatics, analytics, and data use, revenue cycle management, health law and compliance, and organizational management and leadership. Students will receive assistance in registering for certification exams and will complete practice tests.

Prerequisite: Admission to the Health Information Technology - Data Management, AS (HITD-AS) program.

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM* 289**

HIMT 2892 - Health Information Professional Practice Experience

Credits: 1

Students will participate in the health information professional's work environment through a 40-50 hour externally supervised professional practice experience (PPE). In preparation for the externally supervised experience, students will explore career goals, networking, professional organizations, and prepare a resume. After the PPE, students will deliver a presentation describing the activities they engaged in during the PPE.

Prerequisite: HIMT 2350, HIMT 2460, HIMT 2540, HIMT 2730, and HIMT 2740 all with a grade of "C" or higher. Admission to the Health Information Technology - Data Management, AS (HITD-AS) program.

Prerequisite/Corequisite: None

Additional Info: Offered by the Middlesex campus of the CT State Community College only; the courses are offered fully online, allowing students to access the program from any location. **Previous HIM* 280**

HIST 1001 - Western History to the 1500s

Credits: 3

This course is an examination of major themes in the development of the Western World from the earliest historical beginnings to the Renaissance. Topics include: Ancient Middle East, Greece, Rome, Medieval and Renaissance Europe.

Prerequisite: Eligibility for ENG 0910 or ENG 1010

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): GLKY, HUM, LART

Previous HIS* 101

HIST 1001H - Western History to the 1500s Honors

Credits: 3

This course is an examination of major themes in the development of the Western World from the earliest historical beginnings to the Renaissance. Topics include: Ancient Middle East, Greece, Rome, Medieval and Renaissance Europe. As this is an honors course, students will be required to complete additional readings and a research paper or project.

Prerequisite: Eligibility for ENG 1010 or ENG 0910 and permission of Honors Program Coordinator

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): HUM, LART

Previous HIS* 101H

HIST 1002 - Western History from the 1500s

Credits: 3

This course is an examination of Western History from the Reformation through World War II. Major topics covered in the course include: the Reformation, Wars of Religion, development of national governments, the Scientific Revolution, Enlightenment, Agricultural and Industrial Revolutions, French Revolution, Nationalism, Imperialism, and the First and Second World Wars.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): GLKY, HUM, LART

Previous HIS* 102

HIST 1002H - Western History from the 1500s Honors*Credits: 3*

This course is an examination of Western History from the Reformation through World War II. Major topics covered in the course include: the Reformation, Wars of Religion, development of national governments, the Scientific Revolution, Enlightenment, Agricultural and Industrial Revolutions, French Revolution, Nationalism, Imperialism, and the First and Second World Wars. As this is an honors course, students will be required to complete additional readings and a research paper or project.

Prerequisite: Eligibility for ENG 1010 or ENG 0910 and permission of Honors Program Coordinator.

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): HUM, LART

Previous HIS* 102H

HIST 1015 - US History to 1877*Credits: 3*

This course is an examination of major themes in the development of North America from pre-European settlements to the end of the American Civil War and Reconstruction. Topics include Native American societies, European colonization, slavery, the formation of the United States, the Antebellum, and the Civil War/Reconstruction.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): HUM, LART

Previous HIS* 201

HIST 1015H - US History to 1877 Honors*Credits: 3*

This course is an examination of major themes in the development of North America from pre-European settlements to the end of the American Civil War and Reconstruction. Topics include Native American societies, European colonization, slavery, the formation of the United States, the Antebellum, and the Civil War/Reconstruction. As this is an honors course, students will be required to complete additional readings and a research paper or project.

Prerequisite: Eligibility for ENG 1010 or ENG 0910 and permission of Honors Program Coordinator.

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): HUM, LART

Previous HIS* 201H

HIST 1016 - US History from Reconstruction*Credits: 3*

This course is an examination of major themes in the development of the United States from the Reconstruction

Period to the Cold War and beyond. Topics include Reconstruction, westward expansion, the effects of industrialization and urbanization in America, the rise of imperialism and the growth of the U.S. as a world power, the World Wars, the Great Depression, and the Cold War. In this course, students will also explore the fight for suffrage, civil rights, gender equality, and freedom movements.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): HUM, LART

Previous HIS* 202

HIST 1016H - US History from Reconstruction Honors*Credits: 3*

This course is an examination of major themes in the development of the United States from the Reconstruction Period to the Cold War and beyond. Topics include Reconstruction, westward expansion, the effects of industrialization and urbanization in America, the rise of imperialism and the growth of the U.S. as a world power, the World Wars, the Great Depression, and the Cold War. In this course, students will also explore the fight for suffrage, civil rights, gender equality, and freedom movements. As this is an honors course, students will be required to complete additional readings and a research paper or project.

Prerequisite: Eligibility for ENG 0910 or ENG 1010 and permission of Honors Program Coordinator.

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): HUM, LART

Previous HIS* 202H

HIST 1021 - World History to the 1400s*Credits: 3*

Beginning with an examination of the earliest human communities, this course studies the development and spread of major societies and their cultures throughout the world, including topics such as religion, political and social systems, interconnections and conflicts, and trade through the 1400s.

Prerequisite: eligibility for ENG 1010 or ENG 0910

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): GLKY, HUM, LART

Previous HIS* 121

HIST 1021H - World History to the 1400s Honors*Credits: 3*

Beginning with an examination of the earliest human communities, this course studies the development and spread of major societies and their cultures throughout the world, including topics such as religion, political and social systems, interconnections and conflicts, and trade through the 1400s.

As this is an honors course, students will be required to complete additional readings and a research paper or project.

Prerequisite: Eligibility for ENG 1010 or ENG 0910 and permission of Honors Program Coordinator.

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): HUM, LART

Previous HIS* 121H

HIST 1022 - World History since 1500s

Credits: 3

This course studies the major trends and conflicts throughout the world from the late 1400s to the late 1900s, including the impact of slavery, imperialism, authoritarianism, the two World Wars, the Cold War, and freedom movements such as anti-colonialism and the Civil Rights movement.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): GLKY, HUM, LART

Previous HIS* 122

HIST 1022H - World History since 1500s Honors

Credits: 3

This course studies the major trends and conflicts throughout the world from the late 1400s to the late 1900s, including the impact of slavery, imperialism, authoritarianism, the two World Wars, the Cold War, and freedom movements such as anti-colonialism and the Civil Rights movement. As this is an honors course, students will be required to complete additional readings and a research paper or project.

Prerequisite: Eligibility for ENG 1010 or ENG 0910 and permission of Honors Program Coordinator.

General Education Code: Historical Knowledge & Understanding (HISX)

Elective Code(s): HUM, LART

Previous HIS* 122H

HIST 1047 - History of Immigrant Experience in the U.S.

Credits: 3

This course examines the history and culture of immigrant groups in the U.S. Topics will include the history of international immigration to the U.S., the shaping of ethnic identities among various immigrants, and the culture these groups created.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Previous HIS* 147

HIST 2003 - History of Religions in America

Credits: 3

This course introduces the major religions and spiritual traditions of the world including origins, history, beliefs, and practices.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 203

HIST 2010 - History of Colonial America

Credits: 3

A study of the 13 American colonies in the 17th and 18th centuries with emphasis on the Europeans and African who settled the colonies.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 210

HIST 2011 - History of Connecticut

Credits: 3

A survey of Connecticut's history from 1633 to the present from political, social, and economic perspectives. Emphasis will be placed on topics such as immigration, assimilation, industrialization, and cultural movements.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 211

HIST 2013 - US History Since WWII

Credits: 3

This course is a survey of American history from the Second World War to contemporary times. In this course, students will explore the great challenges that the nation faced during the Cold War. We will also investigate the societal transformations that occurred in the political, economic, and social lives of Americans and how these changes still resonate today.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 213

HIST 2014 - Women in Early American History

Credits: 3

This course examines major themes in the lives of women and their experiences related to the development of North America from pre-European settlements, through the American Civil War and Reconstruction. Topics include women's roles in the New World, women in Colonial America, mothers and daughters, revolutions, Republican Motherhood, and True Womanhood, women's relationships to patriarchy and enslaving people, Antebellum reform movements, westward expansion, and Redefining

Womanhood. The course concludes with women and the American Civil War and Reconstruction.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 214

HIST 2015 - Women in the US from 1865

Credits: 3

This course will examine the position of women in the United States from the late nineteenth century to the present. Topics of s'move'sw/swomen and patterns of work, women and business, women and religion, women and assertiveness, women and sexuality, women and aging, women and divorce and women and affirmative action.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 215

HIST 2016 - African American History to 1877

Credits: 3

This course examines the significant role African Americans have played in history, starting in Africa to their struggles for freedom in North America, placing the African American in the proper perspective in a fully dimensional picture of America. Topics include African kingdoms and cultures, the slave trade and the impact of enslavement, the African influence on American culture and the economy, and the Civil War period and Reconstruction.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 216

HIST 2017 - African American History from 1877

Credits: 3

This course examines the history of African Americans from Reconstruction to the twenty-first century, highlighting the many ways in which African Americans have struggled to achieve freedom and equality in American society. Topics include the rise of the Jim Crow laws and sharecropping system in the South and the impact of racial segregation at the national level in late nineteenth century; migration patterns, urbanization, Black Nationalism, leadership protest strategies, and the Civil Rights Movement right up to the present day. The course will also examine how the search for civil rights and black pride has been and continues to be expressed in art, music, literature, and fashion.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 217

HIST 2019 - An American Revolution

Credits: 3

This course focuses on the major events, issues, and people during the period of American Independence. It studies the ideas and actions of ordinary people and diverse groups such as the farmers, enslaved people, women, and Continental soldiers. It will analyze how people reacted to the dominant ideas of the era, how they pursued freedom and liberty, how the rhetoric and reality of the era converged and collided, and ultimately what forces prevailed to create the new republic.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 219

HIST 2022 - Introduction to American Labor History

Credits: 3

This course examines major themes in American labor history beginning with the shift away from artisans' autonomy and the nature of their work; the impact of the Industrial Revolution and the development of unions; the evolution of American policy and the interactions between workers, unions, and management, as well as the influence of political and economic development.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 222

HIST 2024 - The American Indian

Credits: 3

The course offers students a balanced perspective of Native American people. By studying primary sources, including the voices of native people, formal historical texts and the popular press, the course will offer a new look at the complex story of the original residents of the North American territory that we now call the United States.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 224

HIST 2025 - The Constitution in American Society

Credits: 3

Examines both the historical foundation of the U.S. Constitution and its current implementation. Provides students with an opportunity to understand and discuss some of the major Supreme Court decisions in American history and their impact on American society.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): HUM, LART

Cross-listed: POLS 2025

Previous HIS* 225

HIST 2026 - The US Civil War*Credits: 3*

This course is an examination of one of the most important periods in American history. Students will study the political, social, economic, and historical antecedents that led the United States into sectional conflict and a bloody civil war. In analyzing the importance of slavery, race, and the Reconstruction Period, we will also see how many aspects of the war still live with us today.

Prerequisite: Eligibility for ENG 1010 or ENG 0910**Elective Code(s):** HUM, LART**Previous HIS* 226****HIST 2027 - The Vietnam War***Credits: 3*

An intensive study of the three decades spanning the US's involvement in Southeast Asia. Special emphasis will be placed on the causes and results of the Vietnam War; the social issues raised as a result of the war; the political implications, especially on the American presidency; and the after-effects of the war on American consciousness and economic structures.

Prerequisite: Eligibility for ENG 1010 or ENG 0910**Elective Code(s):** HUM, LART**Previous HIS* 227****HIST 2029 - Topics in American Studies***Credits: 3*

This course will examine the historical and cultural definitions of what it means to be an American. Through a variety of sources and platforms, students will investigate how important events, movements, and ideas affect our view of ourselves in the past and today. Topics for discussion will vary greatly from instructor to instructor, but each course will seek to analyze the ever-changing sense of how Americans view themselves through the prism of time.

Prerequisite: Eligibility for ENG 1010 or ENG 0910**Elective Code(s):** HUM, LART**Previous HIS* 229****HIST 2042 - Irish History***Credits: 3*

This course is a survey of Irish history from the ancient world through the 20th Century. Although we will examine the ancient world, the course will focus primarily on the more modern Irish world. Topics for discussion will include the role of religion, the effects of the numerous invasions of the country, the growth of nationalism, and the incredibly complicated relationship between Ireland and England.

Prerequisite: Eligibility for ENG 1010 or ENG 0910**Elective Code(s):** HUM, LART**Previous HIS* 242****HIST 2043 - The Holocaust***Credits: 3*

Examines the particular historical context of the Holocaust and addresses the moral and philosophical challenges posed by genocide in the modern era.

Prerequisite: C- or higher in ENG 1010**Previous HIS* 243****HIST 2044 - Europe in the 20th Century***Credits: 3*

This course is an introductory survey on the political, social, cultural, economic, and intellectual history of Europe during the Twentieth Century.

Prerequisite: Eligibility for ENG 1010 or ENG 0910**Elective Code(s):** HUM, LART**Previous HIS* 244****HIST 2045 - The World at War***Credits: 3*

This course studies the aftermath of World War I and the coming of World War II. Special emphasis is given to the role of the Peace of Paris and its connection to the failure of democracy and the rise of totalitarianism during the inter-war period. This course also examines the global dimensions of World War II and the emergence of the Soviet Union and United States as superpowers. To enhance the course, students will be asked to study some of the artistic and cultural texts that reflect the issues of the time.

Prerequisite: Eligibility for ENG 1010 or ENG 0910**Elective Code(s):** HUM, LART**Previous HIS* 245****HIST 2046 - World History Through Film***Credits: 3*

As primary documents of their time, films are studied to illuminate the historical era which they are made. This course will look at the political, social and intellectual history of world societies reflected in the films of various countries.

Prerequisite: ENG 1010 and one Social Science Elective or permission of the instructor**Previous HIS* 246****HIST 2049 - The History of the Cold War***Credits: 3*

This course is a global study of the Cold War from 1945 to the early 1990s. In this course, students will look at how the Cold War dominated world politics for nearly 50 years. Topics include the post-World War 2 map of Europe, the arms race, cultural influences, American foreign policy and proxy wars, and the world of espionage.

Prerequisite: Eligibility for ENG 1010 or ENG 0910**Elective Code(s):** HUM, LART**Previous HIS* 249**

HIST 2054 - History of Religion*Credits: 3*

This course introduces the major religions and spiritual traditions of the world including origins, history, beliefs, and practices.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 254

HIST 2072 - Modern China*Credits: 3*

This course is a survey of Modern China, including the impact of Western encroachment in the nineteenth century, the efforts to meet domestic and foreign challenges, the 1911 Revolution, and the Nationalist period, the Japanese invasion, the civil war, the founding of the People's Republic of China, and the building of a new China.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 272

HIST 2080 - Modern Africa*Credits: 3*

This course focuses on the history of the African continent after 1500 through the study of African states on the eve of European contact, the impact of the African Slave Trade, the Scramble for Africa, decolonization, and the creation of contemporary states.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 280

HIST 2084 - South Africa*Credits: 3*

This course will analyze the history of South Africa from pre-Colonial times through the end of Apartheid and the establishment of majority rule in 1994. South Africa offers a unique look at European colonialism in Africa and the implementation of legislative racism from the 1940s on. Analyzing South Africa's mineral revolution of the mid-nineteenth century allows the study of labor migration and the impact on traditional African societies.

Prerequisite: Eligibility for ENG 1010 or ENG 0910

Elective Code(s): HUM, LART

Previous HIS* 284

HIST 2099 - Independent Study in History*Credits: 1*

This is an individualized, faculty-supervised learning experience that gives students an opportunity to explore knowledge and skills that may not otherwise be represented in curricular offerings or their interests. Individual study of a special area, topic, theme, or problem in History by

agreement between the student and the course instructor is explored in this course.

HLTH 1003 - Investigations in Health Careers*Credits: 3*

Designed to assist students in meeting the expectations of a health care curriculum and career. Students will become familiar with the rigors of higher education and the specific skills needed to maximize their opportunity for academic and clinical success. The course will include a comprehensive overview of the duties and responsibilities associated with clinical competency. Interdisciplinary learning strategies, correlating clinical and didactic education, Life management skills, work ethic and critical thinking skills necessary for all health providers will be emphasized.

Previous HLT* 103

HLTH 1015 - Current Issues in Health Education*Credits: 1*

This course is a survey of current health issues and concepts. The student will learn principles of nutrition, communicable disease prevention, stress management, exercise, sexually transmitted infections (including HIV/AIDS) and other elements of lifestyle that affect health and be able to relate concepts learned to the National Health Education Standards.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous HLT* 115

HLTH 1021 - A Survey of Alternative Healthcare*Credits: 3*

This course will introduce the student to alternative healthcare both alone and in conjunction with traditional allopathic (western) medicine. Students will examine the theoretical and philosophical foundations of a variety of alternative healthcare options and discuss their potential application.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Additional Info: Course-related costs: Student uniform/scrubs, stethoscope/equipment, and possible Castle Branch, CPR certification, substance abuse screening, and/or other associated clinical costs **Previous HLT*** 121

HLTH 1051 - Health and Wellness Promotion*Credits: 3*

This course will cover the concepts of health and wellness promotion as well as disease prevention and how they relate to the individual, the family, and the community. Topics include nutrition, exercise, teen pregnancy, and other social habits deemed harmful to an individual and/or community.

Conditions such as sexually transmitted infections, cardiovascular disease, obesity, and diabetes will be discussed. Emphasis will be placed on education and developing programs and/or finding the proper resources for various populations.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Additional Info: Course-related expenses include: student uniform/scrubs, stethoscope/equipment, and possible Castle Branch, CPR certification, substance abuse screening, and/or other associated clinical costs **Previous** HLT* 151

HLTH 1055 - Personal Health

Credits: 3

This is a course on the physiological principles involved in the maintenance of individual health. Students will learn principles of hygiene, nutrition, communicable disease prevention, stress management, exercise, and other elements of personal lifestyle that affects health.

Prerequisite: eligibility for ENG 1010

Previous HLT*155

HLTH 1070 - Medical Law and Ethics

Credits: 3

The legalities and ethical behavior associated with the medical practice or facility are discussed with emphasis on the legal and ethical responsibilities of health care practitioners. Federal regulations and guidelines pertinent to medical practices are reviewed. Students will develop an understanding of dealing with patients within a professional code of ethics. Basic concepts of office administration and human resource management are covered.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous HLT* 170

HNRS 1002 - The Honors Seminar: Leadership and Community

Credits: 1

This course uses guest speakers, community service, leadership workshops and projects, and special programming to build leadership skills, engage students in their campus and broader community, develop academic and professional interests, skills, and networks, and facilitate students' exploration of the transfer process.

Prerequisite: Permission of Honors Program Coordinator

Previous HON* 102

HNRS 2001 - The Honors Seminar: Research Course

Credits: 1

This course uses guest speakers, special programming, and in-depth research instruction and assignments to develop students' research skills. The course will also prepare students for transfer to a four-year institution.

Prerequisite: Permission of Honors Program Coordinator.

Previous HON* 201

HNRS 2002 - The Honors Seminar: Capstone

Credits: 1

In this course, students work with faculty advisors within the discipline of their Capstone project to complete the academic research process. The process includes writing an academic paper and developing an oral presentation to be presented to the college community to improve students' skills in academic research and writing, critical thinking, and public speaking. Additionally, the course provides opportunities that further develop students' academic and professional skills.

Prerequisite: Permission of program coordinator.

Previous HON* 202

HORT 1001 - Landscape Construction

Credits: 4

This course provides a survey of the proper construction methods for general landscape components such as paving, retaining walls, decks, and general garden structures. On-ground field work will be completed as appropriate.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous HRT* 101

HORT 1002 - Woody Plants

Credits: 3

This is a basic introduction to common, desirable, deciduous and evergreen trees, shrubs, and vines for the natural and cultivated landscape. The course emphasizes identification as well as learning the attributes, growth habits and cultural needs of the plants. Nomenclature and fundamental tree biology are discussed.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous HRT* 102

HORT 1003 - Herbaceous Plants*Credits: 3*

This course provides instruction in the identification and selection of annual and perennial herbaceous plants for various habitats. Students will develop an understanding of the plants' ornamental value in garden and landscape design, based on flowers, foliage, form and adaptability to the environment.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HRT* 103****HORT 1004 - Soil Systems***Credits: 3*

This course covers the relationships between soils and the environment with emphasis on common horticultural applications such as agricultural production, landscape functions, and greenhouse operations. It specifically focuses on soil texture and classification, the biological and chemical properties of soils, the impact of soils on the environment, and the principles and practices of modifying soils for horticultural applications.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HRT* 104****HORT 1006 - Fruit Production***Credits: 3*

This course will cover the current principles and cultural practices of tree, bush, and vine fruit crop production. The course provides basic knowledge and methods that can be applied on the commercial and residential level. Included, are topics on selection and soil preparation, planting, pruning and fertilization and general cultivation of a variety of fruiting plants. Site visits to fruit production sites will be included.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** nonw**Previous HRT* 106****HORT 1007 - Vegetable and Herb Production***Credits: 3*

This course will cover the current principles and cultural practices of traditional and hydroponic vegetable production. The course provides basic knowledge and methods that can be applied on the commercial and residential level. Included are topics onsite selection and soil preparation, planting, pruning and fertilization and general cultivation of a variety of vegetable plants.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HRT* 107****HORT 1015 - Turf Management***Credits: 3*

This course is provides the student with a basic understanding of turfgrass management and maintenance practices in order to prepare them for their careers within the industry. Class labs and 'hands-on' experience will be stressed throughout the class in order to give students practical knowledge. Field trips and industry guest lecturers will be scheduled according to class interests as a useful tool for students to make valuable contacts.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HRT* 115****HORT 1200 - Horticulture of Cannabis***Credits: 3*

An introductory level course focusing on growing cannabis and hemp. Students will learn about the common challenges of cannabis production and how to best identify and address these challenges. Lectures focus on horticultural management of cannabis crops cultivated in the field and grown in a controlled environment. Production techniques specific to cannabis will be covered including seeding, cloning cuttings, pruning, plant training, post-harvest handling, and Cannabinoid/Tetrahydrocannabinol (THC) extraction. Lectures will also focus on various aspects of the cannabis business and industry.

Prerequisite: none**Previous HRT* 113****HORT 2002 - Landscape Design 1***Credits: 3*

This course provides students with the basic knowledge and skills to create a successful landscape design for public or private client. Hand drafting and illustrative techniques are emphasized. An overview of historical garden design styles is also covered.

Prerequisite: HORT 1002**Previous HRT* 202**

HORT 2003 - Landscape Design 2*Credits: 3*

This course is designed as a continuation the Landscape Design I class. Students learn from a series of structured landscape design projects of increasing complexity. The course emphasizes design development from conceptual design through schematic and preliminary design phases. The relationship between the design program and the physical parameters of the site will be stressed. Visual representation and graphic ability to convey a design intention are reinforced. In the second part of the semester students will be given an introduction to computer aided drafting specifically relating to landscape design. The class is labor intensive and requires a substantial time commitment in class and at home.

Prerequisite: HORT 2002**Previous HRT* 203****HORT 2004 - Computers in Landscape Design***Credits: 3*

This course is an introduction to utilizing computer applications in the landscape design profession. Material will cover the development of two-dimensional base plans, three-dimensional models, and two-dimensional renderings. Also, examples of real-life projects will be highlighted to illustrate the transition from computer drawings to construction. The student will develop a working knowledge of AutoCad, ProLandscape, and Google Sketchup.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Course Fees:** Supplemental Fee Level 1**Previous HRT* 204****HORT 2007 - Landscape Maintenance***Credits: 3*

This course is designed to give students a better understanding of the maintenance and management of various landscapes and the practices associated with improving plant health including; fertilization, pruning, pest control, and propagation.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HRT* 207****HORT 2008 - Landscape Contract Administration***Credits: 3*

This course covers the topics of contracts, project estimation, and personnel management for small landscape businesses. The course will also review the legal requirements to start and execute landscape projects, maintain occupational licensure, and manage municipal planning review processes.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HRT* 208****HORT 2015 - Integrated Pest Management***Credits: 3*

This course will help the student prepare for the Connecticut Supervisory Pesticide Applicators License exam. Because of the broad range of plants, insects, diseases and control methods this covers, the course will serve as a good general overview of modern landscape pest management practices.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HRT* 215****HORT 2019 - Arboriculture***Credits: 3*

This course is an overview of the field of modern arboriculture. While the course was initially designed to help the student prepare for the State Arborist Exam, it will provide the student, even those not planning on taking the state licensing exam, a good background in the science and practice of tree care. Topics include the biology, identification, selection, planting, management, preservation of trees and diagnosis of tree problems.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HRT* 219****HORT 2022 - Greenhouse Management***Credits: 4*

This course helps students prepare for a career in the management and operation of a commercial greenhouse business. The curriculum integrates an understanding of basic plant physiological mechanisms into the decision-making process of a greenhouse manager. The course will instruct students on the use of sustainable management techniques for crop production and sale.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Course Fees:** Supplemental Fee Level 2**Previous HRT* 222**

HORT 2024 - Plant Propagation and Hybridization*Credits: 4*

This course is an in-depth study of the principles and practices involved in the propagation of herbaceous and woody plants. Students will learn the theoretical and practical skills necessary to reproduce plants by seeds, division, layering, cuttings, grafting and tissue culture/micropropagation.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HRT* 224****HORT 2050 - Hydroponic Production***Credits: 4*

This course covers the production of agricultural crops utilizing hydroponic, aquaponics, and other modern technological means. Focus areas of the class will include plant root physiology, macro/micronutrient supplementation, pH and alkalinity adjustments, the nitrogen cycle, current food safety practices and additional information required to grow/maintain successful agricultural crops. Hands on greenhouse assignments and field trips will be utilized, where applicable.

Prerequisite: HORT 2022**Previous HRT* 250****HORT 2095 - CWE Cooperative Work Experience***Credits: 3*

The Horticulture Cooperative Education Program is a "working arrangement of prescribed duration with a guarantee that the student will rotate among several different aspects of a company's functional areas for one or two (+/-) weeks each, completing planned modules that cover the duties and responsibilities of that area. Each party to the "learning contract" must be clear about what the cooperative experience is. The employing company needs to understand what type of work experience they are providing, and the student needs to know what work situation he/she is seeking before beginning the cooperative program."

Prerequisite: Permission from instructor**Previous HRT* 290****HOSP 1100 - Introduction to the Hospitality Industry***Credits: 3*

A survey course encompassing three major areas of the Hospitality Industry: the foodservice industry including restaurants, institutions, clubs, and schools; the hotel-motel industry, including travel and tourism; and hospitality management theories, styles, and laws. Career opportunities are emphasized in each area. Students engage the learning process for the course objectives through lecture, guest speakers and field trips. This course meets American

Culinary Federation (ACF) requirements in the knowledge areas and contact hours summary.

Prerequisite: Eligibility for ENG 1010 or ENG 0930 taken concurrently.**Previous HSP* 100****HOSP 1101 - Principles of Food Preparation***Credits: 3*

Introduces techniques and procedures of basic cooking, including knife skills, culinary terminology, equipment usage, product identification and applied cooking techniques as well as basic fabrication, practical sanitation, culinary math, soup, stock, and sauce preparation.

Prerequisite: Eligibility for: MATH 0989 and ENG 0960**Prerequisite/Corequisite:** HOSP 1109**Course Fees:** Supplemental Fee Level 1**Previous HSP* 101****HOSP 1103 - Principles of Baking I***Credits: 3*

Introduces students to the basic techniques and procedures required to prepare baked goods in a commercial setting, with emphasis on ingredient identification/function, scaling and proper mixing methods. Hands on laboratory training include the basic techniques used to prepare bread, pies, cookies, cakes, and baked custards.

Prerequisite: Eligibility for MATH 0989, eligibility for ENG 0960**Prerequisite/Corequisite:** HOSP 1109**Course Fees:** Supplemental Fee Level 1**Previous HSP* 103****HOSP 1107 - Icing Artistry I***Credits: 3*

Introduces students to the fundamental and necessary skills for commercial cake decorating. Students learn the basic techniques in butter cream icing, royal icing, borders, and decorations. Students will design a multi-tiered cake.

Prerequisite: Eligibility for MATH 1001**Prerequisite/Corequisite:** MATH 0989**Corequisite:** None**Course Fees:** Supplemental Fee Level 1**Previous HSP* 107****HOSP 1109 - Food Safety Certification***Credits: 1*

Presents sanitation, safety, and maintenance challenges encountered in the food service industry. Investigation of causes and prevention of food-borne illnesses. A National Restaurant Association (NRA) ServSafe ® Food Protection Manager certification will be awarded to students who pass the exam. (pass/fail course)

Prerequisite: Eligibility for MATH 0989 and ENG 0960

Course Fees: Supplemental Fee Level 1

Previous HSP* 109

HOSP 1117 - Beverage Management

Credits: 3

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. This course explores the legal concerns of bar operations, the people skills required to be successful in the field of beverage service and the benefits of proper mixology and cost controls. This course will help students identify the classifications of alcoholic beverages, wines and beers and the importance of proper storage processes, controls and accountability.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous HSP* 117

HOSP 1135 - Service Management

Credits: 3

The basic principles of food and beverage management with a focus on front-of-the-house service delivery techniques and guest relations. Students will gain experience in management, basic set-up strategies, service delivery skills, dining etiquette training, and tableside preparation. Sanitary practices and compliance with laws and ordinances of the Department of Health and Liquor Control Commission are enforced.

Prerequisite: Eligible for ENG 1010

Previous HSP* 135

HOSP 1141 - Principles of Tourism and Travel

Credits: 3

This course is a survey of the travel industry and its primary segments, including recreation and leisure systems, the transportation and accommodation industries, destinations, and the travel market. Tourism and travel may be viewed as the underlying economic force that animates the hotel industry. Tourism serves as a foundation for study in hotel/motel operations and procedures.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous HSP* 241

HOSP 1212 - Advanced Food Preparation

Credits: 4

Apply cooking techniques to continue to develop and advance skills. Explore regional American cuisine in preparing classic recipes in quantity, including traditional

breakfast items, sandwiches, and vegetarian options.

Emphasis is on preparation of recipes, purchase orders, requisitions, and cost control for each menu and dining room service.

Prerequisite: HOSP 1101 with a C- or higher

Additional Info: This is a Pass/Fail course **Course Fees:** Supplemental Fee Level 2

Previous HSP* 112

HOSP 1215 - Principles of Baking II

Credits: 3

This course focuses on the preparation of classical pastries and the plating of desserts. Students will prepare puff pastry, pâte à choux, ice cream, pastry cream, Bavarian Cream, tarts, tortes, petit fours, dessert sauces and sugar garnishes.

Prerequisite: HOSP 1103 with a C-or higher and HOSP 1109 with a grade of Pass.

Course Fees: Supplemental Fee Level 1

Previous HSP* 215

HOSP 1304 - Hospitality Customer Relations

Credits: 3

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.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous HSP* 134

HOSP 2095 - Hospitality Management Internship/Work Experience I

Credits: 3

This course provides an opportunity to gain experience in a hotel, restaurant/food service, travel or other hospitality-related business and apply the knowledge learned in the classroom. During class meetings, students will share their experiences at their site. This must be a new experience for the student. Requires 120 internship hours at a site conducive to the student's career goals. The coordinator must approve the site.

Prerequisite: Program coordinator permission, completion of 18 or more earned HSP credit hours, minimum overall GPA of 2.5, minimum of 2.75 GPA in hospitality management courses.

Prerequisite/Corequisite: none

Corequisite: none

Previous HSP* 295

HOSP 2111 - Food & Beverage Cost Control*Credits: 3*

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: MATH 0989**Previous HSP* 211****HOSP 2195 - Hospitality Management Internship/Work Experience II***Credits: 1*

This course provides an opportunity for students to gain experience in a hotel, restaurant, foodservice, travel or hospitality related businesses. The student is responsible for seeking paid employment in the hospitality industry. 280 hours must be completed and documented with paystubs mid-May 1st and August 10th.

Prerequisite: Permission of the Program Coordinator, and minimum overall GPA of 2.5, and overall GPA of 2.75 in HSP courses with completion of HOSP 2095.

Prerequisite/Corequisite: none**Corequisite:** none**Previous HSP* 298****HOSP 2201 - International Foods***Credits: 4*

Explore flavors and cooking techniques from regional world cuisines. Study the foundations of cooking from a cultural, geographical, religious, and historical perspective. Discuss the diffusion of world cuisines in contemporary cooking as well as their cultural impact on current culinary trends. Prepare authentic recipes including meats, poultry, seafood, vegetables, breads, and desserts into full planned meals. Emphasis is placed on organization, showmanship, and supervision.

Prerequisite: HOSP 1135 AND HOSP 1212 both with a C- or higher

Course Fees: Supplemental Fee Level 2**Previous HSP* 201****HOSP 2207 - Icing Artistry II***Credits: 3*

An advanced course in methods of cake decorating. Students will learn to work in advanced sugar and decorating mediums, demonstrating molding, embossing and draping. Students will design and create design cookies and a tiered cake.

Prerequisite: C- or higher in HOSP 1107**Course Fees:** Supplemental Fee Level 1**Previous HSP* 207****HOSP 2210 - Catering Management***Credits: 4*

Designed to provide students with an overview of catering operations and management. Students prepare a business plan for a small private catering firm, as well as review on-premises catering, menu design planning, production, cost-control, and service standards of all the catering business. Additional exposures and experience to the artistic aspects of fine catering.

Prerequisite: HOSP 1109 with a grade of Pass. HOSP 1135 and HOSP 1212 both with a C- or higher.

Course Fees: Supplemental Fee Level 2**Previous HSP* 210****HOSP 2216 - Artisan Bread***Credits: 3*

This course focuses on the preparation and production of artisan breads. Students will work as a bakery team and commercially produce breads that are found in many specialty bakeries using pre-ferments, levains, and various types of yeast as they explore various formulations for straight dough, enriched dough, and naturally leavened breads. Emphasis on baker's math and the science of bread production as well as the hand skills necessary for producing classic artisan breads.

Prerequisite: HOSP 1103 with a C- or higher**Course Fees:** Supplemental Fee Level 1**Previous HSP* 216****HOSP 2225 - Principles of Baking III: Chocolates and Confections***Credits: 3*

Apply advanced pastry techniques to the production of chocolate and sugar confections. The history of chocolate, production, composition, and crystallization. Apply professional pastry techniques to the design, execution, and production of various advanced confections preparations.

Prerequisite: HOSP 1215 with a C- or higher**Course Fees:** Supplemental Fee Level 1**Previous HSP* 225****HOSP 2230 - Sustainable Food Service Management***Credits: 3*

Food impacts all areas of our lives including the environment, local economies, global economy, social well-being, and human health. This course is designed to help students understand the complex issues surrounding food that ultimately impact sustainability. Topics include understanding sustainable food, local and seasonal production, socially just and unjust means of producing foods, processed foods, and food choices.

Prerequisite: HOSP 1100 with a grade of C- or Higher**Previous HSP* 230**

HOSP 2233 - Hospitality Human Resources Management*Credits: 3*

HRM is a fundamental component of the competitiveness, effectiveness, and sustainability of any service organization, as it influences the effective use of human capital in an organization through the management of people-related activities. The course focuses on the role of supervisors and how they develop effective and efficient human resources practices that support the strategic goals of service organizations.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous HSP*** 233**HOSP 2237 - Hospitality Marketing***Credits: 3*

A course exploring the practical applications to marketing unique to hospitality & tourism enterprises. The course provides students with the tools they need to successfully execute the marketing function for a guest driven, hospitality business including, hospitality sales practices used in restaurants, hotels, and clubs, from market analysis to actual sales.

Prerequisite: C- or higher in HOSP 1100**Previous HSP*** 237**HOSP 2238 - Customer Relationship Management***Credits: 3*

The purpose of this course is to give the student a solid foundation in customer relationship management. Students will learn strategic concepts and managerial tactics necessary for organizational success in a customer driven service economy. This course will focus on the applications of consumer behavior, strategic planning, teamwork, cultural coaching, and vision building, as well as an introduction to Total Quality Management. This course emphasizes the importance of development and retention of repeat customers and business buyers.

Prerequisite: Eligibility for ENG 1010**Previous HSP*** 238**HOSP 2242 - Hotel Management***Credits: 3*

This course will provide students with a comprehensive introduction to the management of hotels and lodging properties that combines detailed presentations of each department along with a close examination of organizational structure and the interdependent relationship among departments. The course will highlight the importance of front office operational planning and performance on bottom line profitability and guest satisfaction.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous HSP*** 242**HOSP 2244 - Meetings, Conventions & Special Events Management***Credits: 3*

This course is designed to provide the student with an introduction to the Meetings, Expositions, Events and Conventions (MEEC) Industry. An overview of the industry as well as the methods of creating successful meetings, conventions, and special events are introduced. Topics include setting objectives, program design, site selection, budgeting, negotiations, room setups, audio visual, travel arrangements, and contracting for services.

Prerequisite: none**Prerequisite/Corequisite:** none**Corequisite:** none**Previous HSP*** 244**HOSP 2290 - Classical Cuisine***Credits: 3*

This course provides advanced techniques in flavor development, fabrication, Garde Manger skills and classical French cuisine. Produce charcuterie, pate, terrines, galantines, and sausages as well as use traditional preservation techniques. Students will plan, prepare, and present a Garde Manger platter with a creative decorative centerpiece.

Prerequisite: HOSP 1215, HOSP 2201, and HOSP 2210 all with C- or higher**Course Fees:** Supplemental Fee Level 1**Previous HSP*** 290

HOSP 2294 - Cooperative Education/Work Experience*Credits: 3*

This course provides students with the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings as related to their program of study including corporations, institutions, restaurants, hotel, and conference settings.

Prerequisite: 12 completed credit hours in a Hospitality Careers program

Previous HSP* 296

HOSP 2297 - Hospitality Management Elective*Credits: 1-3*

Students will have an opportunity to pursue with greater depth a topic within the field of Hospitality and Culinary Arts guided by a faculty mentor. Independent studies must be arranged in the semester prior to registration with approval from a Hospitality faculty member.

Prerequisite: Permission of instructor

Previous HSP* 297

HOSP 2301 - Hospitality Law*Credits: 3*

Introduces the basics of hotel, 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.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous HSP* 231

HOSP 2302 - Restaurant Management*Credits: 3*

This course details the important elements involved in the successful restaurant operation and how they interrelate. The process of creating a concept, developing a menu, including menu design, budgeting, controlling costs, staffing, purchasing food and equipment, bar and beverage management, daily operations, and developing a marketing plan will be covered.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous HSP* 232

HOSP 2406 - Hotel Accounting & Front Office Management*Credits: 3*

This course emphasizes accounting procedures and functions of the front office, including internal control procedures, guest services, housekeeping and reservations. Special focus on the needs of management and the application of accounting concepts and techniques to making managerial decisions. Explores the interaction of the front office and other areas of the hotel in relationship to customer service. Yield and revenue management are covered.

Prerequisite: none

Prerequisite/Corequisite: none

Corequisite: none

Previous HSP* 246

HOSP 2409 - Food Writing*Credits: 3*

In this course students will find a way to express their culinary sensibilities in the form of reviews, essays, blogs, media presentations, cookbook and recipe writing. Much of the course will be devoted to analyzing both professional and student work.

Prerequisite: Eligibility for ENG 1010 or permission

Prerequisite/Corequisite: none

Corequisite: none

Previous HSP* 249

HPE 1000 - Introduction to Wellness*Credits: 3*

This course is intended to explore general physiological concepts as they apply to physical fitness, nutrition, stress and overall wellness throughout life. All students will be afforded an opportunity to assess and generate a personal health-fitness profile, identifying strengths and weaknesses associated with physical fitness, nutrition, weight management and stress management. Behavior modification will be emphasized in this course as students learn to set realistic and achievable goals as they plan for safe methods of improving general wellness.

Previous HPE* 100

HPE 1001 - Weight Control & Exercise*Credits: 2*

Designed to help students realize the importance of healthy diet and exercise behaviors in permanent weight control. Behavior modification techniques are used to help students achieve a healthy lifestyle that will result in either a gradual reduction in body weight, and/or the maintenance of a healthy body weight along with good nutrition practices.

Previous HPE* 101

HPE 1004 - Adventure Based Recreation*Credits: 1*

This course is designed to provide the student with an introduction to the history, philosophy, concepts, and the practical application of experiential education in a wide variety of settings, including schools, hospitals, correctional facilities, camps, and corporations. In addition, principles of health, safety, and fitness are incorporated in the curriculum.

Previous HPE* 104**HPE 1007 - Functional Fitness***Credits: 1*

This course focuses on increasing students present fitness levels through functional fitness. Participation in this course may lead to increased energy, mental clarity, and health as a part of one's lifestyle. It will also teach students to recognize proper form and technique. This course may also provide opportunities for students to increase their cardiovascular conditioning, flexibility and/or develop strength and muscular endurance.

Previous HPE* 107**HPE 1008 - Strength and Tone***Credits: 1.0*

Strength and Tone is a challenging course designed to build muscular strength and endurance using light-weights, medicine balls, and resistance bands. This total body class will help sculpt and tone your muscles, help you build lean muscle and boost your metabolism, all while you have a fun time doing it.

Previous HPE* 108**HPE 1015 - Weight Training***Credits: 1.0*

This course is designed to give a basic understanding of the effects of resistance training on the human body. The course will include a combination of lectures, demonstrations, and physical activity. The student will understand the fundamentals of lifting, be able to operate all resistance equipment and develop resistance training protocols.

Previous HPE* 115**HPE 1017 - Weight Training for Physical Fitness***Credits: 2*

Emphasis of this course is on the development of individual skills and methods necessary to understand the body mechanics involved in optimal physical fitness. Programs discussed will include training for leisure sports, rehabilitation, muscular tone, endurance, flexibility, and weight loss.

Previous HPE*117**HPE 1021 - Abs and Lower Body***Credits: 1*

Abs and Lower Body will target your core using both cardiovascular and muscle building exercises. This class will incorporate the use of a variety of equipment including steps, bands, and BOSUs (Balance Trainers). You will be challenged with functional moves including squats, lunges and planks using your own body weight to give you a strong and fit core.

Previous HPE* 121**HPE 1026A - Pilates***Credits: 1*

Pilates will challenge abdominal and core muscles to help improve strength, endurance, flexibility, posture, and physical function. The course is designed to provide the history of Pilates, its theory and benefits, and afford an opportunity for entire body conditioning with a non-impact approach.

Previous HPE* 126A**HPE 1031 - Boot Camp***Credits: 1*

Boot Camp is a high intensity interval training patterned after military style training using sports drills and calisthenics to develop cardiovascular fitness, muscular strength, endurance and flexibility. Workouts will include core conditioning, circuit training, kick boxing and other sports drills, and obstacle courses. Students will be exercising as individuals, with a partner and in groups. While modifications will be demonstrated, this non-contact course is targeted toward intermediate and advanced levels of fitness.

Previous HPE* 131**HPE 1033 - Pickleball***Credits: 1*

This course is an introductory course in the fundamentals of pickleball including serving, volleying, groundstrokes, the lob, dink, and smash. Students will learn rules and court strategy for playing the game. Emphasis will be on total fitness and recreational skills for leisure and lifetime activities.

Previous HPE*133**HPE 1036 - Tai Chi***Credits: 1*

Tai Chi was a form of internal Chinese martial art practiced for both its defense training and health benefits. Tai Chi today has become a modified exercise using all the techniques to attain healing qualities rather than combative awareness. The slow and fluid movements practiced in Tai Chi improve the body's alignment, posture, strength,

flexibility, coordination, balance, and stamina. Tai Chi provides practitioners with an overall toning and strengthening of specific muscles.

Previous HPE*136

HPE 1047 - Self Defense I

Credits: 1

In this self-defense course students will be provided with an opportunity to increase their present fitness level. Participation in this course will lead to increased energy, mental clarity, and health as a part of one's lifestyle. The course may also provide opportunities for students to increase their cardiovascular conditioning and develop strength and muscular endurance.

Previous HPE* 147

HPE 1048 - Self Defense II

Credits: 1

This course is advanced study in the art and methods of self-defense including elements of physical fitness. Students who enroll in this course will be given a promotion test for belt certification.

Prerequisite: HPE 1047

Previous HPE*148

HPE 1061 - Yoga I

Credits: 1

This 6,000-year-old, ancient practice, will teach the student the true meaning of union by combining physical, mental and spiritual states of wellness. The course is designed to provide the history of yoga, its theory and benefits, and afford the student an opportunity to experience this art firsthand.

Cross-listed: DANC 1061

Previous HPE* 261

HPE 1066 - Therapeutic Yoga

Credits: 1

This is a survey class that provides an introduction to the methods used in the up and coming field of Yoga Therapy. The objective is to assess and help balance the body to move more fluidly and recover from injury and disease. We frequently have over-used a muscle, had a minor accident or perhaps an outpatient surgery and have heard that yoga would be good for us (from a doctor or a friend) or perhaps want to continue or begin a yoga practice to keep us centered in our world. We will investigate postural and Range of Motion through movement and understand how to modify poses with props to make them generally accessible to everybody in every body. We will investigate the role of fascia and learn how to manipulate it. We also will look at Ayurveda, the Yogic "science of the body," as a means to analyze and gain insight into our body's rhythms. This class will cover basic bone and muscle anatomy as it applies to yoga postures

(asana) and instruct in the proper use of props to modify many yoga poses.

Previous HPE* 266

HPE 1067 - Pranayana and Meditation

Credits: 1

This class will focus on five of the eight limbs of Yoga that were defined by Patanjali more than 5000 years ago in India. The ancient physical and philosophical practice of yoga is a system that can help manage stress and improve our overall wellness in a high-paced world. We will explore how we breathe and practice various breathing techniques (pranayamas) that can be used to affect mood and physiology. We will also study the various practices of meditation as a means of becoming more grounded and centered, finding a calm state that we can carry with us into our day. Many classes will include a series of postures (Asana) as a warm up followed by Pranayama (mindful breathing) practice and then ending each session in a form of meditation.

Previous HPE* 267

HPE 1070 - Sports Drills

Credits: 1

This course focuses on increasing students present fitness levels through Sport Drills. Participation in this course may lead to increased energy, mental clarity, and health as a part of one's lifestyle. It will also teach students to recognize proper form and technique. This course may also provide opportunities for students to increase their cardiovascular endurance, flexibility and/or develop strength and muscular endurance. Students will develop a basic understanding of the components of group exercise and will acquire the skills to recognize a safe and effective exercise class.

Previous HPE* 160

HPE 1071 - Basketball

Credits: 1

This class presents an approach to learning the game of basketball that will take the learner from basic play to intermediate level. Methodology of presentations consists of lectures, demonstrations, and drills with supervision and feedback provided by the instructor. The student will receive an introduction to each skill, knowledge of how to teach and correct, as well as, information about various types of offensive and defensive systems, strategies, individual and team development.

Previous HPE* 191

HPE 1072 - Volleyball*Credits: 1*

This course is an introductory course in the fundamentals of volleyball including passing, serving, setting and spiking. Students will learn rules and court strategy for playing the game. Emphasis will be on total fitness and recreational skills for leisure and lifetime activities.

Previous HPE*190**HPE 1080 - Latin Inspired Fitness Dance***Credits: 1*

Zumba is a Latin inspired, dance-fitness class that incorporates international music and dance moves through a dynamic, exciting and effective fitness workout. This course integrates basic principles of aerobic, interval and resistance training to maximize caloric output, cardiovascular benefits and total body toning. This class is suitable for dancers and non-dancers alike to participate in an aerobic group class.

Previous HPE* 280**HPE 2017 - Principles of Practices and Coaching***Credits: 3*

This course is a comprehensive introduction to the coaching profession. Emphasis is placed on sports at the high school and serious club levels. Consideration is also given to coaching at other levels, such as youth, recreational, and intercollegiate sports programs. The primary goal of the course is to develop and enhance students' knowledge and understanding of concepts and techniques of coaching and their application to achieving important objectives in working with athletes.

Previous HPE* 217**HPE 2040 - Introduction to Athletic Training***Credits: 3*

An introduction to sports medicine, including the basic concepts and techniques in the prevention, evaluation, treatment and rehabilitation of athletic injuries. The broad spectrum of knowledge necessary to perform these tasks is examined. A lab is intertwined in the educational process of the class, entailing but not limited to taping, on-field care, bracing, splinting, etc.

Prerequisite: ENG 1010**Previous HPE* 242****HPE 2050 - Introduction to Physical Education***Credits: 3*

An introduction to the professional aspects of physical education, exercise science and sport studies. The course includes the history, philosophy, and foundation of the role of physical education and lifetime physical activity in society today. Course topics will explore the philosophical and scientific foundations of physical education and an

examination of literature, scientific inquiry, exercise prescription, lesson planning, nutrition, and career options available.

Previous HPE* 252**HPE 2161 - Yoga II***Credits: 1*

This studio course is a continuation of HPE 1061 and is designed to expand student's understanding of the methods and skills necessary to perform Yoga. Relaxation techniques and flexibility are stressed.

Prerequisite: HPE 1061 or demonstrated proficiency**Cross-listed:** DANC 2161**HSC 1001 - Introduction to Patient Care Management***Credits: 3*

This course is an introduction to patient care management. It focuses on concepts and skills essential for patient care in the healthcare field. A broad overview, with a healthcare perspective, will be presented on such topics as, healthcare occupations, including qualifications, roles and responsibilities, and educational requirements. In addition, communication with patients and the interprofessional team and current healthcare trends will be discussed.

Prerequisite: none**HSC 2090 - Health Science Capstone***Credits: 3***HSER 1001 - Introduction to Human Services***Credits: 3*

This experiential survey course is designed to introduce the student to the extensive nature of human services. The course will present and review basic concepts, philosophy, social policy, laws, current trends, theories, and history. Students in this course will study and explore skills utilized, appropriate and equitable practices, the impacts, and characteristics of human services professionals.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous HSE* 101****HSER 1034 - Introduction to the Mental Health System***Credits: 3*

This course is an introduction to the range of services, care/treatment approaches, and career opportunities for working with individuals afflicted with mental illness. The multi-disciplinary character of human services and mental illness are emphasized through a review of the history, nature, and stigma of mental illness. Some course topics

include an overview of serious mental illnesses, treatment approaches, case management, psychiatric rehabilitation, public awareness and stigma, and consumer empowerment.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous HSE* 134

HSER 1040 - Introduction to Behavioral Healthcare

Credits: 3

The course examines the current research, data related to substance abuse and mental health disorders populations, and behavioral and mental health movement. In this course, students study policies, treatments, and related issues associated with mental and behavioral health care. Emphasis placed on national and state policies, dual diagnosis issues, managed care, cultural competence, and client motivation.

Previous HSE* 141

HSER 1070 - Introduction to Gerontology

Credits: 3

Gerontology is the study of biological, psychological, and social aspects of aging. Gerontologists include researchers and practitioners in diverse fields as biology, medicine, nursing, dentistry, social work, physical and occupational therapy, psychology, psychiatry, sociology, economics, political science, architecture, pharmacy, and anthropology. This course carefully examines aging research and best practices.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous HSE* 170

HSER 1535 - Child Advocacy in Human Services

Credits: 3

The course presents concepts, policies, and practice in the field of human services, specifically child (and family services) and the role, value, and impact of advocacy. Students will examine the needs of children and families, the major human services policies and programs, best practices, and current trends in social services for children and families. The course provides students with a substantive base of knowledge through a human services perspective on child advocacy.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous HSE* 115

HSER 1643 - Disabilities and Mental Health

Credits: 3

This introductory course familiarizes students with the developmental and mental disabilities from childhood through adulthood. Emphasis is placed on the roles of families, societal functions, and professionals that provide support. In this course, students will examine the impact of disabilities both physical and mental, ethics, rehabilitation, life span services, psychosocial aspects, and policies related to disabilities.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous HSE* 133

HSER 2002 - Introduction to Counseling and Interviewing

Credits: 3

This course is a systematic study of the basic principles, methods, theories, and techniques employed in planning, assessment, contracting, and intervention strategies. In this course, students develop a self-awareness of personal values and professional boundaries, ethics, and standards.

Prerequisite: HSER 1001 with a grade of C- or higher.

Previous HSE* 202

HSER 2106 - Professional, Legal, and Ethical Issues in Human Services

Credits: 3

Human services professionals encounter legal issues that pertain to the profession, practices, and needs of clients. In this course, students are introduced to, through an in-depth study, the legal system and the laws that affect human services professionals and clients. The course also investigates, through research, current issues and examines trends in the profession and of human services professionals.

Prerequisite: HSER 1001 with a grade of C- or higher and ENG 1010 or permission of the program coordinator.

Previous HSE* 236

HSER 2242 - Human Services Skills and Methods

Credits: 3

This course is an examination of human services as a holistic response to human needs through various strategies, skills, approaches and techniques. Helping strategies involving case management, counseling, natural helping networks, assessment, and evaluation will be explored and skills will be developed in the areas of observation, listening, intake referral, and report writing.

Prerequisite: HSER 1001 and ENG 1010 or permission of the coordinator.

Previous HSE* 243

HSER 2247 - Change Theory and Strategies in Behavioral Health Care*Credits: 3*

An overview of the theories of human behavior, mental health, substance abuse, and application. Emphasis on the cycle of change and Motivational Enhancement Theory (MET) as used in Behavioral Healthcare. Students in this course also examine counseling techniques appropriate for diverse populations and the application of concepts, theories, and strategies for individuals with multiple behavioral difficulties.

Prerequisite: PSY 1011 and ENG 1010 or permission of instructor

Previous HSE* 147

HSER 2351 - Working with Individuals and Families*Credits: 3*

This course is an introduction to the theory and knowledge related to understanding human behavior and working with families and individuals in a human services capacity. In this course, students engage in experiential learning. This course provides students with theoretical and practical exposure to human behavior highlighting the interaction skills needed in the helping professions.

Prerequisite: HSER 1001 with a grade of C- or higher.

Previous HSE* 251

HSER 2420 - Group and Interpersonal Relations*Credits: 3*

In this course, students will examine group therapy and group dynamics through a comprehensive study of theory and methods that lead to a beginning competence, knowledge, and skills in helping people solve problems in group experiences.

Prerequisite: Eligibility for ENG 1010

Prerequisite/Corequisite: HSER 1001

Previous HSE* 210

HSER 2435 - Family Violence Across the Lifespan*Credits: 3*

This course introduces students to the three types of abuse: spousal/partner, child, and elder. Emphasis is placed on examination of contributing factors, reviewing victim and perpetrator profiles, evaluating community responses and resources, and laws and legislation related to the protection of individuals, the community, and society.

Prerequisite: C- or higher in HSER 1001 or SOC 1001

Previous HSE* 185

HSER 2441 - Human Services Agencies and Organizations*Credits: 3*

This course focuses on the study of community organizations and their methods of practice, analyzing the practice of planning and implementation of human services programs, the function and role of human services professionals, methods of human services best practices, and the components of community functions and change. The skills, methods and organizational functions are explored individually and the interactions between each are also examined.

Prerequisite: HSER 2242 with a grade of C- or higher and ENG 1010 or permission of the program coordinator.

Previous HSE* 241

HSER 2543 - Social and Contemporary Issues in Human Services*Credits: 3*

A research project, equity-oriented advanced course under the personal supervision of faculty member in the Human Services Program. It is designed to provide an opportunity to explore a particular need, topic, community concern, or subject within the area of human services and social justice. The student's research project may require travel at the student's own expense, coordination and planning as well as background checks, drug screens, and proof of health such as vaccination.

Prerequisite: HSER 2242, ENG 1010, approved research proposal and application, and permission of program coordinator.

Previous HSE* 198

HSER 2600 - Supervision and Management in Human Services*Credits: 3*

In this course, students explore human services supervision/management. Through a study of hiring, training, mentoring, and supervision, community engagement and networking, service delivery systems, program implementation, assessment, and evaluation, financial and budget planning, managerial problem-solving, administrative planning for human services organizations, and closely related concepts/topics, students gain an understanding of human services administration and management practices and perspectives.

Prerequisite: HSER 2441 or permission of program coordinator

Previous HSE* 247

HSER 2690 - Behavioral Healthcare Fieldwork*Credits: 3*

The practicum and field placement is under the guidance and supervision of selected mental health agencies in the region and the HSE program and Social Sciences Department. It is a process of experiential learning that integrates knowledge, skills, practices, and attitudes currently being taught and/or learned in coursework. Open only to students enrolled in the Mental Health Degree Program option or the HSE Mental Health Certificate. Field work may require travel at the student's own expense, coordination and planning as well as background checks, drug screens, and proof of health. 120 hours of field practicum.

Prerequisite: HSER 2247 with a C- or higher and permission of program coordinator.

Previous HSE* 287

HSER 2696 - Human Services Field Work I*Credits: 3*

Students are placed in a private or public social service agency or in a position in business that is human service related, by the college's internship coordinator, so that they may apply the theories and skills acquired in their academic studies. This field experience will be received under the joint supervision of personnel in the assigned organization and the college instructor. Completion of 120 hours of supervised field work in a cooperating human service agency. The academic component of the practicum experience is held bi-weekly and all field placement participants/ students are required to participate. This course is open only to students currently enrolled in the Human Services degree program; and may require travel at the student's own expense, planning, and coordination and background checks, drug screens, and proof of health may be required.

Prerequisite: PSY 1011, ENG 1010, HSER 1001, HSER 2242 and HSER 2420 (C- or higher in HSER courses) and permission of the program coordinator.

Previous HSE* 281

HSER 2800 - Foundations of Research Methods in Human Services and Education*Credits: 3*

Through a combination of lecture and hands-on projects, this course examines the philosophy, methodology, current social issues; how they are applied to social justice and questions, the basis of research methods with the goal of programmatic evaluation, and beginning the process of conducting research in the social sciences. This course emphasizes the unique contribution of interdisciplinary research (in disciplines such as but not limited to human services, early childhood education, anthropology, mental health, social work, sociology, and gerontology), the process of identifying challenges/questions, solutions, and application using real-world situations.

Prerequisite: ENG 1010, PSY 1011 and MATH 1001 or higher OR permission of the Human Services or Education Program Coordinator

Cross-listed: EDUC 2800

HSER 2999 - Human Services Independent Study*Credits: 1-3*

This is an individualized, faculty-supervised learning experiences that gives students an opportunity to explore knowledge and skills that may not otherwise be represented in curricular offerings or their interests. Individual study of a special area, topic, theme, or problem in Human Services by agreement between the student and the course instructor is explored in this course.

Prerequisite: ENG 1010 and permission of program coordinator.

Previous HSE* 299

HUM 1001 - Introduction to Humanities*Credits: 3*

A multi-disciplinary introduction to a global perspective on the arts and humanities concentrating on individual expressions of painting, sculpture, poetry, literature, philosophy, music, dance, and drama. Introduction to the Humanities explores how the humanities, through many varied types of creative works, comment on human experiences and raise questions of value and meaning.

Prerequisite: Eligible for ENG 1010

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): HUM, LART

Previous HUM* 101

HUM 1019 - Short-term Study Abroad*Credits: 3*

Through a series of in-class lectures, discussions, on-site visits and interactive activities, this course explores cultures and civilizations through an interdisciplinary approach centered in the humanities. Students are introduced to the distinct thought, life, and society of the host nation, as they examine key historical, political, social, literary, and artistic features geared to the understanding of their present-day world. As part of this course, students are required to travel to a nation outside the United States to observe, understand, and participate in the way of life of the host nation.

Prerequisite: eligible for ENG 1010 or permission of instructor.

Elective Code(s): GLKY, HUM, LART

Previous HUM* 119

HUM 1025 - Peace and Conflict Studies*Credits: 3*

A study of the concepts of positive and negative peace, nonviolent strategies of resistance, human rights, social

justice, restorative justice, conflict transformation, and methods of conflict resolution. Students will analyze contemporary conflicts in a multidisciplinary context -- environmental, historical, political, socio-cultural, psychological, and economic. Students will reflect on issues that may trigger conflict and the types of conflict prevalent in the 21st century.

Prerequisite: Eligible for ENG 1010

Elective Code(s): GLKY, HUM, LART

Previous HUM* 125

HUM 1046 - Leadership Development Studies: A Humanities Approach

Credits: 3

This course is designed to provide emerging and existing leaders the opportunity to explore the concept of leadership and to develop and improve their skills. Students taking this course will gain a basic understanding of the concept of leadership theory while developing a personal philosophy of leadership and an awareness of the moral and ethical responsibilities of leadership. Integrating readings from the humanities, experiential exercises, films, and contemporary readings on leadership, the course provides the opportunity to develop essential leadership skills through study, observation, and application.

Prerequisite: ENG 1010

Elective Code(s): HUM, LART

Previous HUM* 146

HUM 1071 - The Black Experience

Credits: 3

A study of the Black American experience using material from history, sociology, and literature. A primary focus is the search for a viable identity. The course will engage students in the ideas of black social thought, political protest, and efforts to initiate social change.

Prerequisite: Eligible for ENG 1010

Elective Code(s): GLKY, HUM, LART

Previous HUM* 171

HUM 1072 - The Harlem Renaissance

Credits: 3

The Harlem Renaissance defined a new age in African American cultural history. Students will study and experience the incredible surge of creative activity in literature, music, the visual and performing arts by African Americans in the 1920s and 1930s. While the Harlem Renaissance originated in Harlem, New York, it had a global reach.

Prerequisite: Eligible for ENG 1010

Elective Code(s): HUM, LART

Previous HUM* 172

HUM 1078 - Indigenous People: Art, Film, and Literature

Credits: 3

The 12,000-year-old legacy of indigenous peoples' art, music, oral story telling traditions, and written literatures from Chile to the Arctic Circle will be experienced and studied in this class. In addition, texts about indigenous peoples will be read.

Prerequisite: Eligible for ENG 1010

Elective Code(s): HUM, LART

Previous HUM* 178

HUM 1098 - Special Topics in Humanities

Credits: 3

The study and analysis of a topic from the humanist tradition, examined and presented with an interdisciplinary approach. The course focuses on special areas of study within the broad scope of the Humanities. HUM 1098 will examine the impact art, literature, drama, philosophy, religion, architecture, music, film, and/or other similar achievements has had on human history and human society.

Prerequisite: ENG 1010

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): HUM, LART

Previous HUM* 198

HUM 2029 - Topics in American Studies

Credits: 3

A study of the conflicting and competing socio-historical, literary, and artistic definitions of what it means to be an American through film, historical documents, novels, short stories, and other printed sources. Topics may include and are not limited to the Protest Tradition, environmental spaces such as urban life and the American West, Black Feminist resistance, Black Protest Traditions, abolitionist identities, indigenous experiences, Latinx identities, Asian-American identities, and border identities among others.

Prerequisite: ENG 1010 and either ENG 1020 or ENG 1030, or permission of instructor

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): HUM, LART

Previous HUM* 229

INDS 1030 - Interdisciplinary Service Learning

Credits: 3

This course in community service gives students an opportunity to apply knowledge and skills gained through academic study in the implementation of a service-learning project. Students will be given the opportunity to work directly in a community service agency. The course also includes an in-class component in which students reflect

critically on their volunteer experiences in order to synthesize past and present learning.

Prerequisite: Eligible for ENG 1010

Elective Code(s): LART

Previous IDS* 130

INDS 1300 - Philosophy and Practice of Yoga

Credits: 3

This course investigates the philosophy of yoga, its origins, and its place in our contemporary lives. It teaches the different aspects of yoga and areas of study that encompass the foundational principles of the discipline. Students will learn the basic poses as well as meditation and breathing techniques.

Elective Code(s): LART

Previous HUM* 130

INDS 2010 - Creative Voice

Credits: 3

Defining art in its broadest sense to include visual, performance and media arts, as well as literature, music and philosophy, this course will allow students to explore the nature of creative expression. Students will learn to identify and evaluate these art forms, and, in the process, they will be asked to see relationships and make connections between various forms of creative expression. In addition to theoretical discussion of the humanities, students will engage in and explore their own creative processes.

Prerequisite: ENG 1020

Elective Code(s): CRTY, LART

Previous IDS* 210

INDS 2020 - Individual and Society

Credits: 3

This course will examine the history and controversies associated with the Second Amendment of the Constitution, the complexity of urban educational reform, and a variety of issues associated with extreme poverty in America. Using several types of quantitative and qualitative research, we will study factors that have shaped developments in these areas. Questions related to the regulation of guns, long-term educational outcomes, and equality will be central to both the readings and discussions. We will examine quantitative and qualitative data regarding crime, school integration, academic achievement, income, class, and social mobility. We will discuss the various ethical concerns associated with the subject matter of each text.

Prerequisite: ENG 1020

Elective Code(s): GLKY, LART

Previous IDS* 220

INDS 2025 - Contemporary Global Issues

Credits: 3

The purpose of this course is to help students develop a better understanding of the growing global interdependence that structures the world they live in. Students will acquire a basic understanding of a number of the most pressing issues that are both an effect of globalization and require solutions that transcend the boundaries of individual nation states and societies. They will come to understand the complexity of the issues by looking at case studies through different lenses and get a sense that they have opportunities to become agents rather than observers in the process of problem solving. The class will investigate the impact of globalization on the economy, the environment, health issues, the environment and security. The course will offer a number of guest lectures and interactive learning strategies such as video conferencing with partner colleges, service learning opportunities and role plays in order to cope with the complexity of the topic while employing hands-on, experiential learning strategies.

Prerequisite: ENG 1010

Elective Code(s): GLKY, LART

Previous IDS* 225

INDS 2030 - Great Books

Credits: 3

This interdisciplinary Great Books Seminar focuses on questions that are central to the human condition. Individual course topics, such as "What is Justice," "What is Race," "What is Beauty," examine the relationships between and among foundational texts from three distinct disciplines, Humanities, Social Science, Natural Science. The methodology of close textual reading and Socratic discussion is emphasized, including the shared responsibilities of an inquisitive, dialogue-centered learning community. Both professor and students will engage the texts through questioning and rigorous discussion.

Prerequisite: ENG 1020

Elective Code(s): LART, HUM

Previous IDS* 230

INDS 2090 - Liberal Arts Capstone Seminar

Credits: 3

This capstone seminar course focuses on a central theme in relation to a problem, issue or topic affecting cross-sections of humanity. It uses a multi-disciplinary approach to problem solving, personal development, and multi-cultural competency. This course is designed to broaden students' perspectives beyond their own culture or a single discipline. It also teaches students how to make connections among concepts and experiences so that information, skills, and multiple perspectives can be applied to complex challenges. It also provides an opportunity for the integration of knowledge gained in General Education, Liberal Arts and

Humanities courses taken previously. The course includes a rigorous writing component.

Elective Code(s): LART

Previous IDS* 250

INDS 2311 - Teaching of Yoga I

Credits: 3

This course continues the study of an integral yoga practice, which combines asana, pranayama, concentration and meditation. In addition, this class serves as an introduction to yoga teacher training, intended to complement INDS 2312 Teaching Yoga II. Students continue their study of anatomy, alignment, and yoga philosophy, as well as designing and leading yoga practices.

Prerequisite: INDS 1300

Elective Code(s): LART

Previous HUM* 231

INDS 2312 - Teaching of Yoga II

Credits: 3

This course, in conjunction with INDS 2311 Teaching of Yoga I, is designed to provide the foundation and training needed for students who aspire to teach yoga. This class examines the various topics essential to being a skilled yoga teacher, including how to safely and effectively teach asana and pranayama; the principles of effective speech, ethics, and alignment; how to make appropriate adjustments; sequencing of postures; knowledge of the yoga tradition and philosophy; and the cultivation of one's authentic self-expression. Students also gain regular practice and experience in teaching yoga.

Prerequisite: INDS 2311

Elective Code(s): LART

Previous HUM* 232

INTD 1001 - Interior Design Studio I

Credits: 4

An introduction to the elements and principles of design, the interior design profession, and the interior design problem solving process. The Interior Design Studio atmosphere is a working, explorative and hands-on academic design, and research studio. Lectures will begin with certain assignments while students also produce work for a given project. Individual and group critiques will take place per project. Students are also expected to work independently in preparation for interaction and discussion with the studio Professor. Students are expected to be prepared for each class with the assignments, handouts, books, sketchbooks, architectural scale and drawing materials in hand for reference and use.

Prerequisite: ARCH 1005 or permission of Interior Design Coordinator

Course Fees: Supplemental Fee Level 2

Previous IND* 101

INTD 1020 - Materials Textiles and Finishes

Credits: 3

The study of interior design textiles, materials and finishes including characteristics, care, codes, and applications.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 1

Previous IND* 120

INTD 1021 - Color and Lighting for Design

Credits: 3

A study of color theory and its application to interior design. Fundamentals of lighting design, including lamps, luminaires. Lighting techniques, and applications for residential and commercial projects.

Prerequisite: INTD 1020

Course Fees: Supplemental Fee Level 1

Previous IND* 121

INTD 2001 - Interior Design Studio II

Credits: 4

This course is designed to develop technical skills, creativity, an understanding of space planning in residential interior design through presentation formats / material reading. Objectives will be to learn how to plan, organize, and present design concepts of interior design with attention to details and material applications in a residential setting. Students will be encouraged to explore matters of space planning, creating, and developing design schemes, drawing floor plans, elevations, and sections. Students will communicate design ideas through 2D and 3D representations, including massing models.

Prerequisite: INTD 1001 or Permission of Interior Design Coordinator

Course Fees: Supplemental Fee Level 2

Previous IND* 201

INTD 2002 - Interior Design Studio III*Credits: 4*

This course is designed to develop and advance technical skills, creativity, an understanding of space planning in commercial interior design through presentation formats / material reading learned in INTD 2001. Objectives will be to further develop how to plan, organize, and present design concepts of interior design with attention to details and material applications in a residential setting. Students will be encouraged to explore matters of space planning, creating, and developing design schemes, drawing floor plans, elevations, and sections. Students will communicate design ideas through 2D and 3D representations, including massing models.

Prerequisite: INTD 2001 or Permission of Interior Design Coordinator

Course Fees: Supplemental Fee Level 2

Previous IND* 202

INTD 2090 - Interior Design Internship*Credits: 3*

An Interior Design internship provides practical experience in a supervised setting related to the Interior Design profession such as a practice/office, retail design center, material supplier/vendor, product manufacturer, etc. Such an opportunity can be within a public or private setting related to Interior Design or Interior Architecture.

Prerequisite: Completion of 30 credits in Interior Design AND Permission of Interior Design Coordinator

Previous IND* 293

INTR 1001 - Pre-Interpreting Skills*Credits: 3*

This course is designed to establish the requisite skills essential to subsequent interpreter preparation. Before students can be introduced to the models of interpreting, they must first learn how to analyze and understand incoming source messages. This foundational course will teach various techniques to effectively process information for meaning. This course is for interpreting students. Check with advisor before registering.

Prerequisite: ASL 1002 with a 'B' or higher.

Corequisite: ASL 2001, ASL 2005

Previous INT* 103

1021 - Professional Standards in Interpreting*Credits: 3*

An analysis and understanding of the Registry for Interpreters (RID) Code of Professional Conduct (CPC) that is required for those individuals seeking a career as a certified interpreter. Emphasis is on understanding and applying the CPC as is required for the RID National Interpreting Exam. Check with advisor before registering.

Prerequisite: ASL 2001, ASL 2002, ASL 2005, AND INTR 1001, all with a 'B' or higher.

Previous INT* 121

INTR 2013 - Interpreting I: Consecutive*Credits: 4*

Students are presented with the technique of consecutive interpreting as a skill development tool for increasing the skills needed to comprehend, organize and plan the message equivalence as a practice form for simultaneous interpreting. Students will expressively and receptively interpret from both recorded texts and live speakers in a consecutive format. Additionally, up to 20 hours of interaction with native Deaf signers and observation of interpreters in the Deaf community is required to enhance cultural identity and improve communication skills. This course is for interpreting students. Check with advisor before registering.

Prerequisite: ASL 1002, ASL 2005, ASL 2006, INTR 1021, all with a 'B' or higher.

Corequisite: INTR 2014 - Sign-to-Voice

Course Fees: Materials Fee

Previous INT* 213

INTR 2014 - Sign-to-Voice*Credits: 3*

Student will learn the skills needed to voice Deaf people's signed message using the correct English equivalence without changing the intended meaning. Practice with both taped lectures and live Deaf guests will be included in the classroom and outings. Skill building will include team interpreting for various settings. This course is for interpreting students. Check with advisor before registering.

Prerequisite: ASL 2001, ASL 2002, ASL 2005, ASL 2006, INTR 1001, INTR 1021, all with a 'B' or higher.

Corequisite: INTR 2013

Course Fees: Materials Fee

Previous INT* 214

INTR 2034 - Educational Interpreting with Specialized Populations*Credits: 3*

This course is designed to give students an understanding of the legislation impacting the education of deaf children. Students are introduced to factors impacting a deaf child's development and the ability to identify and develop the skills and knowledge necessary to interpret for specialized

population in the deaf community. A study of specialized populations in the Deaf community including but not limited to deaf-blind, aural/oral, the autism spectrum and other behavioral, emotional, physical and mental disorders. Additional focus will include factors influencing the interpreting process and the impact these may have on the registry of interpreters for the deaf code of professional conduct. This course is for interpreting students. Check with advisor before registering.

Prerequisite: ASL 2001, INTR 1001, AND INTR 1021, all with a 'B' or higher, OR permission of the instructor.

Previous INT* 234

INTR 2095 - Interpreting Practicum & Seminar

Credits: 4

The student will complete at least eighty (80) hours of practical work experience in preapproved, supervised settings to conform with state laws. This course will also provide an open forum for discussing questions and concerns arising from the student's observation of interpreted situations and individual practicum experiences. In addition, students will prepare for securing professional positions upon graduation and establish professional development goals for achieving national interpreter certification.

Prerequisite: INTR 1021, INTR 2013, INTR 2014, INTR 2034, all with a 'B' or higher, AND permission of instructor.

Previous INT* 242

INTR 2113 - Interpreting II: Simultaneous

Credits: 4

This course is a continuation of the skills needed for interpreting from English-to-American Sign Language (ASL) and ASL-to-English interpreting. The focus is on the practice of the skills used in the simultaneous interpreting mode. This course will develop the interpreting skills needed to process a continuous message from the Source Language to the Target Language. Expressive and receptive skills will continue to be developed to assist students in producing messages in proper ASL form. Team interpreting is introduced and practiced. Additional strategies for providing peer feedback are developed and refined. Classroom experiences will provide experiential opportunities to practice and hone skills introduced in class presentations. Occasionally experiential hours will be satisfied at off-site locations. This course is for interpreting students. Check with advisor before registering.

Prerequisite: ASL 2002, ASL 2006, INTR 1001, INTR 1021, INTR 2034, all with a 'B' or higher.

Corequisite: INTR 2095 Practicum and Seminar

Previous INT* 215

ITAL 1011 - Elementary Italian I

Credits: 4

An introduction to the Italian language and Italian-speaking cultures with emphasis on the development of the four basic

skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous ITA* 111

ITAL 1012 - Elementary Italian II

Credits: 4

A continuation of Elementary Italian I, this course builds upon previous introduction to the Italian language and Italian-speaking cultures with a continued emphasis on the development of the four basic skills: listening, speaking, reading, and writing. This is the second part to the beginning sequence for students who have had some prior study of this language either in high school, ITAL 1011, or life experience. This is a four-credit course with an embedded language lab component.

Prerequisite: Students must have earned a grade of C- or higher in ITAL 1011, complete a Language and Culture placement test, or obtain permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous ITA* 112

ITAL 1020 - Beginning Italian Conversation I

Credits: 3

This is an introductory course for students who wish to develop basic conversational skills in Italian. It focuses on everyday situations that students may encounter when living or traveling in Italian-speaking environments and dealing with Italian-speaking people in the United States. This is a beginning level course designed for students who have no more than 1 year of elementary Italian. It emphasizes practical, everyday situations and provides a variety of opportunities to develop listening, speaking, reading, and writing skills while enhancing cultural understanding and appreciation of the Italian-speaking world.

Previous ITA* 155

ITAL 1021 - Beginning Italian Conversation II

Credits: 3

This is a second semester introductory course for students who wish to continue developing their basic conversational skills in Italian. It focuses on everyday situations that students may encounter when living or traveling in Italian-speaking environments and dealing with Italian-speaking people in the United States. This is a beginning level course designed for students who have no more than 1 year of

elementary Italian or have completed Beginning Italian Conversation I. It emphasizes practical, everyday situations and provides a variety of opportunities to develop listening, speaking, reading, and writing skills while enhancing cultural understanding and appreciation of the Italian-speaking world.

Prerequisite: A grade of C- or higher in either ITAL 1020 - Beginning Italian Conversation I, ITAL 1011 - Elementary Italian I or ITAL 1012 - Elementary Italian II, or permission of instructor.

ITAL 1030 - Elementary Italian Composition I

Credits: 3

In this high elementary course, students continue to develop writing skills through vocabulary development, spelling exercises, and composition. This course is designed to develop and refine writing skills and analysis through original compositions with attention to common problems of accentuation, punctuation, spelling, and grammar.

Prerequisite: A grade of C- or higher in ITAL 1012 or complete a Language and Culture placement test, or permission of the instructor.

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LACU, LART

Previous ITA* 160

ITAL 2011 - Intermediate Italian I

Credits: 4

This course is for students who have already attained a working knowledge of the language. Students continue to develop and strengthen speaking and listening comprehension and reading and writing skills, as well as learn more about Italian-speaking cultures. Students are introduced to cultural and literary materials that will develop an appreciation of the arts, history, culture, and the literature of Italian-speaking peoples and create an awareness of cultural, social, and linguistic differences and similarities. Instruction focuses on oral and written communication. This is a four-credit course with an embedded language lab component.

Prerequisite: A grade of C- or higher in ITAL 1012, or complete a Language and Culture placement test, or permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous ITA* 211

ITAL 2012 - Intermediate Italian II

Credits: 4

This course is for students who have already attained a working knowledge of the language by either completing 4 years of high school Italian, Intermediate Italian I or the equivalent. Students continue to develop and strengthen

speaking, listening comprehension, reading, and writing skills, as well as learn more about Italian-speaking cultures. Students are introduced to cultural and literary materials that will develop an appreciation of the arts, history, culture, and the literature of Italian-speaking peoples and create an awareness of cultural, social, and linguistic differences and similarities. Instruction focuses on oral and written communication. This is a four-credit course with an embedded language lab component.

Prerequisite: A grade of C- or higher in ITAL 2011, or complete a Language and Culture placement test, or permission of the instructor.

Elective Code(s): FLNG, LACU, LART

Previous ITA* 212

ITAL 2030 - Intermediate Italian Composition I

Credits: 3

In this high intermediate course, students continue to develop deeper fluency in Italian language skills with an emphasis on academic reading and writing. Students continue to refine reading comprehension, writing proficiency, listening, and speaking skills, and grammatical accuracy. Assigned college level readings, which may include whole works and academic writings, form the basis for small and whole class discussions and writing assignments. Students learn to appropriately integrate multiple sources into a research-based paper. Collaborative activities help students further develop linguistic clarity and accuracy, academic vocabulary, critical thinking, and development of ideas appropriate for academic study in Italian.

Prerequisite: A grade of C- or higher in ITAL 2012 or complete a Language and Culture placement test, or permission of the instructor.

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LACU, LART

Previous new

ITAL 2198 - Special Topics in Italian

Credits: 3

This course covers topics of special interest in Italian. Topics vary by campus and semester but focus on literature and/or cultural study.

Prerequisite: ITAL 2012 or permission of instructor

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LACU, LART

Previous ITA* 298

ITAL 2199 - Independent Studies in Italian

Credits: 1-3

Students will have the opportunity to pursue with greater depth a topic within the French discipline guided by a faculty

member. Students should have a high academic standing in Italian language.

Prerequisite: Permission of the Supervising Faculty. All Independent studies must be arranged in the semester prior to registration, with advance departmental approval and the permission of a full-time Language and Culture faculty member.

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LACU, LART

Previous ITA* 299

JAPN 1000 - Getting Started in Japanese

Credits: 1

This course introduces students to the essentials of the Japanese language. This course will expose students to basic speaking and listening skills. Vocabulary needed to interact in Japanese using simple phrases and common expressions is presented.

JAPN 1011 - Elementary Japanese I

Credits: 4

An introduction to the Japanese language and Japanese-speaking cultures with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous JPN* 111

JAPN 1012 - Elementary Japanese II

Credits: 4

A continuation of Elementary Japanese I, this course builds upon previous introduction to the Japanese language and Japanese-speaking cultures with a continued emphasis on the development of the four basic skills: listening, speaking, reading, and writing. This is the second part to the beginning sequence for students who have had some prior study of this language either in high school, Elementary Japanese I or life experience. This is a four-credit course with an embedded language lab component.

Prerequisite: Students must have earned a grade of C- or higher in JAPN 1011, or complete a Language and Culture placement test, or obtain permission of the instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous JPN* 112

LAS 1201 - Introduction to Latino Studies

Credits: 3

This course provides an introduction to the history, literature, ethnicity, gender, sexuality, race, culture, and socio-economies of Latinos in the United States.

Prerequisite: ENG 1010 with a C or higher

Elective Code(s): HUM

LATN 1011 - Elementary Latin I

Credits: 4

An introduction to the Latin language and Classical Roman history and culture with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the instructor.

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous LAT* 111

LATN 1012 - Elementary Latin II

Credits: 4

A continuation of Elementary Latin I, this course builds upon previous introduction to the Latin language and Classical Roman culture and history with a continued emphasis on the development of the four basic skills: listening, speaking, reading, and writing. This is the second part to the beginning sequence for students who have had some prior study of this language either in high school or Elementary Latin I. This is a four-credit course with an embedded language lab component.

Prerequisite: Students must have earned a grade of C- or higher in LATN 1011, or complete a Language and Culture placement test, or obtain permission of the instructor.

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous LAT* 112

LGL 1001 - Introduction to Legal Studies*Credits: 3*

This introductory course is designed to introduce students to the practical aspects of working within the paralegal field and will include an overview examination of the American legal system, paralegal skills and competencies, and regulatory and ethical issues facing paralegals in their careers.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 101

LGL 1002 - Legal Research and Writing*Credits: 3*

This course provides an understanding of the basic principles and processes underlying legal research. Emphasis is placed on the development of practical paralegal skills, taught through legal research exercises. Topics include understanding, classifying, and valuing different sources of law, legal research methods, and application of research findings to case examples. The class also focuses on the development of legal writing skills, including office correspondence, case briefing, written synthesis of legal authorities, written summaries of research findings, and proper legal citation. Ethical considerations in legal research will also be covered.

Prerequisite: Eligibility for ENG 1010 and one of the following: POLS 1020, LGL 1001 or permission of the program coordinator

Previous LGL* 102

LGL 1004 - Real Estate Practice*Credits: 3*

This course is an Introduction to real estate law and real estate practice. Topics include property rights, types of land ownership/estates, easements and rights-of-way, real estate leasing agreements real estate purchase and sale contracts, real estate financing, Closing and settlement procedures, and condominiums, co-operatives, and planned unit developments. Ethics will be discussed throughout the course.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 104

LGL 2003 - Criminal Law*Credits: 3*

An in-depth study of the act(s) and mental state(s) which 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 court decisions, and the Model Penal Code.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous new

LGL 2004 - Criminal Procedure*Credits: 3*

This course enables the student to utilize the classroom as a learning law laboratory since it will explore the Bill of Rights and the Fourteenth Amendment in detail as well as the entire United States Constitution. Constitutional law cases will be studied in the context of criminal procedure issues evolving from the precedents set by the United States Supreme Court.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 204

LGL 2006 - Bankruptcy Law*Credits: 3*

This course will provide students with a thorough review of the United States Bankruptcy Code. The course is tailored to explore the general functions of the Bankruptcy Court. The applicable rules and proceedings for various types of bankruptcy cases will be thoroughly discussed.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 206

LGL 2008 - Litigation*Credits: 3*

This course provides the student with a basic understanding of the civil litigation process in Connecticut, with particular attention to the role of the litigation paralegal. Emphasis is placed on the development of practical paralegal skills, including drafting of litigation documents and administrative skills related to civil litigation. Topics include pleadings, motions, the discovery process, organization of evidence, trial procedures, and alternative dispute resolution. Ethical considerations relevant to the practice of civil litigation will also be examined.

Prerequisite: Eligibility for ENG 1010 and one of the following: POLS 1020, LGL 1001 or permission of the instructor

Previous LGL* 208

LGL 2009 - Probate Practice& Estate Admin*Credits: 3*

This course will familiarize students with a practical understanding of the laws of estate planning and estate administration. Topics include various estate planning techniques; proper use of trusts; gifts and planning for incapacity. Students will learn the appropriate procedures relevant to drafting and interpreting wills and will become familiar with the initial planning and preparation necessary for a comprehensive estate plan.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 209

LGL 2010 - Family Law*Credits: 3*

This course provides a foundation in family law, with particular emphasis on family law practice, including litigation. Topics include client relations, premarital agreements, ceremonial and common law marriages, annulment, separation, dissolution of marriage, child custody and support, tax consequences, the legal status of children, adoption, and surrogacy. The class will emphasize the development of paralegal skills, including practical application of concepts and drafting of legal documents. Ethical rules pertaining to family law practice will also be covered.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 210

LGL 2011 - Business Organization*Credits: 3*

This course provides an introduction to and understanding of the basic principles of law that apply to the formation of business organizations including sole proprietorship, general partnership, limited partnership, LLC, LLP, and corporation. Students will be taught legal concepts regarding the scope and skills needed by the paralegal in the formation and operation of these business forms. Familiarity with legislation, legal terminology, legal ethics, and legal requirements will be stressed. Practical applications and drafting of necessary documents and forms will be included.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 211

LGL 2012 - Contract Law*Credits: 3*

This course examines the fundamental principles of contract law, including contract formation, consideration, breach of contract, defenses, third party rights, and remedies, as well as equitable theories related to contracts. The course will also course will consider selected provisions of Article 2 of the

Uniform Commercial Code, and the impact of these provisions on common law contract principles. Emphasis is given to the role of the paralegal is assisting in the drafting of contracts and contract related litigation documents.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 212

LGL 2013 - Juvenile Law*Credits: 3*

This course will familiarize students with a practical understanding of the laws of Juvenile Court for child protection and delinquency/criminal hearings and proceedings. Topics include the laws of abuse and neglect, termination of parental rights; nonjudicial supervision; court ordered supervision; detention of juveniles, and Family with Service Needs petitions. Students will learn the appropriate procedures relevant to drafting juvenile court documents including petitions for abuse and neglect, termination of parental rights, and FWSN. This course will address the ethical considerations of working in Juvenile Court with an emphasis on confidentiality.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous new

LGL 2016 - Administrative Law*Credits: 3*

This course presents a basic understanding of legal concepts affecting public administrative agencies, including the way in which administrative agencies fit into the United States system of government. Students will study the types and organization of administrative agencies, sources of administrative law, rulemaking, legislative oversight, agency actions, controls on agencies, appeals, adjudications, and judicial review. The course will explore these concepts within the framework of specific areas of agency authority, such as immigration, social security, and civil rights law. The paralegal's role within the practice of administrative law will be emphasized, including application of pertinent paralegal skills and ethical decision making.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 216

LGL 2020 - Computer Applications in Law*Credits: 3*

This course provides the paralegal student with a background in computer applications in the law office. The student will employ and examine Microsoft Office Suite applications, as well as specialized legal software, to perform billing and calendar functions, file and case management, and litigation support. The student will learn to access public records and governmental information using the Internet. Procedures for

electronic filing and access to court forms, dockets and calendars will be reviewed.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 220

LGL 2090 - Advanced Legal Issues Seminar

Credits: 3

This course will be taught as a seminar and through a series of lectures. A guest speaker is also likely to participate. The problem-solving method will be used to examine critical issues in the wake of current legal events and new trends in the law.

Prerequisite: Eligibility for ENG 1010 or permission of the program coordinator

Previous LGL* 230

LGL 2095 - Coop Ed Work Experience

Credits: 3

This course provides students with the opportunity to apply classroom theory in an actual work setting, in paid and unpaid supervised positions, related to their majors.

Completion of approximately 10-20 hours per week of work (150 hours for unpaid placements, depending on major; 300 hours for paid placements) and participation in Cooperative Education Online are required. In addition to the work placement, students are required to attend and complete classroom work (online) to enhance their cooperative education work experiences.

Prerequisite: For Paralegal A.S. students - A minimum overall GPA of 2.0, 12 completed credit hours in the Paralegal program, completion of LGL 2008, and permission of the Program Coordinator. , and permission of the Program Coordinator.

Corequisite: Certificate students who have not already completed LGL 2008 must be enrolled in the course as a corequisite.

Previous LGL* 270

LGL 2190 - Legal Studies Capstone

Credits: 3

This capstone course provides students with an opportunity to engage in advanced analysis, research and writing projects, integrating prior course work and further developing paralegal skills. Students will prepare a portfolio of documents, essays and projects that demonstrate core competencies. Job search strategies and continuing education opportunities will be discussed. Students will prepare for and complete a comprehensive, substantive assessment after review of various content areas.

Prerequisite: LGL 2012 or permission of the program coordinator

Previous LGL* 240

LGL 2195 - Legal Internship

Credits: 3

Actual work experience as a paralegal in a law office or public agency is acquired. Students will seek an internship through an individual search similar to a job search. The coordinator will assist those students unable to secure an internship through their own search. Students will meet periodically in a seminar setting to discuss their progress and to prepare for entry into the job market.

Prerequisite: Permission of the program coordinator

Previous LGL* 280

LIBR 1001 - Introduction to Library Public Services

Credits: 3

This course is an introduction to public services in several types of libraries. Students learn about procedures such as circulation, reference, the importance of Intellectual Freedom and Censorship, and interlibrary loan. Services such as public relations, programming, customer service, and displays are emphasized. This is an approved course by the American Library Association-Library Support Staff Certification for the Foundations in Library Services competency set.

Previous LIB* 101

LIBR 1004 - Introduction to Reference Services

Credits: 3

Students learn how to analyze simple and complex reference questions and identify the best subject resources to answer them. In addition, this course covers topics such as reference ethics, information literacy, youth reference services, reader's advisory, genealogy, reference programming, evaluation of reference materials, current services, and explore potential future library services. This is an approved course by the American Library Association-Library Support Staff Certification for the Reference and Information Services competency set.

Previous LIB* 104

LIBR 1016 - Cataloging and Classification

Credits: 3

This course introduces the organization of libraries and the principles and practices of cataloging including descriptive cataloging, subject analysis, subject headings and classification systems. It includes copy cataloging and original creation of MARC21/BIBFRAME/RDA records. RDA (Resource Description and Access) and BIBFRAME (Bibliographic Framework Initiative) are new requirements that are changing cataloging. Students learn how to update AACR2 (Anglo-American Cataloging Rules). -MARC21 (Machine Readable Cataloging) records with RDA and BIBFRAME so that all catalog records follow new standards and rules for bibliographic description, including FRBR (Functional Requirements of Bibliographic Records) and

FRAD (Functional Requirements of Authority Data). Both print and non-print materials will be covered.

Previous LIB* 116

LIBR 1020 - Library Youth Services

Credits: 3

A critical study of literature for children and young adults, this course is designed to introduce to students the basic elements for bringing literature and readers together. The study includes a variety of literary forms such as folklore, poetry, fiction, drama, and nonfiction, and discussions of writers, illustrators, storytelling, and library programming from early childhood to young adulthood. This is an approved course by the American Library Association-Library Support Staff Certification for the Youth Services competency set.

Previous LIB* 120

LIBR 1023 - Introduction to Library Tech Services

Credits: 3

In this course, students acquire an understanding of the use of bibliographic tools, the skills required for proper use, and a basic knowledge of the technical processing department workflow. This is an approved course by the American Library Association-Library Support Staff Certification for the Collections competency set.

Previous LIB* 123

LIBR 1025 - Digital Media

Credits: 3

In this course students will explore the role of digital media in the field of Library Science by looking at best practices and by creating original media content. Students will be introduced to and create a variety of digital file formats including audio, image, and video. They will look at these files using a variety of available software and applications. Students will be required to create their own original digital content using personal devices such as, but not limited to, digital video recorders, digital audio recorders, laptops, mobile phones, and/or tablets. The hardware will not be provided for the students, so access to some or all of the above-mentioned devices is a requirement for this course. An emphasis will be placed on the ethical use of all digital content following current intellectual property right and copyright laws.

Previous LIB* 125

LIBR 1027 - Management and Teamwork

Credits: 3

In this course, students examine the basic communication, decision-making, and management skills necessary for library support staff. Emphasis is placed on library support staff communicate effectively with library users and other library

staff for a variety of situations with the offering high-quality customer service and serving as a valued member of work team. This is an approved course by the American Library Association-Library Support Staff Certification for two competency areas: Communication and Teamwork and Supervision and Management.

Previous LIB* 127

LIBR 2001 - Digital Information and Technology

Credits: 3

Students are introduced to a wide variety of digital information resources that enhance library services; and gain experience and practice in the selection, management, creation and assessment of digital collections, including online subscriptions, e-books, related technologies, and web services. Additionally, students gain experience in practices of preservation and archives, the use of LibGuides, and current and anticipated future technology and media trends that influence, or impact library services are explored. This is an approved course by the American Library Association-Library Support Staff Certification for the Technology competency set.

Previous LIB* 201

LIBR 2095 - Supervised Field Placement

Credits: 3

This is a practicum course and students are required to complete a minimum of 90 field placement hours. Students participate in a practical, real-world experience in a library or media center setting of their choice under the guidance and supervision of library staff. Students in the library technology certificate program who do not have experience working in a library or media center are encouraged to take this course. Each internship is an individual experience.

Prerequisite: At least 15 Library Technology credits

Previous LIB* 202

LING 1010 - Introduction to Linguistics

Credits: 3

This course is an introduction to the study of language and the fundamentals of linguistic theory. The course focuses on the study of languages, the use of language, and how linguists study language and why language is studied.

Prerequisite: Grade of C- or higher in ENG 0930 or ENG 0960 OR eligibility for ENG 1010.

Previous LIN* 101

MAM 2001 - Principles of Mammography

Credits: 4

This course will review basic patient care and radiation protection. This course will introduce students with radiography backgrounds to the basic principles behind breast imaging (patient care, instrumentation, anatomy and

physiology, technique and evaluation). This course will teach students to operate and utilize digital and conventional mammography equipment to produce images of patients' breast tissue. This course will prepare graduates to possess the knowledge, skill, and affect to meet the demands of an entry level-position as a mammographer. Theory presented will prepare and qualify students to participate in the ARRT Mammography certification examination.

Prerequisite: Admission to the Mammography Program and must be an American Registry of Radiologic Technologists (ARRT) certified/registered Radiographer OR Permission of the Middlesex Campus Program Coordinator.

Corequisite: MAM 2094

Previous MAM* 201

MAM 2094 - Mammography Clinical Experience

Credits: 4

This course will introduce students with radiography backgrounds to the basic principles behind breast imaging (patient care, instrumentation, anatomy and physiology, radiation protection, technique and evaluation). Upon successful completion of the course, the student will be competent in completing the entire mammographic procedure from request through quality control (QC). A minimum of 240 contact hours of supervised instruction is required.

Students must perform 75 mammographic examinations (screening and/or diagnostic) in addition to the 25 examinations that are required by the initial Mammography Quality Standards Act (MQSA) mammography requirements. All examinations must be performed on patients (not phantom or simulations). Clinical experience and completion of required examinations will prepare and qualify students to sit for the ARRT Mammography certification examination.

Prerequisite: Admission to the Mammography Program and must be an American Registry of Radiologic Technologists (ARRT) certified/registered Radiographer OR Permission of the Middlesex Campus Program Coordinator.

Corequisite: MAM 2001

Previous MAM* 202

MASG 1001 - Massage Theory and Practice

Credits: 3

This course will discuss therapeutic massage by exploring professional touch, the history of massage and review of scientific research into the effects of massage therapy including indications, contraindications, universal precautions, health related issues and wellness education. Professional environment. Students will learn the physiological as well as psychological effects of touch.

Previous MAS* 101

MASG 1004 - Massage Therapy I

Credits: 4

Through lectures, discussion, and demonstration students will learn: How to set up and adjust the massage table, proper body mechanics, effects and usage of effleurage, petrissage, and compressions, proper draping of back, gluteal, anterior and posterior legs, chest, and abdominals.

Course Fees: Supplemental Fee Level 2

Previous MAS* 104

MASG 1016 - Anatomy and Physiology for Healthcare

Credits: 4

This course is a basic study of the structure and functions of the human body. It is designed to provide the fundamental knowledge of how each system functions. The anatomy and physiology of the integumentary system will be discussed. The skeletal system and the muscular system will be covered in detail. Blood, cardiovascular system, lymph system, and the digestive system will also be discussed. Disorders and medical treatments particular to each system will be highlighted.

Previous MED* 116

MASG 1022 - Musculoskeletal Anatomy

Credits: 4

Through lectures, discussion, students will learn the basic structure and functions of the Skeletal and Muscular anatomy of the upper and lower body. Students will learn the muscle names, origin, insertion, actions and commonalities of the muscles.

Course Fees: Supplemental Fee Level 2

Previous MAS* 122

MASG 1033 - Pathology I

Credits: 3

Through lectures, discussion, and demonstration students will learn: pathologies of the Integumentary, Musculoskeletal, Nervous and Cardiovascular systems. In addition, students will learn the indications and contraindications for pathologies of the aforementioned systems as they relate to massage therapy.

Previous MAS* 133

MASG 1070 - Massage and Business Ethics

Credits: 3

This course presents an overview of the contemporary Massage Therapy business world, focusing on operation, finance, , planning, personnel management, client confidentiality, and client file/record maintenance. Emphasis is also placed upon licensing requirements and business ownership and entrepreneurship in the Massage Therapy practice. Basic corporate entities such as "C", "S", and

professional corporations will be discussed. This course also acquaints massage therapy students with State and National law and ethics guidelines, ethical practices and basic personal psychology concepts. Students will also be introduced to the concepts of self-assessment and self-esteem in an effort to assist them in understanding the process involved with making the changes necessary in their lives to facilitate success in their chosen career.

Previous MAS* 170

MASG 1104 - Massage Therapy II

Credits: 4

Through lectures, discussion, and demonstration students will learn further techniques including how to set up and adjust the massage table, proper body mechanics, effects and usage of massage therapy, including cross fiber, friction, tapotement, and vibration.

Prerequisite: MASG 1004 with a grade of C or higher

Course Fees: Supplemental Fee Level 2

Previous MAS* 148

MASG 2004 - Massage Therapy III

Credits: 4

Through lectures, discussion, and demonstration students will learn: how to set up and adjust side lying position, proper body mechanics, effects and usage of trigger point, myofascial release, and hydrotherapy.

Prerequisite: MASG 1104 with a grade of C or higher

Previous MAS* 248

MASG 2022 - Kinesiology

Credits: 3

Through lectures and discussion, students will learn the basic structure and functions of the anatomy, biomechanics and muscles types including the principles of the human movement. In addition, students will learn the neuromuscular concepts and principles. Students will also learn how these concepts apply to massage therapy.

Prerequisite: MASG 1022

Previous MAS* 222

MASG 2033 - Pathology II

Credits: 3

Through lecture, discussion, and demonstration students will learn: pathologies of the lymphatic, respiratory, digestive, endocrine, urinary, reproductive systems, as well as principles of cancer. In addition, learn the indications and contraindications for each pathology as they relate to massage therapy.

Previous MAS* 233

MASG 2090 - Massage Therapy Capstone Seminar

Credits: 4

This is the capstone course for the Massage Therapy major and should be taken in the student's last semester. This course provides an opportunity for students to complete, present, and receive feedback on their research projects. The projects will be evaluated by peers and faculty. It also provides students an opportunity to reflect upon and integrate their course learning with their life and work experiences and to relate their learning to the massage therapy field.

Prerequisite: CT and/or MA Massage Therapy License

Previous MAS* 295

MASG 2095 - Clinical Internship

Credits: 4

Throughout this clinical internship, students will complete 100 hours of massage on clients from the public. Student will have the opportunity to apply knowledge obtained throughout the Massage Therapy program in a true therapeutic environment.

Prerequisite: MASG 2004 with a grade of C or higher

Previous MAS* 260

MATH 0901 - Quantitative Reasoning Support

Credits: 3

This course provides corequisite support for students who are also enrolled in MATH 1100. Support topics include learning strategies, prerequisite skills for MATH 1100, and reinforcement of topics in MATH 1100. Support topics will be taught in a just-in-time format so that they are delivered to the student in the same order and at the same time as the corresponding topics in MATH 1100. Taken with MATH 1100, this course emphasizes quantitative skills needed to be an engaged citizen. Critical thinking and problem solving are emphasized along with the application of mathematics to real-world scenarios requiring reasoning from evidence. Students will learn to communicate effectively with numbers and use technology to enhance their quantitative reasoning ability. Credit does not fulfill degree requirements and is not transferable outside the Connecticut Community College system.

Prerequisite: MATH 0988/MATH 0989 with a grade of D- or higher OR placement using multiple measures

Corequisite: MATH 1100

Previous new

MATH 0902 - Statistics I Support

Credits: 3

This course provides corequisite support for students who are also enrolled in MATH 1200 or MATH 1201. Support topics include learning strategies, prerequisite skills for MATH 1200 and MATH 1201, and reinforcement of topics in MATH 1200 and MATH 1201. Support topics will be taught in a just-in-time format so that they are delivered to the

student in the same order and at the same time as the corresponding topics in MATH 1200 and MATH 1201. Taken with MATH 1200 and MATH 1201, this course develops students' numeracy, proportional reasoning, algebra, critical reading, statistical reasoning, and problem-solving skills. Activities will center on data analysis and enhance students' ability to use mathematics to solve problems and provide students just-in-time support for statistics concepts. This course requires the use of computer-based statistical software. Credit does not fulfill degree requirements and is not transferable outside the Connecticut Community College system.

Prerequisite: MATH 0988 /MATH 0989 with a grade of D- or higher OR placement using multiple measures

Previous new

MATH 0906 - College Algebra Support

Credits: 3

This course provides corequisite support for students who are also enrolled in MATH 1600. Support topics include learning strategies, prerequisite skills for MATH 1600, and reinforcement of topics in MATH 1600. Support topics will be taught in a just-in-time format so that they are delivered to the student in the same order and at the same time as the corresponding topics in MATH 1600. Taken with MATH 1600, this course provides an in-depth study of the properties of algebraic, exponential, and logarithmic functions as needed for calculus. Emphasis is on using algebraic and graphical techniques for solving problems involving linear, quadratic, piece-wise defined, rational, polynomial, exponential and logarithmic functions. The use of mathematics specific technology to support understanding of the College Algebra course is required. Credit does not fulfill degree requirements and is not transferable outside the Connecticut Community College system.

Prerequisite: MATH 0988 /MATH 0989 with a grade of C- or higher OR MATH 1010 with a grade of D- or higher OR placement using multiple measures

Previous new

MATH 0987 - Intermediate Algebra Support

Credits: 0

This course provides corequisite support in mathematics for students enrolled in MATH 1010. Topics will parallel topics being studied in MATH 1010 and the course will provide support for the essential quantitative skills needed to be successful in MATH 1010. Taken with MATH 1010, the course will provide support for algebra and mathematical modeling of functions and relations represented by tables, graphs, words, and symbols. Polynomial functions and expressions with special attention to linear, quadratic, exponential, rational, and radical functions are studied. There is an emphasis on modeling and applications for all topics. It will also provide additional instruction as well as structured

support for study skills, time management, and technology skills. *This course cannot be taken alone and does not fulfill the mathematics general education requirement nor can it be used for the mathematics requirement of any program or certificate.*

Prerequisite: MATH 0988 /MATH 0989 with a grade of C or higher OR placement using multiple measures

Corequisite: MATH 1010

Elective Code(s): DEVL, EMBD

Previous MAT* 100

MATH 0988 - Elementary Algebra Intensive

Credits: 6

This course embeds additional support into the MATH 0989 - Elementary Algebra Foundations course, including a concentrated arithmetic review. This course includes a study of the basic properties and theorems of rational numbers, expressions and equations with polynomials, rational and radical expressions, linear equations and inequalities in one variable, graphing linear equations in two variables, formulating equations of lines in two variables, an introduction to functions, rules of integral exponents, operations on polynomials, and applications in geometry and algebra. Credit does not fulfill degree requirements and is not transferable outside the Connecticut Community College system.

Prerequisite: Placement using multiple measures

Previous MAT* 0951

MATH 0989 - Elementary Algebra Foundations

Credits: 3

This course includes a study of the basic properties and theorems of rational numbers, expressions and equations with polynomials, rational and radical expressions, linear equations and inequalities in one variable, graphing linear equations in two variables, formulating equations of lines in two variables, an introduction to functions, rules of integral exponents, operations on polynomials, and applications in geometry and algebra. Credit does not fulfill degree requirements and is not transferable outside the Connecticut Community College system.

Prerequisite: Placement using multiple measures

Previous MAT* 095

MATH 0993 - Medical Mathematics*Credits: 1*

This course includes a study of fractions, decimals, percentages, proportions, dimensional analysis, measurement systems, recording drug administration, dosage calculations, IV calculations, IV piggyback delivery calculations, body weight conversions, and drip rate calculations. This course does not fill a math requirement. Credit does not fulfill degree requirements and is not transferable outside the Connecticut Community College system.

Prerequisite: none**MATH 1000 - Mathematics of Finance***Credits: 3*

An elementary course covering a wide range of mathematics commonly used in business and personal finance. Topics include simple and compound interest, present value, wages, taxes, insurance, and marketing and retailing mathematics. This course may not transfer but can be used to satisfy the mathematical requirements for certain programs and certificates.

Prerequisite: MATH 0988 /MATH 0989 with a grade of D- or higher OR placement using multiple measures**Elective Code(s):** LART**Previous MAT*** 103**MATH 1001 - Quantitative Literacy***Credits: 3*

A survey course to develop the abilities to interpret and reason with information that involves mathematical ideas or numbers. This course will prepare students for the mathematics they will encounter in other college courses and in their career, as well as help develop critical thinking and problem-solving skills needed in all areas of life. Topics include principles of reasoning, problem-solving techniques, statistical reasoning, numbers in the real world, and personal financial management. This course may not transfer but can be used to satisfy the mathematical requirements for certain programs and certificates.

Prerequisite:

MATH 0988/MATH 0989 with a grade of D- or higher OR placement using multiple measures

Elective Code(s): LART**Previous MAT*** 104, MAT* 109, MAT* 135**MATH 1002 - Math for Science and Technology***Credits: 3*

This is a first course covering topics from intermediate algebra and trigonometry with technical applications. Topics include units of measurement and dimensional analysis, fundamental concepts of algebra, functions and graphs, right triangle trigonometry and applications. This course may not transfer but can be used to satisfy the mathematical requirements for certain programs and certificates.

Prerequisite: MATH 0988/MATH 0989 with a grade of C or higher OR placement using multiple measures**Elective Code(s):** LART**Previous MAT*** 115**MATH 1003 - Elementary Statistics***Credits: 3*

This course will demonstrate the fundamental nature of mathematics and its applications in modern life through an introduction to the concepts of statistics. Topics include random sampling, design of surveys and experiments, information from samples, confidence intervals, elementary probability, examining numbers and data critically, graphing and data analysis, written discussion of numerical analysis, and simulation. The use of mathematics specific technology to support understanding is required. This course may not transfer but can be used to satisfy the mathematical requirements for certain programs and certificates.

Prerequisite: MATH 0988/MATH 0989 with a grade of D- or higher OR placement using multiple measures**Elective Code(s):** LART**Previous MAT*** 123**MATH 1004 - Math for Elementary Education: Algebra/Number Systems***Credits: 3*

This is a mathematics course that prepares students to teach mathematical reasoning skills starting with the natural numbers and extending to the integers, rational numbers, and real numbers. Students will learn best practices in math education through the use of manipulatives, appropriate technologies, and analysis of other numeration systems. This course is intended for students in Early Childhood, Elementary, and Middle School Education Programs.

Prerequisite: Placement using multiple measures or MATH 0988 or MATH 0989 with a grade of C- or higher, and eligibility for ENG 1010**Prerequisite/Corequisite:** none**Corequisite:** none**Elective Code(s):** LART**Previous MAT ***141 / MAT* 143**MATH 1010 - Intermediate Algebra***Credits: 3*

This course is a further study of algebra and mathematical modeling of functions and relations represented by tables, graphs, words, and symbols. Polynomial functions and expressions with special attention to linear, quadratic, exponential, rational, and radical functions are studied. There is an emphasis on modeling and applications for all topics. The use of mathematics specific technology to support understanding of the concepts is required.

Prerequisite: Grade of C- or in higher in MATH 0988 or MATH 0989 or placement using multiple measures
Elective Code(s): BUS, LART
Previous MAT* 136, MAT* 137, MAT* 138, MAT* 139

MATH 1011 - Applied Algebra with Modeling

Credits: 3

An introduction to algebraic reasoning through quantitative analysis, problem solving, and modeling with linear, exponential, and quadratic functions. The use of mathematics specific technology to support understanding of the concepts is required. A C- or better will transfer as a math credit to Central CT State University (CCSU).

Prerequisite: Grade of C- or in higher in MATH 0988 or MATH 0989 or placement using multiple measures
Elective Code(s): LART
Previous MAT* 137L

MATH 1012 - Trigonometry with Embedded Algebra

Credits: 4

This course introduces trigonometry through a functional approach. Trigonometric functions are defined through the unit circle and then applied to triangulation problems. Topics include trigonometric identities, inverse trigonometric functions, oblique triangle trigonometry and the graphs of the trigonometric functions, vectors and the polar coordinate system. Linear, rational, and quadratic functions will be explored in support of the learning of trigonometry. The use of mathematics specific technology to support understanding of the concepts is required.

Prerequisite: C- or higher in MATH 0988, MATH 0989 or MATH 1001, or placement using multiple measures

Prerequisite/Corequisite: none

Corequisite: none

Elective Code(s): LART

Previous MAT* 184

MATH 1100 - Quantitative Reasoning

Credits: 3

This course provides a comprehensive overview of the quantitative skills needed to be an engaged citizen. Critical thinking and problem solving are emphasized along with the application of mathematics to real-world scenarios requiring reasoning from evidence. Students will learn to communicate effectively with numbers and use appropriate technology to enhance their quantitative reasoning ability.

Prerequisite:

Revised 01/26/25 to include corequisite language

Placement using multiple measures OR a grade of D- or higher in MATH 1010/MATH 1011 OR a grade of C- or higher in MATH 0988/MATH 0989. A grade of D-, D, or D+ in MATH 0988/MATH 0989 requires corequisite registration in MATH 0901.

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 146

MATH 1200 - Statistics I

Credits: 3

This course covers fundamental concepts in descriptive and inferential statistics, probability, and probability distributions. Descriptive statistics topics include: the concept of population versus sample, frequency distributions, measures of central tendency, measures of variation, measures of position, and correlation and linear regression. Inferential statistics topics include confidence intervals and hypothesis testing. This course requires the use of computer-based statistical software. Students may not earn credit for both this course and MATH 1201 Statistics I with Computer Applications.

Prerequisite: Placement using multiple measures, OR a grade of D- or higher in MATH 1010/MATH 1011, OR a grade of C- or higher in MATH 0988/MATH 0989. A grade of D-, D, or D+ in MATH 0988/0989 requires corequisite registration in MATH 0902.

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): BUS, LART

Previous MAT* 167, MAT* 201

MATH 1201 - Statistics I with Computer Applications

Credits: 4

This course covers fundamental concepts in descriptive and inferential statistics, probability, and probability distributions. Descriptive statistics topics include: the concept of population versus sample, frequency distributions, measures of central tendency, measures of variation, measures of position, and correlation and linear regression. Inferential statistics topics include confidence intervals and hypothesis testing. Use of software for data analysis and data exploration is an integral part of the course. This course requires the use

of computer-based statistical software. Students may not earn credit for both this course and MATH 1200 Statistics I.

Prerequisite: Placement using multiple measures, OR a grade of D- or higher in MATH 1010/MATH 1011, OR a grade of C- or higher in MATH 0988/MATH 0989. A grade of D-, D, or D+ in MATH 0988/0989 requires corequisite registration in MATH 0902.

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): BUS, LART

Previous MAT* 165

MATH 1410 - Math for Elementary Education: Geometry/Data

Credits: 3

Presents geometry, measurement, rational numbers, irrational numbers, ratio and proportions, problem-solving, mathematical reasoning and connections, probability, and statistics. The use of mathematics specific technology to support understanding of the concepts is required.

Prerequisite: C- or higher in MATH 1004

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 144

MATH 1500 - Applied Business Math

Credits: 3

A course in select topics from contemporary mathematics with applications for students in business, economics, and social science. Topics include: the concept of function and its rate of change; mathematical modeling with polynomial, exponential and logarithmic functions; financial applications; systems of linear equations; matrices; and linear programming. The use of mathematics specific technology to support understanding is required.

Prerequisite: C- or higher in MATH 1010 or MATH 1011, or placement using multiple measures.

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 152, MAT* 158

MATH 1600 - Pathway to Calculus: College Algebra

Credits: 3

This course offers the development of numerical, algebraic, and graphical problem-solving techniques to be used in calculus. Techniques are developed to solve equations involving polynomial, radical and rational functions.

Polynomial, inverse, rational, exponential, and logarithmic functions are studied, and their applications are explored both algebraically and graphically. Whenever possible, learning of mathematical concepts is embedded in contextualized

situations relevant to STEM majors. The use of mathematics specific technology to support understanding of the College Algebra course is required. This course is designed for STEM majors and fulfills the prerequisite requirement for MATH 1610 Precalculus.

Prerequisite:

Revised 01/26/25 to include corequisite language and minimum grade change

Placement using multiple measures OR a grade of C- or higher in MATH 1010. A grade of D-, D, or D+ in MATH 1010 requires corequisite registration in MATH 0906.

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 172, MAT*173, MAT* 175

MATH 1610 - Precalculus

Credits: 4

This is an intensive preparatory course for the Calculus course sequence. Topics include a study of functions and their graphs; polynomial functions and their zeros including complex solutions. This also covers rational, trigonometric, exponential, and logarithmic functions and equations. The use of mathematics specific technology to support understanding of the Precalculus course is required.

Prerequisite:

Revised 01/26/25 to reflect minimum grade change

C- or higher in MATH 1600 or placement using multiple measures

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): BUS, LART

Previous MAT* 186

MATH 2200 - Statistics II

Credits: 3

This course includes an in-depth study of inferential statistics. Topics include hypothesis testing, statistical inference about means, proportions and variances with one and two populations; tests for goodness of fit, independence, and homogeneity; analysis of variance and experimental design, linear regression and correlation, multiple regression, and nonparametric methods. This course requires the use of computer-based statistical technology.

Prerequisite: A grade of C- or higher in MATH 1200/MATH 1201

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 222

MATH 2495 - Math Education in Practice I*Credits: 1-3*

This practicum provides students with an early experience in math education while also reinforcing their own content background and overall skills in communicating mathematically. Students will assist and tutor peers in mathematics for a minimum of three hours per week for a full semester in the campus tutor center under the supervision of a math instructor. Each credit equates to 45 hours of experience.

Prerequisite: B or higher in MATH 1600 and two letters of recommendation from mathematics faculty and permission from either the Division Director, Math Coordinator/Chair, Tutor Center Supervisor, or a supervising instructor

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 170

MATH 2500 - Calculus for Business and Social Science*Credits: 3*

This course introduces applications of calculus in business, economics, and social science. This course is intended for students pursuing degrees in social and behavioral sciences, business, and management. Topics include linear and non-linear functions, limits, derivatives, and integrals. The use of mathematics specific technology to support understanding of calculus concepts is required.

Prerequisite: MATH 1010 (C- or higher), OR MATH 1011 (B- or higher), OR MATH 1500 (C- or higher) OR MATH 1600 (C- or higher) OR placement using multiple measures

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): BUS, LART

Previous MAT* 190 / MAT* 230

MATH 2600 - Calculus I*Credits: 4*

A first course in calculus with a focus on differential calculus. Topics include the study of limits, continuity, rates of change, the definition of the derivative, the Mean Value Theorem, and the Fundamental Theorem of Calculus, and techniques of differentiation of linear, polynomial, exponential, logarithmic, rational, and trigonometric functions. The course will include applications of the derivative to solve real-life problems. Characteristics of functions such as intervals of increase or decrease, concavity, extrema, and end behavior will be studied to describe, reason, interpret, and analyze relationships. The course concludes with an introduction of antiderivatives and integration

techniques. The use of mathematics specific technology to support understanding of Calculus I is required.

Prerequisite: Placement using multiple measures OR a grade of C- or higher in MATH 1610

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): BUS, LART

Previous MAT* 254

MATH 2610 - Calculus II*Credits: 4*

Calculus II focuses on two related topics: methods and applications of integration, and infinite series and representation of functions by power series. Topics include Riemann sums, definite and indefinite integrals, polar and parametric curves, applications to geometry (area, volume, arc length), sequences and series, convergence tests, power series, Taylor series and applications to real-life problems. The use of mathematics specific technology to support understanding of calculus is required.

Prerequisite: C- or higher in MATH 2600

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 256

MATH 2611 - Discrete Mathematics for Computer Science*Credits: 4*

A course designed to prepare computer science majors for a background in mathematical abstraction, notation, and critical thinking. Topics include logic, relations, functions, basic set theory, proof techniques, mathematical induction, graph theory, combinatorics, discrete probability, recursion, recurrence relations, number theory, and graph theory. It is intended for Computer Science majors. The use of mathematics specific technology to support understanding of the Discrete Mathematics for Computer Science course is required.

Prerequisite: C- or higher in MATH 2600

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 210, MAT* 287

MATH 2620 - Calculus III: Multivariable*Credits: 4*

This is the third course in the calculus sequence for mathematics, science, and engineering majors. Topics include analytical geometry in space, vector-valued functions with applications, differentiation, and integration of multivariable

functions with applications, integration in vector fields including line and surface integrals, and Green's, Stokes', and the Divergence Theorems. The use of technology to support mathematics specific understanding of calculus concepts is required.

Prerequisite: C- or higher in MATH 2610

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 268

MATH 2621 - Linear Algebra

Credits: 4

This is a beginning course in linear algebra intended for students in mathematics, science, and engineering. Topics include systems of linear equations, matrices, determinants, vectors and vector spaces, linear transformations, eigenvalues and eigenvectors, distance, and orthogonality. Applications from various disciplines will be considered. The use of mathematics specific technology to support the understanding of Linear Algebra is required.

Prerequisite: C- or higher in MATH 2610

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 274

MATH 2622 - Differential Equations

Credits: 4

This is an introductory differential equations course for mathematics, science, and engineering majors. Topics include solution methods for ordinary differential equations of the first and higher order, operators, numerical methods, systems of differential equations, Laplace transforms, and various applications. The use of mathematics specific technology to support the understanding of the Differential Equations course is required.

Prerequisite: C- or higher in MATH 2610

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 286, MAT* 285

MATH 2623 - Foundations of Advanced Mathematics

Credits: 4

A bridge between calculus and upper-level mathematics courses. Logic, sets, relations, functions, methods of proof. The course uses examples from calculus, elementary number theory, geometry, discrete mathematics, basic abstract algebra, and linear algebra. Emphasis is on concepts that will

be encountered in later undergraduate courses. It is intended for Mathematics majors.

Prerequisite: C- or higher in MATH 2610

Prerequisite/Corequisite: none

Corequisite: none

General Education Code: Quantitative Reasoning (QUAX)

Elective Code(s): LART

Previous MAT* 287

MDAS 1011 - Administrative Medical Assisting

Credits: 3

This course covers the theory, practice and techniques of medical office management and an overview of the profession of medical assisting and its role in providing quality health care. Healthcare administrative functions, including: safety in the office environment, verbal and written communication techniques, telehealth, electronic medical records (EMR), medical records management, patient reception, scheduling, professionalism and legal and ethical issues will be emphasized. Emphasis is on daily office procedures, financial management, and computer literacy needed for the health care industry today.

Prerequisite: Eligibility for ENG 1010

Previous MED* 111, MED* 114

MDAS 1012 - Medical Insurance and Billing

Credits: 3

This course presents an overview of healthcare insurance and is designed to introduce the student to the history and development of payment systems, medical insurance, claims processing and billing issues in healthcare. Insurance terminology, healthcare reform, healthcare access, ethical, legal and compliance issues, regulatory requirements, the Health Insurance Portability and Accountability Act (HIPAA), and the eligibility and reimbursement benefit structure of a variety of insurance plans including Medicare, Medicaid, Managed Care, TRICARE, Commercial plans and Workers' Compensation will be covered. Course material and discussions will focus on the different types of insurance, federal and state regulations, referrals and prior authorizations. Manual and electronic recordkeeping, coding and billing and Current Procedural Terminology (CPT), Healthcare Common Procedural Coding System (HCPCS), and International Classification of Diseases (ICD) coding systems, will be compared using healthcare claims processing, medical office accounting practices and billing software.

Prerequisite: Eligibility for ENG 1010

Corequisite: Suggested: MDAS 1025

Previous MED* 112 or legacy Houstonic courses MED*113 and MED*115

MDAS 1025 - Medical Terminology for Clinical and Administrative Professions*Credits: 3*

This course introduces the language of healthcare. It will cover spelling, pronunciation and definitions of medical terms. Anatomy, physiology, major diseases, signs, symptoms, diagnoses, procedures, medications, treatments, and medical abbreviations will be introduced. The basic structure of medical terms including prefixes, suffixes, and word roots will be presented. Body systems are used as the organizational framework to present terminology.

Prerequisite: Eligible for ENG 1010**Previous MED*** 125, HIM* 101, BOT* 180**MDAS 1033 - Clinical Medical Assisting***Credits: 4*

This course covers the theory and practice of clinical skills used by the medical assistant in an outpatient environment. The course presents practices commonly performed in assisting with clinical procedures, developing communication skills between healthcare professionals and patients, and providing patient education. The course focuses on documentation, interview techniques, adult and pediatric physical exams, vital signs and measurements, and medical asepsis.

Prerequisite: Eligibility for ENG 1010**Prerequisite/Corequisite:** MDAS 1025**Previous MED*** 133**MDAS 2016 - Electronic Medical Records***Credits: 3*

This course is designed to introduce the student to the basics of electronic medical records (EMR) software, focusing on the day-to-day operations. This course provides the student with the opportunity to put skills learned in previous coursework into practice. Students learn how to navigate Computer Physician/Provider Order Entry systems (CPOE), understand Health Insurance Portability and Accountability Act (HIPAA) and Health Information Technology for Economic and Clinical Health Act (HITECH), and how to avoid errors with Electronic Health Records (EHR) best practices by inputting data and running reports, in a simulated medical setting. Student to learn about EHR management practices and system interoperability. Telehealth, ePrescribing, and Scribing will be explored along with the impact of EMR on various areas of the healthcare system.

Prerequisite: Eligible for ENG 1010**Previous HIM*** 155, MED* 216**MDAS 2042 - Clinical Procedures and Practices***Credits: 4*

This course provides an introduction to clinical laboratory procedures, sterile technique and laboratory equipment. Basic diagnostic ambulatory tests for patient evaluation and

treatment are studied, along with emergency care, nutrition, surgical techniques, wound care and specialty exams.

Prerequisite/Corequisite: MDAS 1025 and MDAS 1033, both with a 'C' or higher**Previous MED*** 242**MDAS 2045 - Clinical Laboratory Procedures***Credits: 4*

Students will perform venous and capillary blood collection methods. Students will obtain the necessary skills to perform various diagnostic tests performed in ambulatory facilities including microbiology, immunology, hematology, chemistry and pulmonary function tests, routine urinalysis, and electrocardiograms. Students are required to purchase scrubs or a lab coat, to be worn in class.

Prerequisite: MDAS 1033 or MDAS 1025, both with a 'C' or higher**Previous MED*** 245**MDAS 2050 - Principles of Pharmacology***Credits: 3*

This course is an examination of the more commonly prescribed medications as they relate to specific body systems. Topics include practices, procedures and laws governing the use, dispensing, and storage of pharmaceuticals. Terminology relating to drugs and the administration of drugs is emphasized. Medications will be correlated to pathology, common diseases, and treatments as related to body systems.

Prerequisite: Eligible for ENG 1010 and MATH 1002**Previous MED*** 250**MDAS 2050L - Principles of Pharmacology Lab***Credits: 1*

Laboratory to accompany MDAS 2050 Principles of Pharmacology. Lab activities cover general principles of medication administration including determination of dosage, preparation, safe administration, and documentation. Systems of measurement and mathematical equivalents used in pharmacology dosage calculations will be covered. Students will participate in lab simulations covering injection techniques, administration of oral, nasal, ophthalmic, otic, topical, transdermal, and metered dose inhaler medications.

Prerequisite: Eligible MATH 1000**Course Fees:** Supplemental Fee Level 2**Previous MED*** 250L**MDAS 2095 - Medical Assisting Practicum/Externship***Credits: 4*

Preparation and work experience in an outpatient medical setting under the supervision of the facility staff and College instructor. complete approximately 10 hours of seminar

preparation for a minimum of 160-hours experience at an approved site. Practicum/externship experience of at least 160 contact hours enables students to apply the cognitive (knowledge) base and the psychomotor and affective objectives (competencies) they have learned, develop clinical proficiency, and assume responsibility for unpaid performance of clinical and administrative procedures in an ambulatory health care setting. Students will prepare and are encouraged to apply for a certifying exam. Students must have current cardiopulmonary resuscitation(CPR) and first aid certification during the entire practicum/externship experience.

Prerequisite: All Medical Assisting (MDAS) courses with a grade of 'C' or higher and permission of Program Coordinator

Previous MED* 280

MECH 1014 - Statics

Credits: 3

Analysis of the forces which act upon particles and rigid bodies at rest. Balances of forces and moments on an object provide the basis for equilibrium calculations involving points, rigid bodies, trusses, frames and machines with a variety of supports, including frictional. The concepts of centroids, center of gravity and moment of inertia are also introduced.

Prerequisite: MATH 1610 or higher and PHYS 1201

Previous MEC* 104, MEC* 114

MECH 2038 - Dynamics

Credits: 4

This course covers the fundamental techniques used for analyzing the motion of particles and rigid bodies and the forces which cause that motion. Translation and rotation as fundamental components of rectilinear, curvilinear and constrained plane motion are explained. Relative and absolute velocities and accelerations are treated with both graphical and computational techniques. Laboratory practice is used to verify and reinforce the theoretical concepts

Prerequisite: MATH 2600 or higher and MECH 1014

Course Fees: Supplemental Fee Level 1

Previous MEC* 238

MECH 2040 - Fundamentals of Heat and Thermodynamics

Credits: 4

This course covers the fundamental concepts of heat transfer and thermodynamics. Major topics in heat transfer include conduction, convection and radiation and their application to heat exchangers. Major topics in thermodynamics include the First and Second Laws of Thermodynamics and their application to vapor-power and refrigeration cycles. Laboratory experiments will supplement the theoretical class work.

Prerequisite: MATH 1610 or higher

Previous MEC* 240

MECH 2051 - Materials Strength

Credits: 4

This course covers the principles involved in the analysis of stresses which occur within machine and structural elements subjected to various types of loads. Analyses of these stresses are made as applied to beams, columns, couplings and shafts, pressure vessels, connections and other load bearing elements. Laboratory activities will reinforce theory covered in lecture. Mechanical properties of common materials are determined using equipment such as Tensile Testing Machine, Torsion Testing Machine and Impact Testing Machine. Word Processing, Spreadsheet and Oral presentation programs are used in the analysis of experimental data, preparation of laboratory reports, and presentation of those reports in class.

Prerequisite: MECH 1014

Course Fees: Supplemental Fee Level 1

Previous MEC* 251

MECH 2071 - Fluid Mechanics

Credits: 4

An introductory survey of the principles and methods involved in the analysis of fluid systems. Included are common fluid properties, hydrostatics and the kinematics of fluid flow and energy relationships. The use of standard empirical information to reflect the departure of actual hardware performance from the theoretical is reflected in many of the applications considered. This course also provides laboratory experience with practical applications of some of the concepts learned in the lecture.

Prerequisite: MATH 1610 or higher

Course Fees: Supplemental Fee Level 1

Previous MEC* 271

MECH 2072 - Fluid Mechanics & Thermodynamics*Credits: 4*

This course investigates the behavior of fluids from a fluid mechanics and thermodynamics point of view, including the concepts of enthalpy, entropy, and energy balances.

Prerequisite: PHYS 1105**Previous MEC*** 272**MECH 2074 - Heat Transfer***Credits: 2*

This course will include one- and two-dimension flow, and principles of convection, conduction, and radiation. Steady state conditions will be investigated.

Prerequisite: MATH 2600, MECH 2072, PHYS 1105**Corequisite:** MECH 2075**Previous MEC*** 274**MECH 2075 - Thermal Sciences Lab***Credits: 1*

This course studies selected labs from the fields of fluid mechanics, thermodynamics, and heat transfer.

Corequisite: MECH 2074**Course Fees:** Supplemental Fee Level 1**Previous MEC*** 275**METR 1010 - Introduction to Meteorology***Credits: 3*

This 3-credit natural science course is suitable for non-science majors and is an introduction to the principles of atmospheric behavior, with emphasis on atmospheric motion, general circulation, air masses and frontal systems, clouds and precipitation, and their relation to climate and weather formations. Essentials of anthropogenic climate change and climatology are included as are selected applications of meteorology.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** LART, SCI**Previous MET*** 101**MFG 0905 - Foundations of Manufacturing Math***Credits: 2*

First course in Manufacturing Mathematics, a study of arithmetic and algebraic operations applied to manufacturing circumstances. Fractions, decimals, tolerances, percentages, powers and roots, the metric system, as well as ratios and proportions are studied in depth.

Prerequisite/Corequisite: MFG 1405 (Unless student places out of MFG 0905)**Previous MFG*** 051**MFG 1000 - Math for Welders***Credits: 3*

Math for Welders is a classroom-based course focused on the in- depth study of arithmetic, algebraic, geometric, and trigonometric operations applied to the welding trade. Topics include fractions, decimals, ratios, proportions, algebraic expressions and equations, geometric principles applied to triangles and circles, and trigonometric functions.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous new****MFG 1004 - Manufacturing Processes***Credits: 4*

Based on the lectures, students study the theoretical concepts involved in the process of designing and manufacturing parts, as well as develop the understanding, knowledge and skills required in engineering design and manufacturing processes, including Measurements, Math and Blueprints. Lab (Shop) studies emphasize Measuring, Variations and Tolerances, Benchwork and Layout, Workholding, Drilling, Milling, Turning, Grinding & other manufacturing operations as time allows. Exercises in the Lab(Shop) will involve setup, procedures and execution for various manufacturing processes, using a variety of tools, machines and materials.

Prerequisite: none**Course Fees:** Supplemental Fee Level 1 and Adv Manufacturing Lab Fee**Previous MFG*** 104, MFG* 102 - legacy college dependent**MFG 1010 - Parametric Design (SolidWorks)***Credits: 3*

Introduction to computer-based design using SolidWorks® parametric 3D CAD software. The course focuses on Parametric Modeling and topics include: Design Intent and Process, Sketching Techniques, Model Development Techniques, Process-Specific Modeling, Design Changes, Editing Models, Patterning and Assembly Techniques. Students will participate in mostly individual and some group design projects as appropriate

Cross-listed: CAD 2200 - Parametric Design (SolidWorks)**Course Fees:** Adv Manufacturing Lab Fee**Previous MFG*** 110**MFG 1020 - Introduction to Welding***Credits: 4*

Introduction to Welding is a lab course focused on Oxyfuel Cutting (OFC) and Shielded Metal Arc Welding (SMAW). This course covers: oxyfuel torch setup and cutting; welding machine setup and SMAW in the flat, horizontal, vertical, and overhead positions. Proficiency will be demonstrated through projects including clad plates in each position. Welding skills and visual inspection techniques will be

developed by example and through instruction. The importance of shop floor etiquette, workplace cleanliness, and safe work practices will be emphasized.

Prerequisite: None

Prerequisite/Corequisite: MFG 1050 (A grade of C- or higher if taken as a prerequisite)

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 1028 - Blueprint Reading for Welders

Credits: 3

Blueprint Reading for Welders is a classroom-based course focused on the study of blueprint reading as it applies to the welding trade. Topics include, lines and their uses, auxiliary views, sectional views, basic and special dimensioning, dimensioning practices for holes, chamfers, angle, tapers, diameters, radii, and geometric tolerancing. The second half of this course focuses on interpreting drawings related to the welding field. Topics include various weld and joint type symbols that are used in welding blueprints. Supplemental symbols are also covered, including size, shape, location, and finish requirements of various weldments. Interpretation of testing requirements on simple and complex blueprints is introduced.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous MFG* 128

MFG 1049 - Introduction to Metal Fabrication

Credits: 3

Introduction to Fabrication is a classroom and lab-based course focusing on skills and concepts related to fabrication and repair with a focus on practical applications. Lecture topics include fabrication basics, pipe and tubing, bending and straightening, vehicle welding, and best welding practices. The lab portion concentrates on SolidWorks and metrology as related to fabrication. SolidWorks is a computer aided design program that is used to model parts and create blueprints for fabrication and CNC. Metrology is the study and practice of accurate and consistent measurement of parts utilizing industry standard measuring tools.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous MFG* 149

MFG 1050 - Welding Theory I

Credits: 3

Welding Theory I is a classroom-based course focused on the equipment, supplies, and techniques used in Oxyfuel Cutting (OFC), Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Flux Core Arc Welding (FCAW). Subjects covered will support and augment the hands-on experience covered in Introduction to Welding.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous new

MFG 1200 - Automation Fundamentals

Credits: 3

Automation fundamentals explores the interoperation of the mechanical and digital systems that form the backbone of automated manufacturing systems. Students will learn to follow the intended workflow of the system and subsystems in order to troubleshoot issues within these systems. Subsystems will include automated material handling, storage and retrieval, assembly, and inspection operations. Topics include System troubleshooting, I/O troubleshooting, Component Troubleshooting, and Introduction to Local Area Networks.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 1210 - Circuit Design and Diagnostics

Credits: 4

Circuit Design and Diagnostics is a foundational course that will introduce the student to electrical and electronic components, circuits, circuit design, and faulty circuit diagnosing. Topics include fundamentals of electricity and electronics, basic circuits, methods of power generation, advanced electronic circuits, and electronic communication and data systems.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: MFG 1330

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 1220 - Digital Concepts

Credits: 3

This course covers the operation, application, and troubleshooting of TTL and CMOS electronic logic devices, their use in combinatorial and sequential logic circuits, the interface between the logic families, and the interface

between digital and analog circuits. The course also provides a study of Boolean algebra, binary and hexadecimal number systems, binary codes, Karnaugh mapping, and the analysis of the basic components and circuits used in semiconductor switching.

Prerequisite: None

Prerequisite/Corequisite: MFG 1330 (with a C- or higher if taken as a prerequisite)

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 1225 - Digital Controls

Credits: 3

Advanced manufacturing systems rely on various feedback driven digital components for sequencing, timing, and control of automated operations. Digital Controls will discuss these components, and various methods of digital signal processing; including microcontrollers, microprocessors, variable frequency drives, and other programmable logic devices. Students will gain hands on experience interfacing inputs and outputs to logic devices, programming logic devices, and troubleshooting faults within these devices.

Prerequisite: MFG 1220 with a C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 1230 - Industrial Fluid Power

Credits: 3

Fluid power is a very important component of modern manufacturing due to the unique capabilities not possible with other power systems. The applications of fluid power are expanding and the demand for trained personnel is steadily increasing. Thus, any person who wishes to be involved in the manufacturing process in a repair, control or engineering role should be familiar with the fundamentals of hydraulics and pneumatics. This introductory course is a study of the principles, concepts and equipment used in the field of hydraulics and pneumatics. Course emphasis is placed upon systems design, applications, maintenance, and repair. The following concepts are reviewed: fluid power principles, hydraulic pumps and pneumatic compressors, fluid power actuators, control valves, conductors, conditioning equipment, and other fluid power components.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 1235 - Industrial Maintenance, Service and Repair

Credits: 3

Industrial Maintenance Service and Repair will introduce the student to the mechanical side of industrial maintenance. This includes proper safety practices, proper tool use, print reading. The different aspects of power transmission, pulleys, gears, chains etc. we have a focus on proper troubleshooting techniques for proper and timely resolution of malfunctions.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 1240 - Motor Controls for Automation

Credits: 3

The process of motor control is integral to the flow of the product from raw materials to finished product. Industrial Motor Controls will familiarize the student with the following: AC and DC motor controls, schematic diagrams and control circuits, relays, contactors and motor starters, pilot devices, motor drives, and motor installation issues.

Prerequisite: MFG 1330, MFG 1337, MFG 1338

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 1245 - Programmable Logic Controllers Applications

Credits: 3

The incorporation of the PLC is one of the fastest growing sectors in the field of electronics as the PLC replaces electromechanical Control Systems, such as electromagnetic relays and Programmable Logic Devices (PLD's). Programmable Logic Controllers provides you with an overview of the PLC, its hardware, numbering systems and codes, logic fundamentals, programming timers and counters, program control and data manipulation instructions, math instructions, sequences and shift register instructions, PLC installation, editing and troubleshooting.

Prerequisite: MFG 1020

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 1250 - Robotic Automation*Credits: 3*

Robotic systems are the prime movers of the automated manufacturing revolution. Robotic Automation is a comprehensive course that will allow the student to preview many of the technical aspects of robotic principles, power, design, control, and application. Robotic automation will introduce core concepts of electric, hydro, and pneumatic power, digital logic, digital control, electronic sensing systems, end-of-arm tooling, programming, and industrial automation. The course will compare and contrast different robotic systems, subsystems, and their uses. Students will apply this knowledge with hands on labs using industry standard robotic systems to create their own automated processes.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Course Fees:** Supplemental Fee Level 2 and Adv Manufacturing Lab Fee**Previous** new**MFG 1330 - Mathematics for Electricity and Electronics***Credits: 3*

Mathematics for Electricity and Electronics is intended for the student who needs in-depth knowledge of the mathematics of electronics and electricity. It will review several areas that the student may be familiar with and move into advanced areas that are necessary for the understanding of electronics functions and analysis of complex circuits, including: the basic laws of arithmetic, the powers of numbers, scientific notation, literal equations, trigonometry of the right triangle, basic geometric concepts of angles, fractional exponents, and frequency distribution.

Prerequisite: Placement into MATH 0988 or instructor permission**Prerequisite/Corequisite:** None**Corequisite:** None**Previous** MFG* 133**MFG 1337 - Circuit Theory***Credits: 3*

The circuit is a fundamental building block for all electrical and electronic devices that make our life comfortable and efficient. There are several principles that determine the flow of electricity that any student of electricity or electronics must learn in order to understand the nature and abilities of electrical and electronic equipment. Circuit Theory I is an introduction to direct current (DC) circuits. Circuit Theory I will introduce the student to electrical/electronic components; the nature of electricity (voltage, current and resistance); Ohm's Law of measurement; the concept of energy and power; types of circuits (series, parallel, and series-parallel);

Thevenin's and Norton's Theorems of circuits simplification, and magnetism and electro magnetism.

Prerequisite: Placement into MATH 0988 or instructor permission**Prerequisite/Corequisite:** None**Corequisite:** None**Course Fees:** Adv Manufacturing Lab Fee**Previous** MFG* 137**MFG 1338 - Digital Fundamentals***Credits: 3*

Digital circuitry is the foundation of computers and automated control equipment in our industries. Digital circuitry is the basis for many of our appliances, alarm systems and heating systems. Our newer automobiles utilize digital circuits and devices to make them safer and more energy-efficient. Consequently, a basic understanding of the elemental nature, design, theory, and operation of digital circuits is necessary for any electronics student. This course provides the foundation necessary for the understanding of digital logic. The student is introduced to the concepts of digital vs. analog waveforms, digital and other numbering systems, digital codes, and Boolean algebra. The student is then introduced to the various logic gates that are incorporated into all logic systems from that of a computer to a microprocessor in a household appliance. This course explores the combination circuits, data control devices, sequential logic (flip-flop and counters) circuits and shift registers, communications protocols, and finishes with an interface with the world of analog.

Prerequisite: Placement into MATH 0988 or instructor permission**Prerequisite/Corequisite:** None**Corequisite:** None**Course Fees:** Adv Manufacturing Lab Fee**Previous** MFG* 138**MFG 1340 - Robotics***Credits: 3*

Robotics provides the student with a brief history of the application of robotics to the manufacturing process to date and a vision of future applications of robotics. Robotics provides an overview of the robotic hardware, software, and programming necessary to specific applications. Robotics reviews the following: electromechanical systems, fluid power systems, sensing systems, end-of-arm tooling, programmable logic controllers (PLC's), digital electronics, programming, and industrial applications.

Prerequisite: MFG 1338, MFG 1343, MFG 1346**Prerequisite/Corequisite:** None**Corequisite:** None**Course Fees:** Adv Manufacturing Lab Fee**Previous** MFG* 140

MFG 1342 - Electronic Circuits & Devices*Credits: 3*

Electronic circuits and devices are commonplace in the industrial manufacturing process; consequently, a complete understanding of control circuits and devices is necessary for anyone who intends to have a career in manufacturing control, maintenance, or engineering. Electronic Circuits & Devices provides an introduction to electronic materials, components, circuits, devices and their applications. The course will provide an overview of semiconductors, diodes, transistors (bi-polar, field-effect and unijunction), applications of silicon-controlled rectifiers (SCR's) and triodes for alternating current (TRIAC's) to circuits, and application of components to rectifiers, amplifiers, and relays.

Prerequisite: Placement into MATH 0988 or permission by instructor

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 142

MFG 1343 - Industrial Motor Controls*Credits: 3*

In the global economy of today, it is imperative that the manufacturing of each product is as cost-efficient as is physically possible. This efficiency is brought about through the application of the latest technology to the manufacturing process. The process of motor control is integral to the flow of the product from raw material to finished product.

Industrial Motor Control will familiarize the student with the following: principles of solid-state control devices and their components (such as semiconductors, p-n junction, Zenor diodes, and transistors); alternating current (AC) and direct current (DC) motor controls; motor drives; control circuits; motor starters and pilot devices.

Prerequisite: Placement into MATH 0988 or instructor permission

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 143

MFG 1344 - Hydraulics and Pneumatics*Credits: 3*

This course is an introduction to the fundamentals of hydraulics and pneumatics, which involves both theoretical and practical study, including problem solving. Topics will include valves, pumps, circuits, system troubleshooting, and controllers for major processing equipment.

Prerequisite: Placement into MATH 0988 or instructor permission

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 144

MFG 1345 - Electronic Variable Speed Drive*Credits: 3*

The flow of product in the manufacturing process can be as simple as an on/off motor control switch or as complex as a variable speed drive that incorporates a feedback system. Most large and small companies utilize the more technologically advanced systems, hence they incorporate one or more variable-speed drive(s) in their production process. Electronic Variable-Speed Drive Systems will introduce the student to alternating current (AC) and direct current (DC) drive fundamentals, switching amplifier field current controllers, silicon-controlled rectifier (SCR) armature voltage controllers, brushless DC motor controllers, chopper circuits, voltage inverters, and flux vector drives.

Prerequisite: Placement into MATH 0988 or instructor permission

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 145

MFG 1346 - Programmable Logic Controllers*Credits: 3*

The incorporation of the Programmable Logic Controller (PLC) is one of the fastest growing sectors in the field of electronics as the PLC replaces electromechanical control systems, such as electromagnetic relays and programmable logic devices (PLD's). Programmable Logic Controllers provides the student with an overview of the PLC, its hardware, numbering systems and codes, logic fundamentals, programming timers and counters, program control and data manipulation instructions, math instructions, sequencer and shift register instructions, and PLC installation, editing and troubleshooting.

Prerequisite: Placement into MATH 0988 or instructor permission

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 146

MFG 1359 - Industrial Maintenance*Credits: 3*

The industrial maintenance course is designed to give the student an overview of the mechanical nature of industry. Even though electronic devices have made great inroads in industry, the mechanical nature of production remains nearly unchanged over the years. The expression the "wheels of industry" remains as true today as it did yesterday. This course will provide the skills necessary to install and to maintain the mechanical parts and machines that provide the ability of manufacturers to produce our manufactured products e.g., automobiles, appliances, etc. The course covers the following areas: safety, tools, fasteners, industrial print reading, belts and sheaves, chains and sprockets, gears and gearboxes, bearings, shafts, lubrication, seals and packings, pumps and compressors, fluid power, piping systems, and preventive maintenance.

Prerequisite: Placement into MATH 0988 or instructor permission

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 159

MFG 1362 - CNC Maintenance & Repair*Credits: 3*

CNC Maintenance & Repair I provides the student with an introduction to computer numerical control (CNC) machinery including the CNC mill & CNC lathe. Topics include: CNC safety, basic CNC components, basic operations of a CNC, overview of the control unit and operator's unit, CNC part programming, CNC operation and interfacing (programmable machine controller (PMC) system), measurement devices, and troubleshooting techniques. CNC Maintenance & Repair I is designed to give the student an in- depth overview of the design, programming, and operation of CNC machinery, thereby providing the foundation for CNC maintenance & repair.

Prerequisite: Placement into MATH 0988 or instructor permission

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 162

MFG 1400 - Advanced Metrology with CMM (Computerized Measurement Machine)*Credits: 3*

This course is a lab course for a Advanced Metrology with CMM. This course would be taken after having successfully taken MFG 1420 Metrology. It meets hands on for a 3-hour lab. Labs start with drawing (sketching) exercises to add GD&T controls and symbols to engineered drawings using paper and pencil then machined parts are measured using

methods of verifying GD&T tolerances by layout and inspection (using a surface plate, shop standards and the electronic height gage) and using a variety of Coordinate Measuring Machines to again measure the parts.

Programming a DCMM with the PCDMIS language is presented at the end of the course. Some of the tools presented in the labs are surface plates, surface gage and indicator, electronic height stands, use of dowel pins and tooling balls, Gage 2000 CMM, FARO arm CMM, and Global 555 DCMM.

Prerequisite: MFG 1420 and MFG 1424

Prerequisite/Corequisite: MFG 1425 and MFG 2439

Course Fees: Adv Manufacturing Lab Fee

MFG 1405 - Manufacturing Math*Credits: 3*

A Manufacturing Mathematics course that focuses on the study of Algebra, Geometry, and Trigonometry as it applies to manufacturing circumstances. The algebra portion includes algebraic expression, writing equations, and solving equations. The geometry portion includes the study of geometric principles applied to lines, angles, triangles, other polygons, and circles. The trigonometry portion includes Sine, Cosine, and Tangent functions applied to right triangles; and the Law of Sines and the Law of Cosines applied to oblique triangles.

Prerequisite: MFG 0905 OR placement into MFG 1405

Previous MFG* 105

MFG 1409 - Introduction to MasterCAM*Credits: 3*

This course introduces the student to computer-based CAD/CAM (Computer-Aided Drafting/ Computer-Aided Manufacturing) using MasterCAM software, an industry standard. CAD/CAM uses CAD drawing tools to describe geometries of an object. The CAM portion of the program defines the toolpath that directs the motion of a machine tool to create a product that is the exact shape that was drawn. This introductory course familiarizes the student to MasterCAM using mill, lathe, and solids tutorials.

Prerequisite: Placement into MATH 0988 or instructor permission

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 109

MFG 1411 - Manufacturing Materials & Processes I*Credits: 3*

An introduction to the basic principles on which manufacturing processes are based, and to the basic materials produced by or used in these processes. Topics include: nature of materials and specifically metals; the basic processes in manufacturing metals and some non-metals; testing of engineering materials; ferrous and non-ferrous metals and alloys; fundamentals of metal casting, molding,

and heat-treating processes; metal cutting, forming, welding, joining, and abrasive processes; metal machining processes; quality control measurement and inspection. Some topics include problem solving and algebra-based calculations.

Prerequisite: MATH 1010 (may be taken concurrently) or permission of instructor.

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 111

MFG 1413 - Principles of Quality Control

Credits: 3

This is the first course in Quality Control. Topics covered includes determination of Quality basics, problem solving tools, estimation of a process, standard deviation of a sample data, calculation of probability of simple events, use of control charts, and process capabilities. Student will develop SPC and TQM Manufacturing Plans.

Prerequisite/Corequisite: MFG 1405

Previous QUA* 114

MFG 1414 - Quality & Lean Principles

Credits: 3

Introduction to Total Quality Performance systems, and Lean Methodology. Provide the students with an overview of the history of Total Quality Performance along with the theory & objectives. Students will learn some of the tools used for Quality Control inspection and observation along with the methods used in lean implementation for manufacturing operations. Also included possible tour(s) of manufacturing companies that are utilizing Lean mfg. methods. Students will get the opportunity to view a real-world Lean Manufacturing Operation (time permitting). Also, participate in hands-on Quality Improvement exercise, or Kaizen Event. The course includes the following topics: history of lean manufacturing, Toyota Production System [TPS], lean principles, root cause analysis [RCA], 5S, and an Introduction to Six-Sigma methodology.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous MFG* 114, **QUA*** 114

MFG 1415 - Safety in the Workplace

Credits: 1

This course provides an introduction to the safety and health issues encountered in a manufacturing environment. This course introduces students to the concepts of personal and work environment safety requirements of manufacturers as well as the governmental oversight agencies such as OSHA.

Prerequisite/Corequisite: None

Corequisite: None

Previous MFG* 115

MFG 1420 - Metrology

Credits: 3

This course covers the scientific study of inspection, Metrology. Students will be instructed on correct measurement techniques as well as provided with hands-on exercises in order to complete inspection reports using a multitude of measurement instruments that are commonly used in the manufacturing industry.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 120

MFG 1424 - Blueprint Reading 1

Credits: 3

This is an initial course introducing the basic principles of blueprint reading. Topics include layouts of drawings, line types and their usage, orthographic projections, sectional and auxiliary views, sketching, dimensioning and tolerancing practices for holes, chamfers, angles, tapers, keyways, diameters and radii.

Prerequisite: None

Previous MFG* 124

MFG 1425 - Blueprint Reading 2 with GD & T

Credits: 3

This is an advanced level course in Blueprint Reading with an emphasis on Geometric Dimensioning and Tolerancing. Students will be instructed on the language and symbology used on blueprints to communicate form, fit, and function of mating components and assemblies.

Prerequisite: MFG 1424 or EGR 1120 with a C- or higher

Previous MFG* 125

MFG 1453 - Benchwork

Credits: 2

This course covers the fundamental principles used in semi-precision and precision layout. Students will be instructed on proper technique using hand tools, band saws, hole making tools, work holding devices, and deburring tools in order to fabricate workpieces from blueprints. Half of the course will be spent in lecture and half will be spent in lab completing hands-on projects.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous MFG* 153

MFG 1467 - Conventional Process Machining Lab*Credits: 4*

This course is a combination of classroom theory and hands on lab experiences. This course is 8-hours classroom of lab each week to machine various projects. This course introduces a student to the fundamentals of metal machining technology machines. The student will learn how to operate lathes. Students perform basic lathe operations including turning, facing, knurling, drilling, reaming and tapping. The student also performs basic milling operations such as indicating a vise, tramming a head, use an edge finder, square a block, drill tap and ream holes on location. Speeds and feeds and basic machining principles are covered. In addition, the lab includes the associated use of measuring tools and instruments used in the inspection of class required projects. Student is introduced to ProtoTRAK CNC - digital read outs of X and Y machine coordinates.

Prerequisite: Placement into MATH 0988 or instructor permission

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous MFG* 167

MFG 1477 - Machine Technology Fundamentals*Credits: 4*

This course is a combination of classroom theory and hands on lab experiences. This course is 8-hours classroom of lab each week to machine various projects. This course introduces a student to the fundamentals of metal machining technology machines. The student will learn how to operate lathes, mills, grinders and sawing machines. Students perform basic lathe operations including turning, facing, knurling, drilling, reaming and tapping. The student also performs basic milling operations such as indicating a vise, tramming a head, use an edge finder, square a block, drill tap and ream holes on location. Speeds and feeds and basic machining principles are covered. The student also learns how to operate a surface grinder using all safety guidelines, mount and dress a wheel and grind surfaces flat and parallel. The student also learns to operate a bench grinder.

Prerequisite: none

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous MFG* 177

MFG 1478 - CNC Fundamentals*Credits: 3*

This course is a combination of classroom theory and hands on lab experiences. This course is split with 3-hours classroom and 3-hours lab each week to machine various projects. This course introduces a student to the fundamentals of Computer Numerical Controlled machines. The student will learn conversational programming to operate lathes and

milling machines. This is the first step to understand the Cartesian Coordinate System and basic steps and processes to machine parts to blueprint specifications. The students will also learn to operate CNC machines to understand and set tool offsets as well as loading programs. This also includes proper tool and cutter mounting for best performance. Cutter compensation is covered in both conversational and G-code language. This includes the set-up of vises and other work holding devices or fixtures. Indicating surfaces and datum identification is an important part of this class. Geometric Dimensions and Tolerances are explained to meet business and industry standards. Included is maintenance and machine care.

Prerequisite: none

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous MFG* 178

MFG 1479 - Career Awareness for Manufacturing*Credits: 1*

This course will prepare students for the opportunities available in different manufacturing career pathways. Students will strengthen their skills in researching potential employers and in personal marketing, including building resumes and sharpening their interview skills.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous MFG* 179

MFG 1501 - Introduction to Injection Molding Technology*Credits: 3*

This course provides students with a foundational understanding of injection mold terminology, machine part identification, safety protocols, machine controls, and startup and shutdown procedures. Students will learn to recognize and address common part defects including short shots, flashing, warping, surface defects, color variations, and shrinkage. Additionally, students will gain knowledge about the properties of frequently utilized molding materials.

Prerequisite: None

Course Fees: Adv Manufacturing Lab Fee

MFG 1502 - Injection Molding Design Lab*Credits: 4*

In this course, students will gain a comprehensive understanding of injection molding principles, including mold design considerations, material selection, process optimization, and quality control techniques. They will learn to interpret design requirements, create mold designs using industry-standard software, and simulate molding processes to predict part quality and production efficiency.

Prerequisite: MFG 1501

Course Fees: Supplemental Level 2 and Adv Manufacturing Lab Fee

MFG 1503 - Injection Plastic Materials Lab

Credits: 4

The Injection Plastic Materials Lab is a practical, hands-on course designed to provide students with comprehensive knowledge and skills in working with plastic materials for injection molding processes. They will learn hands-on techniques for preparing and handling plastic materials, setting up molds, adjusting processing parameters, and troubleshooting common issues encountered during the molding process. Practical exercises will focus on optimizing processing parameters to achieve desired outcomes in terms of part quality, consistency, and efficiency.

Prerequisite: MFG 1501

Course Fees: Supplemental Level 2 and Adv Manufacturing Lab Fee

MFG 1504 - Injection Molding Machine Setters

Credits: 3

The Injection Mold Machine Setters course is designed to equip students with specialized knowledge in the setup and operation of injection molding machines. This comprehensive curriculum encompasses crucial subjects, from machine readiness and parameter customization to problem-solving and equipment upkeep. Throughout the course, students will examine the complexities of setting up injection molding machines, covering tasks such as installing molds, loading materials, and adjusting tooling. The course prioritizes a deep understanding of the machine's components, their roles, and strategies for maximizing their efficiency to streamline production processes.

Prerequisite: MFG 1501

Course Fees: Adv Manufacturing Lab Fee

MFG 2050 - Welding Theory II

Credits: 3

Welding Theory II is a classroom-based course focused on the equipment, supplies, and techniques used in Gas Tungsten Arc Welding (GTAW), Plasma Arc Cutting (PAC), Resistance Welding (RW) and Pipe and Tube welding. Subjects covered will support and augment the hands-on experience covered in Advanced Welding and Advanced Fabrication.

Prerequisite: A grade of C- or higher in MFG 1050

Prerequisite/Corequisite: None

Corequisite: None

Previous new

MFG 2067 - Metallurgy

Credits: 3

Metallurgy is a classroom-based introductory course covering the basic principles of metallurgy and describes their uses in industrial applications. This course will explain why certain material properties are desired and how these properties are attained.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous MFG* 267

MFG 2070 - Welding Automation & Processes

Credits: 3

Welding Automation and Processes is a lecture and lab-based course focused on automatic/specialty cutting and welding processes. Equipment covered in this course includes CNC controlled plasma, water jet, and laser cutting processes in addition to automated and manual laser welding processes, press brake forming, and robotic welding.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: MFG 2080

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous MFG* 270

MFG 2073 - Welding Codes, Testing, and Certification

Credits: 3

The Welding Codes, Testing, and Certification is a classroom and lab-based course focused on preparing to be certified in one or several welding processes. Certification tests are designed to ensure that the weldment meets specific standards as to the specific welding process, type and thickness of metal, joint design, position(s) and other requirements. This course will review American Welding Society (AWS) structural and aerospace welding specifications. Content covered in the classroom will tie in directly to projects and laboratories conducted during Advanced Welding.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: MFG 2081

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous MFG* 273

MFG 2080 - Advanced Fabrication

Credits: 3

Advanced Fabrication is a lab-based course focused on developing the skills needed for a career in fabrication. Proficiency will be demonstrated through projects utilizing a

variety of fabrication equipment including rolls, brakes, punches, shears, and various welding methods.

Prerequisite: A grade of C- or higher in MFG 1020 and MFG 1049 and MFG 1028

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 2081 - Advanced Welding

Credits: 3

Advanced Welding is a lab-based course focused on developing the skills needed for a career in welding. Proficiency will be demonstrated through projects including fillet welds, groove welds, and cladding performed in multiple positions. Welding skills and inspection techniques will be developed by example and through instruction. The importance of shop floor etiquette, workplace cleanliness, and safe work practices will be emphasized.

Prerequisite: A grade of C- or higher in MFG 1020 and MFG 1050

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous new

MFG 2216 - Tool Design

Credits: 4

Covers the theory of subtractive and additive tools design. Presents the principles, practices, tools, manufacturing methodologies, and commercial standards of single point, jig, fixture, and die design, their fabrication and application through lectures, visual aids, and individual projects and design work. The laboratory portion provides practice in the design of metal cutting subtractive and additive tools.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 2 and Adv Manufacturing Lab Fee

Previous MFG 216

MFG 2230 - Statistical Process Control

Credits: 3

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: None

Prerequisite/Corequisite: None

Corequisite: None

Previous MFG 230

MFG 2405 - Principles of CNC with Mastercam

Credits: 3

An introduction to computer numerical control (CNC) programming of 3-axis machine tools by generating 2D and 3D geometries using Mastercam® software. Topics include an introduction to CNC programming, coding, virtual set-up, virtual tooling, virtual operation, post-processing, and troubleshooting based on CNC practices. Students learn the basic principles and applications of numerically controlled software and hardware and get exposed to the programming of CNC milling machines and machining centers.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* 205

MFG 2439 - Geometric Dimension & Tolerancing (GD&T)

Credits: 3

An intermediate course in the interpretation of engineering drawings, beginning with the basics of dimensional tolerances and tolerance systems. Topics include: the mathematics of interpreting and specifying tolerances on dimensions, the system and rules of geometric tolerancing, and the basic nomenclature and standard symbols conforming to the latest ANSI/ASME Y14.5M-2018 standards as they pertain to manufacturing and engineering drawings.

Prerequisite: A grade of C- or higher in MFG 1424 or EGR 1120 (or permission of instructor)

Previous MFG* 239

MFG 2444 - CNC I

Credits: 3

This course introduces students to Computer Numerical Control programming for CNC Mills and CNC Lathe. Students will receive instruction on CNC control commands (G & M code) through the use of Simulator MCUs (Machine Control Units) as well as online resources.

Course Fees: Adv Manufacturing Lab Fee

Previous MFG* B244 or MFG* 168

MFG 2445 - CNC II*Credits: 4*

This course introduces students to Computer Numerical Control (CNC) machining with topics including setup and tooling, programming NIMS Certification parts, and modification of programs to compensate for process variation, utilization of canned drilling cycles, circular interpolation, special milling cycles, looping and special features. Upon completion students will be able to setup CNC 3-axis mills; locate, load and proof the CNC program; execute the program; inspect parts; and modify program instructions via G&M code.

Prerequisite: MFG 2444**Course Fees:** Supplemental Fee Level 2 and Adv Manufacturing Lab Fee**Previous MFG*** B245 or MFG* 256**MFG 2456 - Advanced CNC***Credits: 3*

This is an advanced level of CNC programming and operation in both lathes and machining centers. Topics include setup and tooling, programming simple parts, canned drilling cycles, circular interpolation, special milling cycles, cutter compensation, looping and macros and special features.

Prerequisite: A grade of C- or higher in MFG 1478 or permission of instructor**Prerequisite/Corequisite:** None**Corequisite:** None**Course Fees:** Supplemental Fee Level 2 and Adv Manufacturing Lab Fee**Previous MFG*** 256**MFG 2477 - Advanced Machine Technology***Credits: 4*

This course is a combination of classroom theory and hands on lab experiences. This course is split with 3-hours classroom and 5-hours lab each week to machine various projects. This course introduces a student to more advanced practices in metal machining technology machines. The student learns advanced techniques in operation of lathes, mills, grinders and sawing machines to manufacture parts to blueprint specifications to tighter tolerances. Advanced lathe operations include single point threading both external and internal. It also includes face grooves, internal and external grooving and boring and the use and understanding of carbide tooling. The milling portion includes machining more complex parts and utilizing the power of conversational programming and canned cycles. Achieving tighter tolerance parts becomes evident with the advanced techniques in the surface grinder using grinding vises, squaring blocks, gage blocks and indicators.

Prerequisite: A grade of C- or higher in MFG 1477 or instructor permission**Course Fees:** Supplemental Fee Level 2 and Adv Manufacturing Lab Fee**Previous MFG*** 277**MLT 1001 - Introduction to Clinical Laboratory/Principles of Lab Analysis***Credits: 3*

An overview and introduction to laboratory information systems, urinalysis, hematology, chemistry, immunology, immunohematology, microbiology, and phlebotomy. Universal precautions and proper procedures in regard to specimen processing and analysis will be taught to the student. Laboratory mathematics, quality control, and the proper use of instrumentation will be presented as used in the clinical laboratory, physician's office laboratory, and laboratory science areas. Tours of area clinical laboratories will provide students with exposure to current instrumentation used in the field.

Previous MLT* 101**MLT 1002 - Urinalysis and Body Fluids***Credits: 2*

This course is designed to provide students with an introduction to basic theories, principles and techniques as applied to the medical laboratory area of urinalysis and body fluids. Major topics covered include: renal physiology and disease, physical, chemical and microscopic examination of urine and body fluids, the collection of urine and body fluids, fecal examination, basic correlation of laboratory result with disease states and quality control.

Previous MLT* 102**MLT 2000 - Clinical Hematology and Coagulation***Credits: 4*

This course is designed to acquaint the student with the study of blood in health and disease. The origin, development and function of human blood cells, and a review of the vascular and coagulation systems will be discussed. Normal and abnormal findings will be studied through manual and automated procedures. Specific topics include: complete blood counts (CBC) and coagulation profile, normal values, quality control, and blood disorders.

Prerequisite: MLT 1001**Course Fees:** Supplemental Fee Level 2 and Adv Materials Fee**Previous MLT*** 200**MLT 2002 - Clinical Chemistry***Credits: 4*

This course is designed to acquaint the student with the theory and function of the clinical chemistry laboratory. Course of study includes analysis of blood and body fluid in routine and emergency testing in the clinical chemistry lab.

The theory of manual testing as it is applied to automated procedures, interpretation and analysis of test results and how these correlate to the patient's clinical diagnosis will be stressed.

Prerequisite: MLT 1001

Course Fees: Supplemental Fee Level 2 and Adv Materials Fee

Previous MLT* 202

MLT 2004 - Clinical Immunology and Immunochemistry

Credits: 4

This course is designed to acquaint the student with the theory and functions of the immune system and the theory and practice of clinical immunology and immunochemistry. Emphasis will be placed on the various serological procedures and their diagnostic significance.

Prerequisite: MLT 1001

Course Fees: Supplemental Fee Level 2 and Adv Materials Fee

Previous MLT* 204

MLT 2006 - Clinical Microbiology

Credits: 4

This course is designed to acquaint the student with the clinical microbiology laboratory and routine medically significant organisms. The course will cover microorganisms in general, as well as pathogens including anaerobic bacteria, gram negative and gram positive bacteria, spirochetes, parasites, viruses, and fungi that are medically significant to humans. The course will include the principal characteristics and procedures used in clinical microbiology to identify normal flora and medically significant bacteria. The laboratory identification of the organism is based on morphological, cultural, and biochemical characteristics. Additional topics will include safety in the microbiology lab, quality control, and antimicrobial susceptibility testing.

Prerequisite: MLT 1001

Course Fees: Supplemental Fee Level 2 and Adv Materials Fee

Previous MLT* 206

MLT 2095 - Clinical Internship I

Credits: 4

This 200-hour experience will consist of a supervised clinical internship in a hospital clinical laboratory to enhance student learning and to apply classroom theory to laboratory practice in a clinical setting. The rotation scheduled provides experience in some of the following departments: Immunohematology, Chemistry, Hematology, Coagulation, Microbiology, Immunology, and Urinalysis. Students are required to complete a minimum of #25 venipunctures during the course of the 200-hour internship.

Prerequisite: A grade of B- or higher in MLT 2006, and permission of program coordinator

Previous MLT* 210

MLT 2195 - Clinical Internship II

Credits: 4

This 200-hour experience will consist of a supervised clinical internship in a hospital clinical laboratory to enhance student learning and to apply classroom theory to laboratory practice in a clinical setting. The rotation schedule provides experience in some of the following departments: Immunohematology, Chemistry, Hematology, Coagulation, Microbiology, Immunology, and Urinalysis.

Prerequisite: A grade of B- or higher in MLT 2095, and permission of program coordinator

Previous MLT* 212

MRI 2001 - Cross Sectional Anatomy I

Credits: 1

See CAT 2001 - Cross Sectional Anatomy I

Prerequisite: Admission to the Magnetic Resonance Imaging (MRI) Program and American Registry of Radiologic Technologists (ARRT) Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy, or Sonography (Registration through the American Registry for Diagnostic Medical Sonography) (ARDMS).OR Permission of the Middlesex Campus Program Coordinator.

Cross-listed: CAT 2001 - Cross Sectional Anatomy I

Previous MRI* 201

MRI 2002 - MRI Pathology I*Credits: 1*

This is the first semester of a 2-semester course sequence. The major pathologic conditions diagnosed by magnetic resonance (MR) imaging are presented. Emphasis is placed on the brain, vascular system of the neck and head, and the spine as detected by MR imaging. Differentiation between normal and pathologic tissues on MR scans, as well as the associated symptoms and origin of each type of pathology presented. Disease progression and treatment options are also discussed.

Prerequisite: Admissions to the Magnetic Resonance Imaging (MRI) Program, and American Registry of Radiologic Technologists (ARRT) Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy, or Sonography (Registration through the American Registry for Diagnostic Medical Sonography) (ARDMS) OR Permission of the Middlesex Campus Program Coordinator.

Corequisite: MRI 2001/CAT 2006

Previous MRI* 202

MRI 2003 - MRI Procedures and Instrumentation I*Credits: 2*

This is the first semester of a 2-semester sequence. The course discusses past and potential future developments in magnetic resonance (MR) Imaging and the most prominent researchers and pioneers in the field. The course will introduce the student to clinical aspects of MR procedures and applying imaging parameters in the clinical setting. This course will also explain how images are acquired using MR and how MR signal is produced and detected. Proper screening and preparation of patients for contrast-enhanced MR imaging examinations will be outlined. Contrast agents, potential adverse effects of contrast agents, the mechanism of action and the effects of contrast media on images will be presented. Students will learn how to design image protocol and how to apply protocols in specific situations. Preliminary patient positioning criteria for various areas of the body will be discussed.

Prerequisite: Admissions to the Magnetic Resonance Imaging (MRI) Program, and American Registry of Radiologic Technologists (ARRT) Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy, or Sonography (Registration through the American Registry for Diagnostic Medical Sonography) (ARDMS) OR Permission of the Middlesex Campus Program Coordinator.

Corequisite: MRI 2001/CAT 2006

Previous MRI* 203

MRI 2004 - MRI Image Quality, Equipment and Safety Essentials I*Credits: 2*

This is the first semester of a 2-semester course sequence. Magnetic imaging parameters are introduced. The formation of the magnetic resonance (MR) signal is discussed as well as the essential components of an MR imaging system. Magnetic safety precautions that affect both patient and operator are discussed.

Prerequisite: Admissions to the Magnetic Resonance Imaging (MRI) Program, and American Registry of Radiologic Technologists (ARRT) Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy, or Sonography (Registration through the American Registry for Diagnostic Medical Sonography) (ARDMS) OR Permission of the Middlesex Campus Program Coordinator.

Corequisite: MRI 2001/CAT 2006

Previous MRI* 204

MRI 2005 - Cross Sectional Anatomy II*Credits: 2*

This course will introduce students to cross-sectional imaging of the chest, abdomen, pelvis and extremities. Emphasis will be placed on pathology affecting the chest, abdomen, pelvis and extremities in the application of computed tomography (CT)/magnetic resonance imaging (MRI) imaging. The uses for and administration of pharmacological agents for CT/MRI imaging will be included in this course.

Cross-listed: CAT 2005 - Cross Sectional Anatomy II

Previous MRI* 205

MRI 2007 - MRI Pathology II*Credits: 1*

This is the second semester of a 2-semester course sequence. The major pathologic conditions diagnosed by magnetic resonance (MR) imaging are presented. Emphasis is placed on the abdomen, pelvis, and extremities as detected on MR imaging. Differentiation between normal and pathologic tissues on MR scans, as well as the associated symptoms and origin of each type of pathology presented. Disease progression and treatment options are also discussed.

Prerequisite: MRI 2001/CAT 2006 with a grade C or higher.

Corequisite: MRI 2194

Previous MRI* 207

MRI 2008 - MRI Procedures and Instrumentation II*Credits: 3*

This is the second semester of a 2-semester sequence. This course identifies common anatomic structures, pathology of the central nervous system and positioning criteria for various areas of the body. This course describes the available coils for magnetic resonance (MR) imaging and their specific applications. How to apply MR imaging parameters in the

clinical setting and how to differentiate between different types of pulse sequences will be discussed. The parameters related to tissue characteristics that affect image quality such as T1 and T2 relaxation and how to apply pulse sequence principles to MR imaging. Advanced patient positioning criteria for various areas of the body will be discussed.

Prerequisite: MRI 2001/CAT 2004 with a grade C or higher

Corequisite: MRI 2194

Previous MRI* 208

MRI 2009 - MRI Image Quality, Equipment and Safety Essentials II

Credits: 2

This is the second semester of a 2-semester sequence. This course identifies common anatomic structures, pathology of the central nervous system and positioning criteria for various area of the body. This course describes the available coils for magnetic resonance (MR) imaging and their specific applications. How to apply MR imaging parameters in the clinical setting and how to differentiate between different types of pulse sequences will be discussed. The parameters related to tissue characteristics that affect image quality such as T1 and T2 relaxation and how to apply pulse sequence principles to MR imaging. Advanced patient positioning criteria for various areas of the body will be discussed.

Prerequisite: MRI 2001/CAT 2004 with a grade C or higher.

Corequisite: MRI 2194

Previous MRI* 209

MRI 2094 - Clinical Experience I

Credits: 4

This is the first semester of a 2-semester course sequence. This course introduces the student to the clinical setting and the practical skills necessary to operate magnetic resonance (MR) imaging systems. Clinical competency evaluation (s) will be completed during this course which are required to sit for the national registry exam.

Prerequisite: Admissions to the Magnetic Resonance Imaging (MRI) Program, and American Registry of Radiologic Technologists (ARRT) Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy, or Sonography (Registration through the American Registry for Diagnostic Medical Sonography) (ARDMS) OR Permission of the Middlesex Campus Program Coordinator.

Corequisite: MRI 2001/CAT 2004

Previous MRI* 206

MRI 2194 - Clinical Experience II

Credits: 4

This is the second semester of a 2-semester sequence. This course introduces the student to the clinical setting and the practical skills necessary to operate magnetic resonance (MR) imaging systems. Clinical competency evaluation(s) will be

completed during this course which are required to sit for the national registry exam.

Prerequisite: MRI 2001/CAT 2004 with a grade C or higher.

Corequisite: MRI 2009

Course Fees: Supplemental Fee Level 2

Previous MRI* 210

MUS 1000 - History and Appreciation of Western Music

Credits: 3

This course is an entry-level music class that surveys the history of classical Western music and forms a foundation for intelligent and appreciative listening through knowledge of the characteristics, media, and structure of music, major choral and instrumental works, musical styles, interpretation, and the principles of aesthetics. Students will engage in lectures, class discussion, recordings, and attendance at live performances.

Prerequisite: eligibility for ENG 1010

Elective Code(s): ARTS, LART

MUS 1001 - Music History - Medieval-Baroque

Credits: 3

This course is a survey of western European music from the Medieval Period through Baroque with an emphasis given to stylistic forms (i.e. plainchant, motet, opera, fugue), composers (i.e. Palestrina, Corelli, Morley, Vivaldi, Bach, Handel), and the cultural/societal impact on the music. The course will also review the elemental components of music (i.e. pitch, melody, rhythm, texture, and harmony). Students will be required to write two concert reports after attending two live performances featuring works from the periods covered in the class.

Prerequisite: Eligibility for ENG 1010

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, LART

Previous MUS* 101

MUS 1002 - Music History - Classical-Contemporary

Credits: 3

This course is a survey of western music from Classical through Modern periods, with a review to the concept of sound and the elements of music (i.e. rhythm, melody, harmony, texture and form). Emphasis is given to major developments in music along with the cultural and sociological changes, which gave rise to new vocal and instrumental genres. Students will be required to write two concert reports after attending two live performances featuring works from the periods covered in the class.

Prerequisite: Eligibility for ENG 1010

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, LART

Previous MUS* 102

MUS 1004 - World Music*Credits: 3*

This course offers an opportunity to study a variety of ethnic music from around the world within the context of the societies that create it. While the primary focus will be limited to certain selected regions and traditions, the overall scope will be broad in that these regions represent many different countries. The approach to the course material is interdisciplinary as it incorporates aspects of the arts, humanities, and social sciences.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART, GLKY**Previous MUS*** 104**MUS 1007 - Today's Music***Credits: 3*

A music appreciation course that examines the development of American music from its roots in Anglo, African, Native and Latin American traditions to the evolved styles of country, blues, folk, rock "n" roll. Emphasis will be given to the impact of these earlier styles on contemporary practices.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Previous MUS*** 107**MUS 1008 - Today's Music: Gospel, Ragtime, Blues, Jazz***Credits: 3*

An examination of the development of American music from its roots in the secular and sacred traditions of the late 1800's and their impact on the pre-jazz forms of ragtime, brass bands, and blues to the jazz forms of swing, bebop, cool and fusion. The course will also explore music developed out of American rural and urban settings (i.e., shaped note singing to urban gospel). Emphasis will be given to the stylistic characteristics of each form and their impact on current music styles.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Additional Info:** Offered in the spring semester. **Previous MUS*** 108**MUS 1009 - History and Appreciation of Jazz***Credits: 3*

A historical study of jazz from its early roots to the players today. The course looks at the evolution of jazz and how it has been influenced by technology and society. Students will examine the artists and music in jazz today, and the role of jazz in the past. This course will look at various audio and video performances of jazz musicians and ensembles to analyze their effect on this genre of music. Students will

attend live performances and discuss them in class, with the performing musicians when possible. Topics covered include the New Orleans era, the Big Band era, Swing, Bebop and Hard Bop, the Bossa Nova era, and jazz today.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Previous MUS*** 137**MUS 1010 - Rock and Roll History and Appreciation***Credits: 3*

A survey of the evolution of rock music and the origins, characteristics, stylistic development, and cultural/social perspectives. The course will present the major historical developments of Rock and Roll, as well as related 'popular' musical styles. From its roots in rhythm and blues, to the use of sampling, the class will explore the development of style, instrumentation, playing techniques, and the cultural conditions that helped to define the major trends in Rock and Roll.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Previous MUS*** 138**MUS 1011 - Survey of Recording Industry***Credits: 3*

This course will examine the history of the recording industry as well as its organization and structure. Students will learn about legal issues pertinent to the recording industry, commercial marketing, and significant people of the recording industry.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** ARTS, LART**Previous MUS*** 205**MUS 1100 - Fundamentals of Music***Credits: 3*

This course offers an introduction to the most rudimentary and ubiquitous aspects of the academic discipline of music. Students will develop skills that will allow them to read, write, and perform music. Thus, while not required for or limited to music majors, this class will prepare students for subsequent study in music theory and ear training. Topics include: notation, pitch, rhythm, meter, scale construction, key signatures, triads, inversions, and basic sight-singing.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Additional Info:** This course is only offered in the spring and is open to any student at the college. **Previous MUS*** 111

MUS 1101 - Music Theory I*Credits: 3*

This course offers an exploration of the rudiments of music theory and analysis. Students will strengthen the skills needed to read and write music notation. Topics include: pitch, rhythm, meter, scale construction, keys, intervals, triads and seventh chords, chord inversions, basic counterpoint, voice leading, chorale part writing, and figured bass. The aural component of the material studied in this course is covered in MUS 1201, therefore the courses must be taken concurrently.

Prerequisite: A very basic understanding of notation before beginning this class is highly recommended. Successful completion of MUS 1100 is recommended, but not required.

Corequisite: MUS 1201

Elective Code(s): ARTS, LART

Additional Info: Offered in the fall semester. Open to any student at the college. **Previous** MUS* 115

MUS 1102 - Music Theory II*Credits: 3*

This course offers a continued exploration of topics discussed in MUS 1101. Topics include: seventh chords, secondary function chords, modulation, form, and counterpoint. The aural component of the material studied in this course is covered in MUS 1202, therefore the courses must be taken concurrently.

Prerequisite: MUS 1101 with a "C" or higher; or by permission of the instructor

Corequisite: MUS 1202, This corequisite can only be overridden by permission of the instructor upon the successful completion of a placement test.

Elective Code(s): ARTS, LART

Additional Info: Offered in the spring semester. Open to any student at the college. **Previous** MUS* 116

MUS 1201 - Music Ear-Training I*Credits: 1*

This course covers the aural component of MUS 1101. The goal of Ear Training I is to acquire the skills necessary to make intelligent and competent musicians. This course will focus on three major areas; sight singing, rhythmic reading, and dictation. Students are introduced to solfege and moveable "do" in major and minor keys, Curwen hand signs, stick notation, and score reading, and conducting. Students will also develop their aural skills with rhythm exercises, music dictations, interval singing, scale singing, chordal and ensemble singing. Pentatonic music and music in Major and minor tonalities will be explored.

Prerequisite: A basic understanding of notation before beginning this class is highly recommended. Successful completion of MUS 1100 is recommended before taking this course, but not required.

Corequisite: MUS 1101 must be taken concurrently. This

corequisite can only be overridden by permission of the instructor upon the successful completion of a placement test.

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 166, MUS* 163

MUS 1202 - Music Ear-Training II*Credits: 1*

This course is a continuation of MUS 1201. Ear Training II is considered to be the aural lab component of MUS 1102, therefore this course must be taken concurrently with MUS 1102. This course explores more advanced materials using solfege and moveable "do" in major and minor keys and Curwen hand signs: all Intervals (ascending and descending), scales (major, minor in all 3 types, chromatic), triads (MmdA) in all inversions, and 7th chords are sung and identified. Practice singing in two and three parts in treble and bass clefs is included as well as conducting and "Sing and Play." This course also includes singing and dictation of one-part and two-parts melodies in major and minor (all 3 types). Sight-singing in compound triple meter, keyboard harmony and simple chord progressions with few inversions are introduced (aural identification of diatonic harmonic functions).

Prerequisite: MUS 1201 with a "C" or higher, or by permission of the instructor.

Corequisite: MUS 1102 must be taken concurrently. This corequisite can only be overridden by permission of the instructor upon the successful completion of a placement test.

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 168, MUS* 164

MUS 1300 - Beginning Piano*Credits: 3*

This course offers an introduction to the basics of piano playing through the study and application of scales, chords, and repertoire. Students will acquire basic skills in reading general music notation and in music theory.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, CRTY, LART

Previous MUS* 148

MUS 1301 - Group Piano I*Credits: 1*

This course provides beginning piano instruction and application/reinforcement of MUS 1101 on the keyboard: read music in treble and bass clef, and play: intervals up to an octave; chords of all qualities (major, minor, augmented, diminished: blocked and broken); 8-notes scales in major and minor of Group 1 (up to 2 octaves in

parallel & one in contrary motion); chord progressions; and repertoire of varied eras. Students will also work on: transposition, melodic harmonization, improvisation, and harmonic analysis.

Prerequisite: Permission by the instructor. Basic understanding of MUS 1101 concurrently.

Corequisite: Highly recommended to take concurrently with MUS 1101

Elective Code(s): ARTS, CRTY, LART

Course Fees: Supplemental Fee Level 2

Previous MUS* 190, MUS* 153

MUS 1302 - Group Piano II

Credits: 1

This class is the continuation of MUS 1301 and it concentrates on performance of advanced beginning repertoire and piano technique, as well as sight-reading, transposing improvisation, harmonic analysis, and harmonization of short melodies.

Prerequisite: MUS 1301 with a "C" or higher; or permission by the instructor

Corequisite: Highly recommended to take concurrently with MUS 1102

Elective Code(s): ARTS, CRTY, LART

Course Fees: Supplemental Fee Level 2

Previous MUS* 191

MUS 1303 - Intermediate Piano

Credits: 3

As a continuation of MUS 1300 Beginning Piano, students will study both Major and minor scales, play basic chord progressions and learn repertoire that includes various positions on the piano. Students will further develop skills in reading music and applying concepts of music theory to piano performance.

Prerequisite: MUS 1300

MUS 1405 - Applied Lessons I

Credits: 2

This course is the first in a sequence of required private vocal and instrumental lessons to reinforce and learn elements of music performance. Students will continue their instruction through one hour per week masterclass and one hour per week of private music lesson. Private teachers will be selected and approved by the music department. This course is offered in the following areas of practice:

Brass (MUS 1405B), Composition (MUS 1405C), Guitar (MUS 1405G), Piano (MUS1405P), Percussion (MUS 1405R), Strings (MUS 1405S), Voice (MUS 1405V), Woodwinds (MUS 1405W)

Prerequisite: By permission of the music program coordinator /department chair

Elective Code(s): ARTS, LART

Previous MUS* 185, MUS* 183

MUS 1406 - Applied Lessons II

Credits: 2

This course is the second in a sequence of required private vocal and instrumental lessons to reinforce and learn elements of music performance. Students will continue their instruction through one hour per week masterclass and one hour per week of private music lesson. Private teachers will be selected and approved by the music department.

Brass (MUS 1406B), Composition (MUS 1406C), Guitar (MUS 1406G), Piano (MUS1406P), Percussion (MUS 1406R), Strings (MUS 1406S), Voice (MUS 1406V), Woodwinds (MUS 1406W)

Prerequisite: MUS 1405 with a "C" or above, or permission of instructor

Elective Code(s): ARTS, LART

Previous MUS* 186, MUS* 184

MUS 1501 - Chorale Ensemble I

Credits: 1

This course is a performance ensemble in which students will study and perform choral repertoire representing a variety of styles and historical periods, from the renaissance to the postmodern age. In addition to regular rehearsals, students will participate in at least one performance each semester. This course exposes students to a "hands-on" quality experience in the arts.

Prerequisite: Permission by the instructor required (students who take this class must be able to sing and reproduce tones (i.e., "match pitch").

Elective Code(s): ARTS, CRTY, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 133, MUS* 161

MUS 1502 - Chorale Ensemble II

Credits: 1

This course is the second in a sequence of a performance ensemble in which students will study and perform choral repertoire representing a variety of styles and historical periods, from the renaissance to the postmodern age. This course exposes students to a "hands-on" quality experience in the arts. In addition to regular rehearsals, students will participate in a dress rehearsal as well as a concert showcase. Chorale II is intended for music majors who are pursuing advanced study in voice and/or are satisfying their performance ensemble requirement for the degree. In level II, students are expected to display developing leadership skills.

Prerequisite: MUS 1501 with a "C" or higher; or permission by the instructor

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 134, MUS* 162

MUS 1511 - Madrigal/Chamber Singer I*Credits: 1*

The primary purposes of this academic course are the development of students' musicianship and their vocal technique, as well as the study and performance of a variety of musical styles and historical periods, from the renaissance to the postmodern age, through the medium of choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This advanced course is open to all students in the college and requires passing a brief audition. Previous choral experience, knowledge of music notation and good sight-reading skills are required. In addition to regular rehearsals, students will participate in at least one performance each semester. This course exposes students to a "hands-on" quality experience in the arts. Students registered for this course must be also registered for a Chorale Ensemble course (I, II, III, or IV) or obtain permission by the instructor.

Prerequisite: Audition is required and instructor approval**Corequisite:** MUS 2504 concurrently, or permission by the instructor**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 1**Previous MUS*** 174**MUS 1512 - Madrigal/Chamber Singer II***Credits: 1*

This course is the second in a sequence of advanced choral performance ensemble. The primary purposes of this academic course are the development of students' musicianship and their vocal technique, as well as the study and performance of a variety of musical styles and historical periods, from the renaissance to the postmodern age, through the medium of choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This advanced course is open to all students in the college as long as all pre-requisites and co-requisites are met. Previous choral experience :knowledge of music notation, vocal production, and good sight-reading skills are required. In addition to regular rehearsals, students will participate in at least one performance each semester. Students registered for this course must be also registered for a Chorale Ensemble course (I, II, II or IV) or obtain permission by the instructor.

Prerequisite: MUS 1511 with 'C' or above, or permission by the instructor (audition required)**Corequisite:** MUS 2504 concurrently, or permission by the instructor**Elective Code(s):** ARTS, CRTY, LART**Course Fees:** Supplemental Fee Level 1**Previous MUS*** 175**MUS 1521 - Classical Chamber Ensemble I***Credits: 1*

Students participating in the Chamber Ensemble course will gain exposure and experience in performing standard classical repertoire as part of a classical chamber ensemble. During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop ensemble performance skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble. Music majors are required to take an ensemble course for four semesters.

Prerequisite: MUS 1406 with a "C" or above, or permission of instructor**Elective Code(s):** ARTS, LART**Course Fees:** Supplemental Fee Level 1**Previous MUS*** 187**MUS 1522 - Jazz Combo I***Credits: 1*

This course is the first level college jazz combo. Students participating in the Jazz Ensemble course will gain exposure and experience in performing standard jazz repertoire as part of a jazz combo ensemble (e.g., the "Real Book") and representing various periods and styles in jazz history (swing, bop, cool jazz, modal jazz, blues). During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop jazz improvisation skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.

Prerequisite: Students have completed audition process into the program and demonstrate some facility with their musical instrument, or permission by the instructor.**Elective Code(s):** ARTS, LART**Additional Info:** Music majors with emphasis in Jazz are required to take the course for four semesters. **Course Fees:** Supplemental Fee Level 1**Previous MUS*** 192**MUS 1530 - Jazz Ensemble***Credits: 2*

This course is a beginner level college jazz combo. While the class is largely performance based, the ensemble's main focus will be to make the student aware of the prerequisite skill set of being a member of a small jazz group. Students will prepare repertoire from the standard repertoire (e.g., the

"Real Book") and representing various periods and styles in jazz history (swing, bop, cool jazz, modal jazz, blues).

Prerequisite: Must have some rudimentary facility with a musical instrument

Elective Code(s): ARTS, LART

Previous MUS* 158

MUS 1531 - Jazz Combo II

Credits: 1

This course is the second in a sequence of college jazz combo. Students participating in the Jazz Ensemble course will gain exposure and experience in performing standard jazz repertoire as part of a jazz combo ensemble (e.g., the "Real Book") and representing various periods and styles in jazz history (swing, bop, cool jazz, modal jazz, blues). During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop jazz improvisation skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.

Prerequisite: Completion of MUS 1522 with a "C" or higher; or permission by the instructor.

Elective Code(s): ARTS, LART

Additional Info: Music majors with emphasis in Jazz are required to take the course for four semesters. **Course Fees:** Supplemental Fee Level 1

Previous MUS* 194

MUS 1532 - Classical Chamber Ensemble II

Credits: 1

This course is the second in a sequence of a chamber performance ensemble. Students participating in the Chamber Ensemble course will gain exposure and experience in performing standard classical repertoire as part of a classical chamber ensemble. During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop ensemble performance skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.

Prerequisite: MUS 1521 with a "C" or above; or permission by the instructor.

Elective Code(s): ARTS, LART

Additional Info: Music majors are required to take an ensemble course for four semesters. **Course Fees:** Supplemental Fee Level 1

Previous MUS* 193

MUS 1540 - Drumming and Percussion Ensemble

Credits: 3

Through ensemble playing, students will learn a variety of traditional rhythms such as African, Latin, Indonesian (Gamelan), Middle Eastern, etc. Various percussion instruments and playing techniques will be studied, including improvisation, and some cultural aspects associated with the instruments. Students will also learn how to use found objects as instruments. Students should make an effort to obtain a drum for use in the ensemble.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): ARTS, CRTY, LART

Previous MUS* 152

MUS 1600 - Introduction to Music Production

Credits: 3

This course is an introduction to the art and science of music production. Current practices, elements, and tools for electronic mixing and mastering will be defined and explored. The course will lay a thorough foundation of industry standard mixing and mastering skills, EQ, compression, using MIDI samples, electronic synthesis, various plugins, flexible and current as the dynamics of the industry shift.

MUS 1601 - Electronic Music

Credits: 3

Designed for the non-musician, this course focuses on the composition, creation, performing, and recording of music using modern production techniques. Students will learn the compositional elements of music including rhythm, music and chord theory, and song structure and then perform and record their compositions using Musical Instrument Digital Interface(MIDI)keyboards and digital audio workstations.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, CRTY, LART

Previous MUS* 117

MUS 1602 - Electronic Music Composition I

Credits: 3

The study of contemporary electronic music composition, technique, performance, and recording using synthesis, computer sequencing, and recording technology.

Prerequisite: MUS 1301 with a "C" or above; or permission by the instructor.

Elective Code(s): ARTS, LART

Previous MUS* 218, MUS* 117

MUS 1701 - Introduction to Music Business*Credits: 3*

A comprehensive introduction to the music business covering all aspects of the industry, its history and current trends including recording, publishing, artist management, music merchandising, live performance, touring, music organizations and radio. Included in this course will be various guest speakers representing various aspects of the music business. Attendance at and analysis of local live performances and their promotion is encouraged.

Prerequisite: Eligibility for ENG 1010**Elective Code(s):** ARTS, LART**Previous MUS*** 105**MUS 1702 - Arts and Entertainment Management***Credits: 3*

This course provides practical, current and professional instruction in how to successfully manage an arts and entertainment organization. Using place-based modules, this course presents topics in organizational structure, managing artists and the hypothetical creation of a non-profit or other business venture.

Prerequisite: ENG 1010 or permission from the Music Program Coordinator**Elective Code(s):** ARTS, LART**Previous MUS*** 225**MUS 1801 - Beginning Voice***Credits: 3*

Beginning voice is a performance-based course designed to introduce vocal technique, Italian/English classical, folk and Broadway song repertoire and performance practices to individuals seeking vocal instruction. Emphasis will be given at the beginning of the course to breathing, vowel modification, posture and other physical issues related to singing. As the semester continues, we will study Italian diction, performance practice, and introduce International Phonetic Alphabet (IPA).

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** ARTS, LART**Previous MUS*** 160**MUS 1802 - Intermediate Voice***Credits: 3*

Intermediate Voice is a performance-based course designed to be a continuation of the concepts learned in Beginning Voice, including vocal technique, Italian/English classical, folk, and Broadway song repertoire and performance practices to individuals seeking vocal instruction. Emphasis will be given to breathing, vowel modification, posture, and other physical issues related to singing. As the semester continues, we will continue to study Italian diction,

performance practice, vocal technique and the International Phonetic Alphabet (IPA).

Prerequisite: MUS 1801 or permission of instructor**Elective Code(s):** ARTS, LART**MUS 1803 - Language for Singers***Credits: 2*

This course is designed to provide knowledge of International Phonetic Alphabet (IPA) as it applies to singers, teaching them not only IPA but also how to form vowels and consonants (the anatomy of the voice). In addition, students will learn how to transcribe American broadcasting English texts into IPA. Students will also be introduced to basic IPA symbols for Italian, German, French, Spanish, and Latin.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** ARTS, LART**Previous MUS*** 167**MUS 1811 - Guitar I***Credits: 3*

Guitar I is an introductory course that will teach the fundamentals of guitar playing utilizing correct technique. Students will become familiar with the basic principles of both classical and popular styles. The main objective of the course is to develop enough proficiency so that students are able play solo guitar music from notation as well as song accompaniment.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Previous MUS*** 141**MUS 1812 - Guitar II***Credits: 3*

Guitar II is a course that will teach the intermediate to advanced techniques and fundamentals of guitar playing. The main objective of the course is to expand on the material learned in MUS 1811 - Guitar I, including the ability to play solo and ensemble guitar music at a level appropriate for school performances. This course teaches finger-style playing based on classical guitar technique.

Prerequisite: MUS 1811 with a "C" or above; or instructor's permission**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** ARTS, CRTY, LART**Previous MUS*** 142

MUS 1821 - Introduction to Music Education*Credits: 2*

This course is designed to introduce students to the profession of music education. An overview of the music education profession, including history, philosophy, psychology, curriculum, professional organizations, and obligations will be discussed.

Prerequisite: A very basic understanding of notation before beginning this class is highly recommended. Successful completion of MUS 1100 is recommended.

Elective Code(s): ARTS, LART

Additional Info: Only offered in the spring semester.

Previous MUS* 206

MUS 1831 - Introduction to Conducting*Credits: 2*

This course is designed to introduce basic conducting techniques, develop independence of hands, and present a comprehensive approach to score preparation, with the main goal of communicating music artistically and expressively through conducting.

Prerequisite: Completion of MUS 1301, MUS 1102, MUS 1202, AND either MUS 1501 or MUS 1521, all with a grade of "C" or higher; or by permission of the instructor.

Elective Code(s): ARTS, LART

Previous MUS* 188

MUS 2095 - Music Industry Practicum Project/Internship*Credits: 3*

Practical, general workplace training supported by an individualized learning plan developed by the employer, students, and Music Industry faculty advisor. After creating this plan with their faculty advisor, students will explore a career in the music business over the course of at least a three-month internship. This practicum project will be a demonstration of all music industry knowledge learning in the previous semesters.

Prerequisite: Approval of Music Program Coordinator

Elective Code(s): ARTS, LART

Previous MUS* 295

MUS 2098 - Special Topics in Music*Credits: 2*

This course is offered as an independent study whose contents vary each semester. Students will participate in a focused exploration of a designated topic. Intended as a course for advanced music majors, this class will allow students to study content which is not covered in the standard catalog of music instruction offerings.

Prerequisite: MUS 1202 with a "C" or above, or instructor's permission

Elective Code(s): ARTS, LART

Previous MUS* 298

MUS 2103 - Music Theory III*Credits: 3*

This course is the third in a required sequence of four music theory classes for music majors. Students will continue the study of harmony and voice leading through writing and analysis. In addition to secondary dominant and leading tone chords, students will learn to recognize and write Neapolitan chords, augmented 6th chords, modal mixture, and the beginning elements of late romantic harmonic vocabulary. Additionally, students will study forms including binary, ternary, sonata, and fugue. The aural component of the material studied in this course is covered in MUS 2201, therefore the courses must be taken concurrently.

Prerequisite: MUS 1202 with a "C" or higher; or by permission of the instructor

Corequisite: MUS 2201 This corequisite can only be override by permission of the instructor upon the successful completion of a placement test.

Elective Code(s): ARTS, LART

Additional Info: Only offered in the fall semester. Open to any student at the college. **Previous MUS*** 213

MUS 2104 - Music Theory IV*Credits: 3*

This course is the fourth in a required sequence of four, MUS 2202 must be taken concurrently.

Prerequisite: MUS 2201 with a "C" or higher; or by permission of the instructor

Corequisite: MUS 2202 This corequisite can only be override by permission of the instructor upon the successful completion of a placement test.

Elective Code(s): ARTS, LART

Additional Info: Only offered in the spring semester. Open to any student at the college. **Previous MUS*** 214

MUS 2201 - Music Ear-Training III*Credits: 1*

This course is a continuation of MUS 1202. Ear Training III is considered to be the aural lab component of MUS 2103, therefore this course must be taken concurrently with MUS 2103. This course explores more advanced materials using solfege (moveable "do" and modified "do" in major and minor keys) and Curwen hand signs. Solfege singing is honed and students will be expected to demonstrate strong sight-singing of diatonic harmony. In addition to reinforcing previous material, this course introduces the whole tone scale, complex rhythmic exercises (subdivision of simple and compound meters), atonal melodies, modes and their transpositions, "C" clefs, Bach Chorales, and more complex harmonic progressions which include secondary dominants, leading tone chords, the Neapolitan chord and augmented sixth chords in major and minor keys. Individual and ensemble singing up to 5 parts are required in this course, as well as "Sing and Play" and Dictation exercises. Melodies for

singing and dictation gradually incorporate chromatic alterations, and Chorale in four-parts need to include Roman numerals and the soprano and bass parts notated.

Prerequisite: MUS 1102 with a "C" or higher, or by permission of the instructor.

Corequisite: MUS 2103 must be taken concurrently. This corequisite can only be overridden by permission of the instructor upon the successful completion of a placement test.

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 260, MUS* 263

MUS 2202 - Music Ear-Training IV

Credits: 1

This course is a continuation of MUS 2201. Ear Training III is considered to be the aural lab component of MUS 2104, therefore the courses must be taken concurrently. This course explores advanced materials using solfege (moveable "do" and modified "do" in major and minor keys). In addition to reinforcing previous material, this course introduces the interval of a 9th, the blues and octatonic scales, complex rhythmic exercises (mixed meters, using values up to the 32nd note/rest and including dotted rhythms, triplets, duplets, quintuplets, sextuplets, syncopations, hemiolas); more complex atonal melodies and harmonic progressions which include secondary dominants, leading tone chords, leading-tone and borrowed chords, the Neapolitan chord and augmented sixth chords in major and minor keys, and modulations. Individual and ensemble singing up to 6 parts are required in this course, as well as "Sing and Play" and Dictation exercises. Melodies for singing and dictation incorporate chromatic alterations and modulations, and Chorale in four-parts are notated including Roman numerals.

Prerequisite: MUS 2103 with a "C" or higher, or by permission of the instructor.

Corequisite: MUS 2104 must be taken concurrently. This corequisite can only be overridden by permission of the instructor upon the successful completion of a placement test.

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 261, MUS* 264

MUS 2303 - Group Piano III

Credits: 1

This course is a continuation of MUS 1302. Concentration is on scales, chord progressions, and beginning intermediate level solo piano repertoire. Sight-reading, score reading, ensemble playing, improvisation, and transposition are included.

Prerequisite: MUS 1302 with a "C" or higher; or permission by the instructor

Corequisite: Highly recommended to take concurrently with MUS 2103

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 2

Previous MUS* 252

MUS 2304 - Group Piano IV

Credits: 1

This course is a continuation of MUS 2303. Concentration is on scales, chord progressions, and intermediate level solo piano repertoire. Sight-reading, score reading, ensemble playing, improvisation, and transposition are included.

Prerequisite: MUS 2303 with a "C" or higher; or permission by the instructor.

Corequisite: Highly recommended to take concurrently with MUS 2104

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 2

Previous MUS* 255

MUS 2405 - Applied Lessons III

Credits: 2

This course is the third in a sequence of required private vocal and instrumental lessons to reinforce and learn elements of music performance. Students will continue their instruction through one hour per week masterclass and one hour per week of private music lesson. Private teachers will be selected and approved by the music department. Brass (MUS 2405B), Composition (MUS 2405C), Guitar (MUS 2405G), Piano (MUS 2405P), Percussion (MUS 2405R), Strings (MUS 2405S), Voice (MUS 2405V), Woodwinds (MUS 2405W)

Prerequisite: MUS 1406 with a "C" or above, or permission of instructor

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): ARTS, LART

Previous MUS* 285

MUS 2406 - Applied Lessons IV

Credits: 2

This course is the fourth and last in a sequence of required private vocal and instrumental lessons to reinforce and learn elements of music performance. Students will continue their instruction through one hour per week masterclass and one

hour per week of private music lesson. Private teachers will be selected and approved by the music department. In lieu of a jury at the end of the semester, students in Applied IV are required to do a Capstone lecture-recital.

Brass (MUS 2406B), Composition (MUS 2406C), Guitar (MUS 2406G), Piano (MUS 2406P), Percussion (MUS 2406R), Strings (2406S), Voice (MUS 2406V), Woodwinds (MUS 2406W)

Prerequisite: MUS 1406 with a "C" or above, or permission of instructor

Elective Code(s): ARTS, LART

Previous MUS* 286

MUS 2503 - Chorale Ensemble III

Credits: 1

This course is the third in a sequence of performance ensemble in which students will study and perform choral repertoire representing a variety of styles and historical periods, from the renaissance to the postmodern age. This course exposes students to a "hands-on" quality experience in the arts. In addition to regular rehearsals, students will participate in at least one performance each semester. Chorale III is intended for music majors who are pursuing study in voice and/or are satisfying their performance ensemble requirement for the degree. In level III, students are expected to display leadership skills.

Prerequisite: MUS 1502 with a "C" or higher; or permission by the instructor

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 270

MUS 2504 - Chorale Ensemble IV

Credits: 1

This course is a performance ensemble in which students will study and perform choral repertoire representing a variety of styles and historical periods, from the renaissance to the postmodern age. This course exposes students to a "hands-on" quality experience in the arts. In addition to regular rehearsals, students will participate in at least one performance each semester. Chorale IV is intended for music majors who are pursuing advanced study in voice and/or are satisfying their performance ensemble requirement for the degree. In level IV, students are expected to display leadership skills.

Prerequisite: MUS 2503 with a "C" or higher; or permission by the instructor

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 271

MUS 2513 - Madrigal/Chamber Singer III

Credits: 1

This course is the third in a sequence of advanced choral performance ensemble. The primary purposes of this academic course are the development of students' musicianship and their vocal technique, as well as the study and performance of a variety of musical styles and historical periods, from the renaissance to the postmodern age, through the medium of choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This advanced course is open to all students in the college as long as all pre-requisites and co-requisites are met. Previous choral experience: knowledge of music notation, vocal production, and good sight-reading skills are required. In addition to regular rehearsals, students will participate in at least one performance each semester. Students registered for this course must be also registered for a Chorale Ensemble course (I, II, III or IV) or obtain permission by the instructor.

Prerequisite: MUS 1512 with 'C' or above, or permission by the instructor

Corequisite: MUS 2503 or MUS 2504 concurrently, or permission by the instructor

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 275

MUS 2514 - Madrigal/Chamber Singer IV

Credits: 1

This course is the fourth and last in a sequence of advanced choral performance ensemble. The primary purposes of this academic course are the development of students' musicianship and their vocal technique, as well as the study and performance of a variety of musical styles and historical periods, from the renaissance to the postmodern age, through the medium of choral ensemble. The course includes regular rhythmic, diction, sight-reading and vocalizing exercises, as well as learning of their own soprano, alto, tenor, baritone or bass part. This advanced course is open to all students in the college as long as all pre-requisites and co-requisites are met. Previous choral experience: knowledge of music notation, vocal production, and good sight-reading skills are required. In addition to regular rehearsals, students will participate in at least one performance each semester. Students registered for this course must be also registered for a Chorale Ensemble course (I, II, III or IV) or obtain permission by the instructor.

Prerequisite: MUS 2513 with 'C' or above, or permission by the instructor

Corequisite: MUS 2503 or MUS 2504 concurrently, or permission by the instructor

Elective Code(s): ARTS, LART

Course Fees: Supplemental Fee Level 1

Previous MUS* 276

MUS 2523 - Classical Chamber Ensemble III*Credits: 1*

This course is the third in a sequence of a chamber performance ensemble. Students participating in the Chamber Ensemble course will gain exposure and experience in performing standard classical repertoire as part of a classical chamber ensemble. During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop ensemble performance skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.

Prerequisite: MUS 1532 with a "C" or above; or permission by the instructor.

Elective Code(s): ARTS, LART

Additional Info: Music majors are required to take an ensemble course for four semesters. **Course Fees:** Supplemental Fee Level 1

Previous MUS* 242

MUS 2524 - Classical Chamber Ensemble IV*Credits: 1*

This course is the fourth and last in a sequence of a chamber performance ensemble. Students participating in the Chamber Ensemble course will gain exposure and experience in performing standard classical repertoire as part of a classical chamber ensemble. During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop ensemble performance skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.

Prerequisite: MUS 2523 with a "C" or above; or permission by the instructor.

Elective Code(s): ARTS, LART

Additional Info: Music majors are required to take an ensemble course for four semesters. **Course Fees:** Supplemental Fee Level 1

Previous MUS* 247

MUS 2533 - Jazz Combo III*Credits: 1*

This course is the third in a sequence of college jazz combo. Students participating in the Jazz Ensemble course will gain exposure and experience in performing standard jazz repertoire as part of a jazz combo ensemble (e.g., the "Real Book") and representing various periods and styles in jazz history (swing, bop, cool jazz, modal jazz, blues). During

preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop jazz improvisation skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.

Prerequisite: MUS 1531 with a "C" or higher; or permission by the instructor.

Elective Code(s): ARTS, LART

Additional Info: Music majors with emphasis in Jazz are required to take the course for four semesters. **Course Fees:** Supplemental Fee Level 1

Previous MUS* 248

MUS 2534 - Jazz Combo IV*Credits: 1*

This course is the fourth and last in a sequence of college jazz combo. Students participating in the Jazz Ensemble course will gain exposure and experience in performing standard jazz repertoire as part of a jazz combo ensemble (e.g., the "Real Book") and representing various periods and styles in jazz history (swing, bop, cool jazz, modal jazz, blues). During preparation of the musical selections, students will be required to listen to recordings of works by the composers and professional performers to gain an understanding of the historical significance and stylistic approach of selected performance repertoire. Students will develop jazz improvisation skills and ensemble techniques and will be required to practice assigned musical selections outside of class in order to be prepared to perform these pieces with the ensemble.

Prerequisite: MUS 2533 with a "C" or higher; or permission of the instructor.

Elective Code(s): ARTS, LART

Additional Info: Music majors with emphasis in Jazz are required to take the course for four semesters. **Course Fees:** Supplemental Fee Level 1

Previous MUS* 249

MUS 2603 - Electronic Music Composition II*Credits: 3*

A continuation of MUS 1602 - Electronic Music Composition I. This course is an exploration of techniques used in electronic music composition. Topics covered include further exploration in the editing of digital recording using industry-standard sequencing software; the mix, mastering and exporting of digital recordings; and the composition of a music score for a video. Students will also be introduced to the various aspects of operating a recording studio which will include the type and function of equipment used.

Prerequisite: MUS 1602 with a "C" or above; or by permission of the instructor

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): ARTS, CRTY, LART

Previous MUS* 219

MUS 2604 - Advanced Music Mixing and Processing

Credits: 3

This is an advanced-level course in audio and music mixing and signal processing. Students will be expected to take pre-recorded multi-track audio and music production files and edit, mix, process, and master them at a professional level. Topics will include advanced-level sound design, multi-track digital mixing and signal processing, including audio compression, equalization, filtering, reverb, echo, delay, flanging, modulation, pitch shifting, chorus, and other digital effects.

Prerequisite: MUS 2603

Corequisite: MUS 2605

Elective Code(s): ARTS, LART

Previous MUS* 238

MUS 2605 - Principles of Sound Recording

Credits: 3

This course is an advanced study of the techniques and methodologies used in studio and live recording of sound and music. Students will be expected to work both individually and collaboratively in the recording and mastering of live or studio music recording projects. Topics will include advanced knowledge of multi-track recording, studio acoustics, sound design, digital mixing consoles, microphone placement techniques, signal processors, monitoring, talkback systems, and studio session procedures.

Prerequisite: MUS 2603

Corequisite: MUS 2604

Elective Code(s): ARTS, LART

Previous MUS* 237

MUS 2606 - Music for Film, TV, and Other Media

Credits: 3

A practical course that focuses on music composition as it relates to digital studio creation for the express purpose of composing for sundry media genres to include, but not limited to film, television, commercials, documentaries, and video games music scores.

Prerequisite: MUS 2603 or by Music Program Coordinator's approval. Demonstrated knowledge and success in music theory, rudimentary acoustic composition, as well as digital music software programs are highly recommended.

Elective Code(s): ARTS, LART

Previous MUS* 230

NMED 1001 - Introduction to Nuclear Medicine

Credits: 3

N/A

Prerequisite: Acceptance into the Nuclear Medicine Technology Program and full attendance during freshmen orientation.

Corequisite: NMED 1194

Previous NMT* 101

NMED 1002 - Nuclear Medicine Procedures I

Credits: 3

Introduces basic nuclear medicine technology procedures.

Prerequisite: Acceptance into the Nuclear Medicine Technology Program and full attendance during freshmen orientation.

Corequisite: NMED 1194

Previous NMT* 102

NMED 1194 - Clinical Practicum I

Credits: 1

Introduces the clinical setting and general nuclear medicine areas through simulated labs and hands-on training.

Prerequisite: Acceptance into the Nuclear Medicine Technology Program and full attendance during freshmen orientation.

Corequisite: NMED 1002

Previous NMT* 111

NMED 1195 - Clinical Internship I

Credits: 0.5

Students attend clinical training Monday through Friday, eight hours per day.

Prerequisite: NMED 1194

Previous NMT* 113

NMED 1221 - Physics in Nuclear Medicine

Credits: 3

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: PHYS 1101

Corequisite: NMED 1294

Previous NMT* 121

NMED 1294 - Clinical Practicum II*Credits: 1*

Emphasizes, through simulated labs and hands-on training, the handling and positioning of patients and the application of clinical nuclear medicine procedures.

Prerequisite: NMED 1195**Corequisite:** NMED 2002**Previous NMT*** 112**NMED 1295 - Clinical Internship II***Credits: 3*

Students attend clinical training Monday through Friday, eight hours per day, minimum of 400 clinical hours.

Prerequisite: NMED 1294**Previous NMT*** 126**NMED 2002 - Nuclear Medicine Procedures II***Credits: 3*

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: NMED 1002**Corequisite:** NMED 1294**Previous NMT*** 201**NMED 2003 - Radiopharmacy***Credits: 3*

N/A

Prerequisite: CHEM 1110**Corequisite:** NMED 2394**Previous NMT*** 203**NMED 2004 - Nuclear Medicine Instrumentation***Credits: 3*

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.

Prerequisite: Acceptance into the Nuclear Medicine Technology program**Corequisite:** NMED 1194**Previous NMT*** 202**NMED 2010 - Introduction to Computers and Nuclear Medicine Applications***Credits: 3*

This course 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: NMED 2004 and RST 2000**Corequisite:** NMED 2102**Previous** new**NMED 2095 - Nuclear Medicine Seminar***Credits: 3*

Provides the student with a review of quality control procedures, state and federal regulations, radiation safety, radiobiology, marketing, and management of nuclear medicine technology departments, as well as career and professional development skills.

Corequisite: NMED 2102**Previous NMT*** 223**NMED 2102 - Nuclear Medicine Procedures III***Credits: 3*

Builds on the procedures and organ systems presented in NMED 1002, 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: NMED 2002**Corequisite:** NMED 2494**Previous NMT*** 221**NMED 2394 - Clinical Practicum III***Credits: 2*

Emphasizes, through simulated labs and hands-on training, the handling and positioning of patients and the application of clinical nuclear medicine procedures.

Prerequisite: NMED 1295**Corequisite:** NMED 2003**Previous NMT*** 211**NMED 2395 - Clinical Internship III***Credits: 0.5*

Students attend clinical training Monday through Friday, eight hours per day.

Prerequisite: NMED 2394**Previous NMT*** 216

NMED 2494 - Clinical Practicum IV*Credits: 2*

Introduces a sophisticated use of nuclear medicine technology and instrumentation. Students build on competencies achieved in NMED 1194, NMED 1294, and NMED 2394.

Prerequisite: NMED 2395**Corequisite:** NMED 2394**Course Fees:** Supplemental Fee Level 2**Previous NMT*** 212**NMP 1001 - Digital Media Foundations***Credits: 3*

A hands-on introduction to the fundamental concepts of producing creative digital-based media with a focus on the creation, aesthetics and common workflow techniques used in professional media production environments. Students will learn basic design and development principles while exploring the mediums of graphic design, image editing, animation, audio and video through the use of various media production tools and software. Creative production projects include logo/screen designs, informational graphics, image editing/compositing, audio editing/creation, video and motion-based sequencing and the production of a digital multimedia portfolio.

Prerequisite: Computer experience highly recommended**Additional Info:** This course is only offered at the Middletown Campus. **Previous DGA*** 101**NMP 1025 - New Media Production***Credits: 3*

This course is an introduction to the production of New Media. "New Media" means current and emerging communications technologies that are digital-based, interactive, and interconnected through computers, the Internet, mobile devices and social media platforms. The course also touches on emerging areas such as virtual reality and 360-degree video. Students will explore and produce a variety of digital media including, web sites, blogs, podcasts, and social media profiles using various forms of digital images, audio, video, and graphics.

Prerequisite: previous computer experience highly recommended**Previous COM*** 125 or **DGA*** 125**NMP 1047 - Digital Cinematography***Credits: 3*

An advanced-level production course examining photographic principles as they apply to movies and video. This course uses advanced digital video cameras and covers topics such as composition, depth-of-field, lenses, focal length, exposure, focus, filters, camera angles, camera operation, camera movement, visual effects, and principles of lighting and color; as well as the roles of the Director of

Photography and other camera and lighting crew on a film production. This is a hands-on course with students completing a series of practical exercises and production assignments.

Prerequisite: COMM 1601**Previous ART*** 147 or **COM*** 147**NMP 1053 - Film Production***Credits: 3*

A hands-on, collaborative approach to narrative film production techniques, including pre-production organization, cameras, lighting, shooting strategies, sound recording, crewing, and editing. Students will specialize in a specific area of production and collaborate with fellow students to produce a short original film during the semester. Creative use of the medium for dramatic story telling will be emphasized using current technologies.

Prerequisite: COMM 1601**Previous COM*** 153**NMP 1110 - Introduction to Digital Graphics***Credits: 3*

This course is an introduction to the fundamental concepts and techniques involved with producing digital imagery for various production applications and environments. Students will explore a range of digital software and hardware applications designed for use by artists and designers in various media production industries. Topics covered include: proper organizational workflow techniques related to screen-based, online media production (communication, asset management, file sharing, etc.) and creative use of common digital graphic production tools.

Prerequisite: previous computer experience highly recommended**Previous DGA*** 110**NMP 1120 - Image Editing and the Pixel***Credits: 3*

Students will receive in-depth instruction in leading digital image editing software which is used in commercial graphics, video production and new media production. This software is used to edit and manipulate photographs and other images with an emphasis on integration into assorted media productions. Topics covered include: image creation and editing; digital color theory and file formats; typographic effects; advanced filter techniques; automation and performance options; and new media production workflow considerations.

Prerequisite: NMP 1001 or NMP 1110**Previous DGA*** 120

NMP 1130 - Vector Graphics*Credits: 3*

Students will receive in-depth instruction in leading vector-based, structured drawing illustration software applications which are used in commercial graphics, video production and multimedia authoring. The course explores the use of vector-based drawing tools and the various techniques used to create vector-based artwork within various media production environments. Topics covered include vector-based graphic construction, path editing, color and custom gradients, patterns, typographic effects, filter techniques, printing, output options, and outside application integration.

Prerequisite: NMP 1001 or NMP 1110**Previous** DGA* 223**NMP 1140 - Digital Publishing and Layout***Credits: 3*

Students will receive in-depth instruction across several publishing software applications which are used in commercial graphics and multimedia production. Publishing software applications are used for creating layouts of text, graphics, photographs, and other visual images for print and electronic distribution. The course includes hands-on production of publication and templates for typical office documents, technical manuals, marketing literature, books, newsletters, eBooks, and packaging. Topics covered include: digital typography; style sheets, layout grids and master page techniques, image processing effects, interactivity, trapping and color palette systems, plug-in architecture and common digital publishing issues.

Prerequisite: NMP 1001 or NMP 1110**Previous** DGA* 231**NMP 2003 - Media Literacy***Credits: 3*

An examination of the techniques used by media communicators to share meaning, influence and entertain mass audiences with sounds and images.

Prerequisite: Eligible for ENG 1010**Previous** COM* 203**NMP 2020 - Television Studio Production***Credits: 3*

An exploration of the techniques and technologies used in live multicamera studio production. Students receive direct hands-on experience on advanced broadcast production equipment in the college's Center for New Media through the production of live streamed programming. Students can specialize and become professionally certified on advanced broadcast technologies such as Chyron character generation, Sony MVS switchers, video servers, broadcast and robotic cameras, mobile and remote transmissions, automated run-down systems, multichannel audio mixers and video streaming technology.

Prerequisite: COMM 1601**Additional Info:** This course can only be taken at the Middletown campus. **Previous** COM* 220**NMP 2028 - News and Documentary Production***Credits: 3*

This course focuses on creating news programs and documentaries. The course teaches advanced skills in studio production, field production, program development, interviewing, research strategies, and media ethics. Students research and report on news and current affairs issues while creating news packages and short documentaries. They participate in multi-camera TV studio productions and distribute content over digital streaming networks.

Prerequisite: NMP 2020**Previous** COM* 228**NMP 2064 - Advanced Video Editing***Credits: 3*

This advanced course in digital video editing begins with an exploration of the history and theory of film editing and its evolution into digital non-linear editing. Next, through in-class demonstrations and various hands-on editing assignments students will learn the methods and workflow of a professional post-production environment. Students will practice advanced editing techniques by using Premiere Pro to edit a variety of projects including a montage, a narrative short, an action sequence, a commercial and a documentary short. Workflow between Premiere Pro, After Effects, and Audition will also be explored.

Prerequisite: COMM 1601**Additional Info:** This course is only offered at the Middletown campus. **Previous** COM* 264**NMP 2090 - Media Production Capstone***Credits: 3*

This is intended as a culminating course for media production students. Students will apply the skills and knowledge they have learned in previous media production courses to create an advanced, professional-level project in their particular media specialization area. Completed projects should

demonstrate both technical and conceptual sophistication. The course emphasizes taking a professional approach to the process of project development, production, and post-production and includes the development of a professional portfolio website.

Prerequisite: Must be a sophomore-level student in a New Media Production AAS degree, one of the NMP certificate programs or a student the Communication Studies AA who has completed at least three production courses, or permission of instructor.

Additional Info: This course is only offered at the Middletown campus. **Previous** COM* 287

NMP 2095 - Media Production Practicum

Credits: 3

A practicum-based course where students learn from observing professional media producers in a production environment. Students also assist in media productions and projects under the direct supervision of professional staff. Students are involved in different aspects of media production depending on their previous experience and focus area. This may include project development, pre-production, production, or post-production work. Practicums are typically unpaid and require a minimum of 120 hours. Enrollment requires instructor or coordinator permission and students must have previous media production experience and/or completed at least two previous media production courses with a B- or higher grade.

Prerequisite: By permission of instructor or program coordinator. Previous media production experience required. Enrollment is limited to 10 students.

Previous COM* 293

NMP 2100 - Introduction to Animated Productions

Credits: 3

This course is an introduction to the fundamental concepts and techniques involved with producing digital imagery for various production applications and environments. Students will explore a range of digital software and hardware applications designed for use by artists and designers in various media production industries. Topics covered include: proper organizational workflow techniques related to screen-based, online media production (communication, asset management, file sharing, etc.) and creative use of common digital graphic production tools.

Prerequisite: NMP 1001 or NMP 1110

Previous new, replacing DGA 260 Animation

NMP 2110 - Visual Effects

Credits: 3

An introduction to the creative and technical processes involved in the production of visual effects. Through theories, instructions, visual examples, and hands-on production students will learn the fundamental principles of animating and producing visual effects utilizing industry-leading software and hardware. Topics covered include: motion graphic animation concepts, compositing, masking, effects, keying, motion tracking, rotoscoping and animating in 3D space. Student experience will include the production of various animated projects to further enhance their production portfolios.

Prerequisite: NMP 1001 or NMP 1110

Previous new, replaces DGA 257

NMP 2120 - Foundations of 3D Animation

Credits: 3

An introduction to the creative and technical processes involved in the production of 3-dimensional graphics and animation. Through theories, instructions, visual examples, and hands-on production students will learn the fundamental principles of modeling and animating virtual objects and environments using industry-leading software and hardware. Students' experience will include the production of various modeled and animated projects to further enhance their production portfolios.

Prerequisite: NMP 1001 or NMP 1110

Previous new, replaces DGA 256 3D Animation Foundations

NMP 2195 - Media Internship

Credits: 3

A jointly supervised internship experience with a cooperating media-related business or institution providing experiential opportunities through work. Interns train and work under the supervision of media professionals in media-related environments aligned with their area of specialization. Internships may be paid or unpaid. Students should apply for and arrange an internship during the semester prior to registration. Students should normally do an internship during the last semester of their studies. Requires permission of instructor and previous media-related experience and/or coursework. A minimum of 120 hours of internship work is required.

Prerequisite: Permission of Instructor

Additional Info: This course is only offered at the Middletown campus. **Previous** COM* 295

NMP 2200 - Producing Interactive Media*Credits: 3*

Students will explore the various tools and techniques involved in the production of interactive multimedia. Interactive media authoring is the process of using software that allows for the integration of sound, imagery, animation, and video to create interactive applications, environments, and experiences. Topics covered include: an overview of multimedia authoring environments; interactivity; scripting; image processing techniques; animation concepts; digital audio and video integration; cross platform production and distribution methods.

Prerequisite: NMP 1001**Previous** new, replaces DGA 250 Interactive Multimedia**NMP 2210 - Web Productions Fundamentals***Credits: 3*

An introduction to graphic and multimedia skills utilized in website production. This course discusses the anatomy of web pages, identifies common web-based elements and tackles production issues such as effective web sites across different browsers and platforms, dynamic layout for variable screen resolutions, color, project planning, mapping, interface design, prototyping and organizing content. Students will use industry standard applications for coding (X)HTML/CSS and creating, editing, and integrating graphics and multimedia elements involved in web-based media production.

Prerequisite: NMP 1001 or NMP 1110**Previous** new, replaces DGA 241 Internet Web Design I**NMP 2220 - Web Production II***Credits: 3*

A continuation of NMP 2210 - Web Productions Fundamentals that explores the creative and technical production processes behind successful communicative and interactive website construction. Topics covered include: domain name registration and server considerations; file transfer protocol and database needs; PHP functionality and reusable code; scripting technologies; advanced CSS techniques; multimedia integration; blog installation and modification; dynamic layouts; mobile detection and handling; and other CSS tools for desktop/tablet/phone scenarios.

Prerequisite: NMP 2210**Previous** new, replaces DGA 242 Internet Web Design II**NMP 2295 - Experiential Learning and Practice in Media Production II***Credits: 3*

This course serves as a second 120-hour Internship in media production or Center for New Media Production Practicum. Students should apply for and arrange an internship during the semester prior to registration. This course is only offered

at the Middletown campus. The Internship requires a minimum of 120 hours for 3 credits.

Prerequisite: Permission of Instructor**Previous** COM* 296**NRG 1101 - Introduction. to Energy & Systems***Credits: 3*

Explore current issues surrounding the energy industry including climate change and sustainability. Understand the basic energy consuming components of buildings and opportunities in clean energy and resource conservation as building blocks to a sustainable future. Students are introduced to career opportunities in energy management, renewable energy and sustainability.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous** NRG* 101**NRG 1122 - Commercial HVAC Systems & Analysis***Credits: 3*

Familiarity with and the analysis of building HVAC systems is a basic necessity for commercial energy auditors. Students will gain an understanding of the operation, control, and application of various types of commercial HVAC Systems by touring mechanical rooms around campus to identify different parts of the commercial HVAC system (boilers, chillers, air handlers). Hands-on lab enables students to analyze the operation, efficiency, and programming of these systems. Data logging may be included for calculations and analysis.

Prerequisite: PHYS 1201 and NRG 1123, both with C- or higher**Previous** NRG* 122**NRG 1123 - Energy Efficiency Methods***Credits: 3*

A systems approach is used to analyze the input, output, and efficiency of commonplace energy conversion devices. Included are motors, fans, pumps, heat engines, domestic hot water heaters, furnaces, boilers, refrigeration devices, and heat pumps. In so doing students (1) become fluent in the use of the many different units used to denote and measure energy/power (2) learn what quantities need to be measured to determine energy/power in different systems (3) determine the energy/cost savings associated with different efficiency improvement strategies.

Prerequisite: NRG 1101 with a C- or higher**Previous** NRG* 123

NRG 1130 - Applied Renewable Energy Systems*Credits: 3*

Focuses on the practical application of renewable energy technologies. Topics include energy and resource conservation and project siting, economics, financing, renewable energy and tax credits, technical and engineering aspects, regulatory issues, energy storage, monitoring and verification. Students study the advantages, limitations and potential of various energy sources. Wind, solar, small-scale hydro, ground-source heat pumps, combined heat and power, biofuels, fuel cells, and other technologies are examined. Students will learn the strategies and cost/benefit analyses employed by energy analysts to meet demand with clean energy production. Students will also complete their own study and proposal for a renewable energy project.

Prerequisite: PHYS 1201 and NRG 1123, both with C- or higher

Previous NRG* 130

NRG 1132 - Industrial Energy Systems*Credits: 3*

Energy Managers are called upon to assess ways to save money by saving energy in industrial processes. Saving energy can typically lead to other direct benefits such as a more efficient process, better tolerances on parts, and less wear and tear on manufacturing equipment. Understanding these unique systems, accurately projecting energy savings, dealing with a business' core operations and convincing reluctant managers that saving energy equals greater profit are valuable skills into today's energy market. Topics include Compressed Air Systems and Controls, Lighting, Steam Systems, Ventilation, Dust Collection and Energy Auditing.

Prerequisite: NRG 1123 with a C- or higher

Previous NRG* 132

NRG 1133 - Lighting Fundamentals & Appl.*Credits: 3*

Competence with lighting systems analysis is a basic necessity for commercial energy auditors. Topics include assessment of quantity and quality of light, light sources, luminaries, lighting controls, manufacturer lamp and ballast specifications, lighting power density, lighting-HVAC interactions, retrofit opportunities, cost savings analysis, and lighting codes/regulations. Students create a directly supervised lighting audit project.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Course Fees: Supplemental Fee Level 1

Previous NRG* 133

NRG 2241 - Commercial Energy Use Analysis & Simulations*Credits: 3*

Provides students with exposure to the entire energy analysis process work flow with a "hands-on" implementation of an actual building energy study and an energy modeling using Building Information Modeling and AutoDesk Revit, eQuest software and other specialized modeling tools.

Prerequisite: NRG 1123 with a C- or higher

Course Fees: Supplemental Fee Level 1

Previous NRG* 241

NRG 2242 - Energy Accounting*Credits: 3*

A comprehensive approach to energy cost reduction for commercial buildings. We will study advanced utility consumption analysis (trends, adjusted baselines, weather normalization, load factors, load shapes, baseload), the value of operation and maintenance improvements, energy saving capital improvement measures (energy conservation measures), measurement and verification of the operating conditions of energy-using equipment, and monitoring systems to maintain cost reduction, and methods of implementing energy conservation measure projects and explore different utility incentive programs.

Prerequisite: NRG 1123 with a C- or higher

Previous NRG* 242

NTEC 1000 - Introduction to Nuclear Systems*Credits: 3*

This course is an introduction to the major systems of a commercial nuclear power plant. Designed for the student with no prior knowledge of engineering principles, it adheres to a systematic approach to operations and explains the underlying theoretical principles. The course focuses on Pressurized Water Reactor (PWR) and Boiling Water Reactor (BWR) plant design. The course also presents an overview of the Pressurized Heavy Water Reactor (PHWR), Fast Breeder Reactor (FBR), and High Temperature Gas-cooled Reactor (HTGR).

Prerequisite: None

Prerequisite/Corequisite: None

Previous NUC* 100

NTEC 1100 - Radiation Health Safety*Credits: 2*

This course is an introduction to basic concepts associated with nuclear physics and nuclear radiation, health, and safety. Topics include nuclear structure, radioactivity, and interaction of radiation with matter, shielding, radiation measurement, exposure, and biological effects.

Prerequisite: MATH 1610, CHEM 1210

Prerequisite/Corequisite: NTEC 1110, NTEC 1170

Previous NUC* 110

NTEC 1110 - Radiation Health Safety Lab*Credits: 1*

This course is designed to give the student hands-on experience working with a variety of radiation monitoring devices. The students will also gain experience in the processing and analysis of counting data.

Prerequisite: MATH 1610, CHEM 1210

Prerequisite/Corequisite: NTEC 1100, NTEC 1170

Course Fees: Supplemental Fee Level 2

Previous NUC* 111

NTEC 1170 - Atomic & Reactor Physics*Credits: 4*

This course is an introduction to modern physics concepts of the structure of the atom, the properties of atomic particles, the nature of light, relativity theory and elementary quantum mechanics. An understanding of fission energy concepts and transmutations will be provided.

Prerequisite: MATH 1610, NTEC 1000, PHYS 1104

Prerequisite/Corequisite: MATH 2600, PHYS 1105, NTEC 1100 & NTEC 1110

Additional Info: Three Rivers campus **Previous NUC*** 117

NTEC 1180 - Nuclear Chemistry*Credits: 1*

This course is an introduction to the basic concepts of nuclear reactor chemistry. Topics covered include oxidation-reduction reactions, principles of corrosion, corrosion control practices, and important nuclear chemical reactions.

Prerequisite: CHEM 1210, MATH 1610, NTEC 1000

Prerequisite/Corequisite: NTEC 1170

Additional Info: Three Rivers campus **Previous NUC*** 118

NTEC 2095 - Nuclear Co-op I*Credits: 3*

In this course, students will work in industry gaining hands-on experience while applying academic knowledge acquired during their first year of classroom/ laboratory college education. A specific project will be agreed upon by the co-op student, industry supervisor, and faculty advisor. A minimum of 225 documented industry contact hours must be devoted by the co-op student during the semester internship.

Prerequisite: Permission of instructor

Prerequisite/Corequisite: Students must have completed all freshman level technology courses and have a GPA of 2.50 or higher.

Additional Info: Three Rivers campus **Previous NUC*** 295

NTEC 2100 - Nuclear Instruments & Controls*Credits: 2*

The study of the underlying electrical, mechanical, physical, and chemical principles by which the instrumentation and modern PWR (pressurized water reactor) and BWR (boiling

water reactor) systems control the safe generation of nuclear-based power. Emphasis is placed on the full understanding of the nuclear fission process and the interactions of the numerous subsystems required monitoring and controlling this important energy technology.

Prerequisite: EET 1045, NTEC 1170, NTEC 2500

Prerequisite/Corequisite: NTEC 2110

Additional Info: Three Rivers campus **Course Fees:** Supplemental Fee Level 1

Previous NUC* 210

NTEC 2110 - Nuclear Instruments & Controls Lab*Credits: 1*

These laboratory exercises transfer acquired electrical, mechanical, physical, and chemical technology gained in earlier courses in hands-on applications to 15 selected nuclear instrument-controlled subsystems. Emphasis is placed on the full understanding of the detection capabilities and subsequent safe nuclear system control.

Prerequisite: EET 1045, NTEC 1170, and NTEC 2500

Prerequisite/Corequisite: NTEC 2100

Additional Info: Three Rivers campus **Course Fees:** Supplemental Fee Level 1

Previous NUC* 211

NTEC 2195 - Nuclear Co-op II*Credits: 3*

In this course, students will work in industry gaining enhanced hands-on experience while applying academic knowledge acquired during their first year of classroom/laboratory college education along with hands-on experience gained in their 12-week summer internship, as well as from initial nuclear co-op experience. A specific project will be agreed upon by the co-op student, industry supervisor, and faculty advisor. A minimum of 225 documented industry contact hours must be devoted by the co-op student during the semester.

Prerequisite: Consent of Program Coordinator. Students must have completed all freshman level technology courses, a summer internship, and NTEC 2095.

Additional Info: Three Rivers campus **Previous NUC*** 296

NTEC 2200 - Nuclear Simulator*Credits: 1*

A study of the primary and secondary systems of a Pressurized Water Reactor (PWR), with emphasis on control and protective subsystems, plant start-up, normal plant operation, and critical shut-down procedures. Reactor "accident" analyses are stressed for total reactor system comprehension. This is the capstone event for the nuclear degree program.

Prerequisite: NTEC 1170, NTEC 1180, NTEC 2500, NTEC 2610

Prerequisite/Corequisite: NTEC 2210

Additional Info: Three Rivers campus **Previous** NUC* 220

NTEC 2210 - Nuclear Simulator Lab*Credits: 1*

A study of reactor plant primary and secondary systems, control and protective systems, plant start-up, normal plant operation, and critical shut-down procedures is covered through the extensive "hands-on" utilization of a modern nuclear reactor simulator. This is the capstone event for the nuclear degree program.

Prerequisite: NTEC 1170, NTEC 1180, NTEC 2500, NTEC 2610

Prerequisite/Corequisite: NTEC 2200

Additional Info: Three Rivers campus **Previous** NUC* 221

NTEC 2300 - Nuclear Topics*Credits: 2*

This course is a state-of-the-art survey course studying factors impacting modern nuclear power generation, including environmental impacts, fuel management, preventive maintenance, equipment operation, failure and analysis, safety engineering, human factors engineering, and emergency planning procedures. Additionally, an overview of other regional nuclear related business activities will be presented.

Prerequisite: NTEC 1170, NTEC 1180, NTEC 2500, NTEC 2610

Additional Info: Three Rivers campus **Previous** NUC* 230

NTEC 2500 - Reactor Theory*Credits: 4*

This course studies nuclear energy with emphasis on fission, reactor types, moderation of neutrons, activation and decay schemes, transmutations, neutron diffusion theory, and theoretical reactor operation including heat transfer, power transients, instrumentation, and resultant radiation.

Prerequisite: MATH 2600, NTEC 1170, NTEC 1180, PHYS 1105

Additional Info: Three Rivers campus **Previous** NUC* 250

NTEC 2600 - Nuclear Material Science*Credits: 2*

This course will acquaint the student with constitution, properties and characteristics of engineering materials and provide a foundation for stress analysis on structures in equilibrium with emphasis on applications to nuclear power, including effects of material irradiation.

Prerequisite: MATH 2600, NTEC 1170, NTEC 1180, PHYS 1105

Prerequisite/Corequisite: NTEC 2610

Additional Info: Three Rivers campus **Previous** NUC* 260

NTEC 2610 - Nuclear Material Science Lab*Credits: 1*

This lab will focus on performing experiments in metallographic examination, mechanical testing, and heat treatment of a variety of ferrous and nonferrous metals. Experiments to determine properties of materials such as strain, fatigue, corrosion, compression, and tensions will also be conducted. Brittle fracture and thermal stress will be performed as well as effects of irradiating materials.

Prerequisite: MATH 2600, NTEC 1170, NTEC 1180, PHYS 1105

Prerequisite/Corequisite: NTEC 2600

Additional Info: Three Rivers campus **Course Fees:**

Supplemental Fee Level 1

Previous NUC* 261

NTRN 1001 - Introduction to Dietetics*Credits: 3*

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. Introduction to medical terminology.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous NTR* 101

NTRN 1002 - Nutrition I: Principles of Nutrition*Credits: 3*

A study of the science of nutrition including the chemical structure, function, digestion, absorption, and metabolism of nutrients. Class discussion will emphasize how poor dietary habits contribute to the formation of diseases associated with the Western diet. Students critically analyze their own diets with respect to nutritional content and adequacy.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous NTR* 102

NTRN 1003 - Nutrition Therapy I*Credits: 3*

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: A grade of C or higher in NTRN 1002

Previous NTR* 103

NTRN 1005 - Food Management System*Credits: 3*

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: eligible for MATH 1002

Previous NTR* 105

NTRN 1020 - Foods*Credits: 3*

Presents and applies basic food preparation, basic food science, cooking equipment, menu planning, developing and testing quality food products.

Prerequisite: eligible for MATH 1002

Previous NTR* 120

NTRN 2000 - Nutrition Through the Life Cycle*Credits: 3*

Covers the stages of the life cycle including the nutritional needs for growth, development and normal functioning of individuals. The stages include preconception, pregnancy, lactation, infancy, toddler, school-age children, adolescent, adulthood and aging adulthood. It includes age-specific conditions and interventions.

Prerequisite: BIO 1111, NTRN 1002

Previous NTR* 200

NTRN 2001 - Community Nutrition Education*Credits: 3*

Provides a community approach to nutrition education. Students will develop skills in presenting nutrition education programs to small groups or classes.

Prerequisite: NTRN 1003 and COMM 1301

Previous NTR* 201

NTRN 2002 - Nutrition Therapy II*Credits: 3*

Focuses on the physiological principles and nutritional needs of more complex conditions. Increases medical terminology vocabulary.

Prerequisite: A grade of C or higher in NTRN 1003, BIO 1111, and CHEM 1110. **Note:** BIO 1111 and CHEM

1110 must be taken within 5 years of beginning this course unless waived by the program coordinator.

Previous NTR* 202

NTRN 2005 - Management in Dietetics*Credits: 3*

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: NTRN 1005

Previous NTR* 205

NTRN 2095 - Nutrition Internship I*Credits: 3*

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: NTRN 1003, NTRN 1020, HOSP 1109, BIO 1111, and MATH 1002 or higher and valid ServSafe Certification for the duration of the internship. A minimum GPA of 2.8 and a C in all nutrition, science and math courses are also required for this class.

Previous NTR* 210

NTRN 2195 - Nutrition Internship II*Credits: 3*

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: NTRN 2095

Previous NTR* 212

NTRN 2295 - Nutrition Internship III*Credits: 3*

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: NTRN 2195

Previous NTR* 214

NUR 1120C - Nursing in Health & Illness I*Credits: 9*

This course serves as an introduction to the art and science of nursing. Learning experiences assist the student to integrate knowledge from pre-and co-requisite courses into the provision of safe patient-centered care using the nursing process. Emphasis is placed upon developing foundational clinical judgment, communication, professionalism, and select fundamental nursing concepts.

Prerequisite: BIO 2111 (C+ or higher), ENG 1010 (C OR HIGHER), MATH 1200 OR HIGHER (C OR HIGHER)

Prerequisite/Corequisite: BIO 2112 (C+ OR HIGHER), PSY 1011 (C OR HIGHER)

Previous NUR* 120

NUR 1125C - Nursing in Health & Illness II*Credits: 8*

This course builds upon concepts of nursing practice introduced in NUR 1120C. The course integrates a holistic, family centered approach to the nursing and interprofessional care of patients, families, and groups across the lifespan. Focus is placed on the concepts of comfort, elimination, infection, nutrition, perfusion, reproduction, regulation/metabolism, tissue integrity, and fluid & electrolytes.

Prerequisite: NUR 1120C (C or higher), BIO 2112 (C+ or higher), PSY 1011 (C or higher)

Prerequisite/Corequisite: BIO 2350 (C or higher), PSY 2001 (C or higher)

Previous NUR* 125

NUR 1126 - Transition to the CT-CCNP Concept-Based Curriculum*Credits: 1*

The Connecticut Community College Nursing Program (CT-CCNP) has implemented a curriculum revision that necessitates a transition process for students readmitted to the CT-CCNP from the previous CT-CCNP curriculum from fall 2019 forward, at all sites. As part of the process, this course eases the transition to the new Concept-Based Curriculum(CBC)and positions students for success. Students in this course engage in independent and group learning activities designed to familiarize them with concept-based teaching and learning to support successful transition to the CBC. Students complete learning activities based upon their level of entry into the CBC.

Prerequisite: NUR 1120C, NUR 1125C, NUR 2220C AND NUR 2225C

Previous NUR* 126

NUR 1150 - LPN to AD RN Bridge Course*Credits: 3*

This course is the didactic component for the Licensed Practical Nurse (LPN) to Registered Nurse (RN) advanced placement program option for LPNs who are accepted into the Connecticut Community College Nursing Program (CT-CCNP). Emphasis is placed on the theoretical components of the first two semesters of the AD RN program with assigned learning activities to support a successful transition of the LPN into the final year of the associate degree nursing program.

Prerequisite: All general education courses required for admission to the nursing program and the first and second semester of the nursing program:

BIO 2111 & BIO 2112 : C+ minimum grade within 5 years of admission to RN program

ENG 1010, MATH 1200 (or higher), CCS 1001 (may be exempted), PSY 1011, PSY 2001, BIO 2350 : all with a minimum grade of C

NUR 1152C - LPN to RN Transition*Credits: 2*

This course is the final component of the Licensed Practical Nurse (LPN) to Registered Nurse (RN) articulation plan for LPNs who are accepted into the Connecticut Community College Nursing Program (CT-CCNP) LPN to RN program option. During this course, students engage in learning activities to support a successful transition into the final year of the associate degree nursing program. Students are introduced to the concept-based learning environment and supporting course resources. Students are provided with the opportunity to practice critical thinking and demonstrate level competencies in the laboratory, simulation, and/or clinical setting. Emphasis is placed on the assessment and clinical skills necessary to provide safe, patient-centered care as a member of the interprofessional healthcare team.

Prerequisite: NUR 1150 (C or higher) AND PERMISSION OF PROGRAM DIRECTOR

Previous NUR* 152

NUR 2220C - Nursing in Health & Illness III*Credits: 9*

This course is designed to further develop concepts of nursing practice delivered in NUR 1125C. Focus is placed on the nursing and interprofessional care of patients, families, groups and communities with a variety of complex health care needs across the lifespan. The course focuses on the concepts of acid-base balance, elimination, gas exchange, inflammation, perfusion, regulation and metabolism.

Prerequisite: NUR 1125C OR NUR 1152C (C or higher), BIO 2350 (C or higher), PSY 2001 (C or higher)

Prerequisite/Corequisite: SOC 1001 (C or higher), ENG 1020 OR ANY ENG COURSE THAT MEETS THE WRITTEN COMMUNICATION II OUTCOMES (C or higher)

Previous NUR* 220

NUR 2225C - Nursing in Health & Illness IV*Credits: 8*

This course is designed to further develop concepts of nursing practice introduced in NUR2220C. The course places focus on the advanced concepts of cellular regulation, elimination, immunity, intracranial regulation, tissue integrity, and mood & cognition.

Prerequisite: NUR 2220C (C or higher), SOC 1001 (C or higher), ENG 1020 OR ANY ENG COURSE THAT MEETS THE WRITTEN COMMUNICATION II OUTCOMES (C or higher)

Prerequisite/Corequisite: ARTS & HUMANITIES COURSE (C or higher)

Corequisite: NUR 2226

Course Fees: Nursing Media Fee

Previous NUR* 225

NUR 2226 - Transition to Professional Nursing Practice*Credits: 1*

This course prepares the student for transition to nursing practice by providing a more in-depth exploration of the concepts of leadership, professionalism, clinical judgment, and inter-professional communication. Students explore current trends in nursing and engage in multiple preparatory activities for obtaining licensure, acquiring post-graduate employment, and planning professional development.

Prerequisite: NUR 2220C (C or higher), SOC 1001 (C or higher), ENG 1020 OR ANY ENG COURSE THAT MEETS THE WRITTEN COMMUNICATION II OUTCOMES (C or higher)

Prerequisite/Corequisite: ARTS & HUMANITIES COURSE (C or higher)

Corequisite: NUR 2225C

Previous NUR* 226

OCEN 1010 - Introduction to Oceanography*Credits: 3*

This 3-credit non-laboratory science course is suitable for science and non-science majors and is an introduction to the science of the ocean with emphasis on the geological, physical, chemical and biological aspects of oceans. Topics include physical and chemical properties of seawater, circulation, bathymetry, waves, tides, El Niño, and marine plants and animal habitats. Some field trips may be required.

Prerequisite: Eligibility for ENG 1010

General Education Code: Scientific Knowledge & Understanding (SCKX)

Elective Code(s): LART, SCI

Previous OCE* 101

OPDD 1001 - Introduction to Ophthalmic Dispensing*Credits: 4*

Designed to introduce the student to the field of Ophthalmic Dispensing, this course will provide a general overview of optical theory and is intended to provide the student with a basis for more advanced study. The course will include segments of basic lens theory, normal and abnormal vision, the history of lenses and eyeglasses, an introduction to prism, and a determination of lens power at any point of a lens. The laboratory component will include introduction to the lensometer, marking and blocking devices, mechanical edging equipment and hand edgers, as well as an overview of the fabrication process.

Prerequisite/Corequisite: ENG 1010 and MATH 1010 or higher

Additional Info: Lecture: 3 hours per week. Laboratory: 3 hours per week **Previous** ODD* 101

OPDD 1002 - Ophthalmic Dispensing I*Credits: 4*

This course will deal with the relationship between spectacles and the patient's visual needs. Topics shall include frame types and materials and the proper fitting and adjusting of spectacles, determination of lens thickness and weight, and vertical prism imbalance at the reading level. The laboratory segment shall include work in neutralization, fabrication of multifocal spectacles, pattern making, tinting, and lab equipment operation and maintenance.

Prerequisite: ENG 1010, MATH 1010, and OPDD 1001 with a grade of "C" or higher

Additional Info: Lecture: 3 hours per week. Laboratory: 3 hours per week **Previous** ODD* 102

OPDD 1003 - Ophthalmic Dispensing II*Credits: 3*

A continuation of Ophthalmic Dispensing I, discussion will include comprehensive spectacle verification, American National Standards Institute (A.N.S.I.) standards, lenses and frames for high powered prescriptions, managing presbyopia,

occupational and lifestyle analysis and lens application, specialized absorptive lenses and sports and safety eyewear. The course will also include a review for the American Board of Opticianry (A.B.O.) exam.

Prerequisite: OPDD 1002 with a grade of "C" or higher

Previous ODD* 103

OPDD 1004 - Ophthalmic Dispensing III

Credits: 3

A continuation of Ophthalmic Dispensing II, to include segments on Low Vision, prescription analysis, critical thinking and problem-solving skills, marketing fashion eyewear, dispensing progressive addition lenses, record keeping, professional ethics and liability. Discussion of and preparation for the State Practical Exam will be included.

Prerequisite: OPDD 1003 with a grade of "C" or higher

Previous ODD* 104

OPDD 1009 - Optical Business Management

Credits: 3

This course is designed to prepare the Ophthalmic Design and Dispensing student for the challenges of managing or operating an Optical business. Topics will include business organization, financial management, purchase, sale or merger of a business, marketing, advertising, accounting procedures, third party billing, inventory control, management skills, and patient/ client relations.

Prerequisite: OPDD 1002 with a grade of "C" or higher

Previous ODD* 109

OPDD 1010 - Ophthalmic Materials I

Credits: 4

This course is designed to introduce the most commonly used ophthalmic devices and their use. It will explore single vision, bifocal, trifocal and progressive lenses commonly used in ophthalmic practice. Special emphasis will be placed on the physical properties of lens materials including index of refraction, absorptive ability, lens coatings and special applications of lens materials. It will include the discussion of the lens surfacing process and the surfacing laboratory. Frame materials, design, selection, and dispensing will be discussed.

Prerequisite: ENG 1010, MATH 1010, and OPDD 1001 with a grade of "C" or higher

Additional Info: Lecture: 3 hours per week. Laboratory: 3 hours per week. **Previous ODD*** 110

OPDD 1011 - Ophthalmic Materials II

Credits: 4

A continuation of OPDD 1010 with special emphasis on unique optical devices and their function. This course will increase hands on experience in optical finishing skills, including edging, hand edging, drilling, grooving and

inserting lenses. Basic frame adjustment and bench alignment shall also be included. Included in this course will be a mandatory optical clinic rotation.

Prerequisite: OPDD 1010 with a grade of "C" or higher

Additional Info: Lecture: 3 hours per week. Laboratory: 3 hours per week. **Previous ODD*** 111

OPDD 1012 - Ophthalmic Materials III

Credits: 4

A continuation of OPDD 1011, to include rimless, semi-rimless, specialty eyewear and more advanced spectacle fabrication. It will include the use of more advanced spectacle fabrication machinery and instruments. Fabrication of trifocals, and progressive addition lenses will be included. Additional didactic and practical application of frame adjusting techniques will be presented. Included in this course will be a mandatory Optical Clinic rotation.

Prerequisite: OPDD 1011 with a grade of "C" or higher

Additional Info: Lecture: 3 hours per week. Laboratory: 3 hours per week. **Previous ODD*** 112

OPDD 1020 - Contact Lenses I

Credits: 3

An introduction to the fitting of contact lenses; outlining the history of contact lenses and the development of new materials. Advantages and disadvantages of these materials will be outlined, as well as indications and contraindications to contact lens wear. Emphasis is placed on rigid lens fitting philosophies and acquisition of basic skills with related instrumentation.

Prerequisite: ENG 1010, MATH 1010, and BIO 1118 with a grade of "C" or higher

Previous ODD* 120

OPDD 1021 - Contact Lenses II

Credits: 4

Continuation of OPDD 1020, with increased attention to lens selection and design. Fitting philosophies of hydrophilic and oxygen permeable lenses are put into practice, and follow-up care is stressed. Diagnostic as well as insertion and removal skills are increased.

Prerequisite: OPDD 1020 with a grade of "C" or higher

Additional Info: Lecture: 3 hours per week. Laboratory: 3 hours per week. **Previous ODD*** 121

OPDD 1022 - Contact Lenses III*Credits: 4*

Continuation of OPDD 1021, dealing mainly with special fitting problems and special lens designs. Practice management techniques are included, as well as continued use of all needed instrumentation.

Prerequisite: OPDD 1021 with a grade of "C" or higher

Additional Info: Lecture: 3 hours per week. Laboratory: 3 hours per week. **Previous** ODD* 122

OPDD 1030 - Low Vision*Credits: 1*

This course is designed to familiarize the student with a wide range of physiological disorders and diseases that lead to significant vision loss, and the optical and non-optical devices used to provide correction. Emphasis will be placed on the use of telescopic, magnifiers, illuminating devices, and a list of resources for the partially sighted patient.

Previous ODD* 130

OPDD 2095 - Opticianry Practicum*Credits: 2*

Students are placed in area optical firms licensed by the State of Connecticut, Department of Health Services, under the direct supervision of a licensed optician. This summer practicum is designed to provide more diverse practical experience to the student/apprentice optician. Supervision of this program will include job site visits by the college faculty member and both employer and faculty evaluation of students' performance. Students will be required to complete an on-campus orientation to the Optical and Contact Lens Clinics, and will be required to keep a log of their daily activities in the off-campus work place.

Previous ODD* 299

OTA 1000 - Foundations of Occupational Therapy*Credits: 3*

An overview of occupational therapy that describes the philosophy and theoretical foundation of the profession as well as the role of the occupational therapy assistant. Level I, observational experiences will be required.

Prerequisite: Admission to the Occupational Therapy Assistant (OTA) Program

Prerequisite/Corequisite: PSY 2001

Corequisite: OTA 1200

Previous OTA* 102

OTA 1200 - Neurologic Intervention in Occupational Therapy*Credits: 4*

A study of the human nervous system with a focus on sensory and motor behavior. The lab is a focus on anatomy and physiology including assessment of function.

Prerequisite/Corequisite: PSY 2001

Corequisite: OTA 1000

Previous OTA* 120

OTA 2008 - Healthcare Management in Occupational Therapy*Credits: 3*

Explores the roles of the OTA in healthcare delivery, with an emphasis on ethics, standards of practice, professional behavior, certification/licensure, emerging areas of practice, evidence-based practice and the healthcare team role delineation.

Prerequisite: OTA 1200, and PSY 2001

Corequisite: OTA 2095

Previous OTA* 208

OTA 2010 - Occupational Therapy Practice in Pediatrics*Credits: 3*

An overview of disabilities and diseases that affect children, and the study of occupational therapy theory and practice as it pertains to the treatment of these disabilities.

Prerequisite: OTA 1200, and PSY 2001

Corequisite: OTA 2010L

Previous OTA* 210

OTA 2010L - Occupational Therapy Practice in Pediatrics Lab*Credits: 1*

A laboratory course in occupational therapy to complement OTA 2010.

Prerequisite: OTA 1200, and PSY 2001

Corequisite: OTA 2010

Previous OTA* 210L

OTA 2016 - Occupational Therapy Practice in Physical Dysfunction*Credits: 3*

The study of Occupational Therapy theory and practice as it pertains to the treatment of disabilities and diseases commonly treated by occupational therapy practitioners in the physical rehabilitation setting.

Prerequisite: OTA 1200, and PSY 2001

Corequisite: OTA 2016L

Previous OTA* 216

OTA 2016L - Occupational Therapy Practice in Physical Dysfunction Lab*Credits: 1*

Exploration of Occupational Therapy assessments, techniques, interventions and approaches utilized within the practice area of physical disability.

Prerequisite: OTA 1200, and PSY 2001**Corequisite:** OTA 2016**Previous** OTA* 216L**OTA 2018 - Occupational Therapy Practice in Mental Health***Credits: 3*

The study of Occupational Therapy theory and practice as it pertains to psychiatric diagnoses, and the impact of such upon one's occupational functioning.

Prerequisite: OTA 1200, and PSY 2001**Corequisite:** OTA 2018L**Previous** OTA* 218**OTA 2018L - Occupational Therapy Practice in Mental Health Lab***Credits: 1*

Exploration of Occupational Therapy assessments, techniques, interventions and approaches utilized within the practice area of mental health.

Prerequisite: OTA 1200, and PSY 2001**Corequisite:** OTA 2018**Previous** OTA* 218L**OTA 2034 - Documentation in Occupational Therapy***Credits: 3*

This course develops an understanding of, and provides opportunities for, the student to become proficient in the various styles and formats of clinical documentation. Students will develop the ability to construct and revise treatment goals and formulate treatment plans employing various styles utilized within the medical profession.

Prerequisite: OTA 1200**Previous** OTA* 234**OTA 2090 - Clinical Seminar in Occupational Therapy***Credits: 1*

The study of occupational therapy treatment principles and applications as it pertains to clinical practice.

Prerequisite: Successful completion of all Occupational Therapy Assistant (OTA) and general education course work, and both OTA 2095.**Corequisite:** OTA 2195**Previous** OTA* 244**OTA 2095 - Level I Advanced Fieldwork***Credits: 1*

A pass/fail course providing 20 hours of supervised fieldwork experience where the student applies treatment learned in Occupational Therapy Assistant (OTA) courses and learns about the roles of other professionals involved in patient treatment.

Prerequisite: OTA 1200, and PSY 2001**Corequisite:** OTA 2008**Previous** OTA* 206**OTA 2195 - Level II Fieldwork***Credits: 11*

Sixteen weeks of clinical training under the direction of an occupational therapy practitioner in the practice areas of psychosocial dysfunction, physical dysfunction and/or pediatrics.

Prerequisite: Successful completion of all Occupational Therapy Assistant (OTA) and general education course work, and Level I and Level 1 Advanced Fieldwork.**Corequisite:** OTA 2090**Previous** OTA* 242**PHIL 1001 - Introduction to Philosophy***Credits: 3*

This course introduces students to the topics and practices of philosophy. It surveys major philosophical issues and questions drawn from ancient and contemporary sources.

Prerequisite: Eligibility for ENG 1010 (or completion of ENG 0930, ENG 0940, or ENG 0960 with a grade of C or higher.)**Prerequisite/Corequisite:** none**Corequisite:** none**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** HUM, LART**Previous** PHL* 101

PHIL 1012 - Bioethics*Credits: 3*

This course is an introduction and survey course in Bioethics that will examine some of the moral issues affecting the daily realities of healthcare. Bioethics is concerned with the ethical questions that arise in the relationships among life sciences, biotechnology, medicine, environment, politics, law, global issues, and philosophy. The student will investigate philosophical theories and principles, ethics, bioethics, and current laws governing healthcare providers' decisions and research. Students will discuss issues related to end of life, the formation of life, and research.

Prerequisite: Eligibility for ENG 1010**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** HUM, LART**Previous PHL* 112****PHIL 1098 - Special Topics in Philosophy***Credits: 3*

In this course, students participate in an in-depth exploration of a specialized area within the study of philosophy.

Prerequisite: ENG 1010**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** HUM, LART**Previous PHL* 199****PHIL 1101 - Ethics***Credits: 3*

In this course, students examine the leading theories of morality and ethics concerning what is good, right, and just; the principles of good moral reasoning; and contemporary ethical issues.

Prerequisite: Eligibility for ENG 1010 (or completion of ENG 0930, ENG 0940, or ENG 0960 with a grade of C or higher.)**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** HUM, LART**Previous PHL* 111****PHIL 1301 - Logic***Credits: 3*

Logic is the study of reasoning and promotes skill in evaluating persuasive language according to general standards of validity. Students are introduced to deductive and inductive reasoning skills and methods of evaluation. In this course, emphasis is on argument recognition, fallacy identification, and the analysis of reasoning in ordinary language.

Prerequisite: Eligibility for ENG 1010 (or completion of ENG 0930, ENG 0940, or ENG 0960 with a grade of C or higher.)**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** HUM, LART**Previous PHL* 131****PHIL 1405 - Sustainable Living***Credits: 3*

Sustainable living involves creating and maintaining conditions under which humans and nature can exist in productive harmony while fulfilling environmental, social/societal, economic, and other needs for present and future generations. This course is an introduction to ideas and issues surrounding sustainability such as eco-literacy, whole systems thinking, principles of ecological design, technology, politics, ethics, economics, food and energy, and worldview; and includes fieldwork.

Prerequisite: ENG 1010**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** HUM, LART**Previous PHL* 145****PHIL 1501 - World Religions***Credits: 3*

Students are introduced to the core beliefs and practices of major world religions. The emphasis in this course is on origins, history, and the social and cultural aspects of multiple world religions.

Prerequisite: Eligibility for ENG 1010 (or completion of ENG 0930, ENG 0940, or ENG 0960 with a grade of C or higher)**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Elective Code(s):** ARTS, GLKY, HUM, LART**Previous PHL* 151**

PHIL 1605 - Asian Philosophy & Religion*Credits: 3*

This course is an introductory examination of the major philosophies originating within the religious traditions of southern and eastern Asia. Hinduism, Buddhism, Daoism, and Confucianism, and will all be viewed through the lenses of metaphysics, epistemology, and ethics to increase both knowledge of the subject and an appreciation for a diversity of cultures.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** HUM, LART**Previous** PHL* 165**PHLB 1001 - Techniques of Phlebotomy***Credits: 3*

This course prepares students for entry level phlebotomy positions in multiple health care settings. Students will develop skills in performing phlebotomy procedures. During in-class training, students will practice drawing blood samples, both from training aids as well as classmates. This training will help prepare students for externships/practicum.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Course Fees:** Supplemental Fee Level 1 and Materials Fee**Previous** HLT* 141**PHLB 1041 - Phlebotomy for MLTs***Credits: 1*

This course provides the student with the skills and knowledge to perform phlebotomy techniques in a clinical setting. Topics include: the role of the phlebotomist and other allied health professionals; legal issues including confidentiality; interpersonal skills among health care providers; anatomy and physiology of the circulatory system. Blood collection techniques will include venipuncture by vacutainer system, syringe, and winged-infusion methods as well as capillary puncture procedures, special collections and complication. Other topics include: the clinical laboratory department and tests performed within the various departments; specimen collection, handling and transportation procedures as well as quality assurance and infection control and safety procedures.

Additional Info: This course was previously known as MLT 1041**PHLB 1072 - Concepts in Specimen Processing for Phlebotomists***Credits: 3*

This course will review the basic concepts required in order for a graduate to work in a specimen processing department of a clinical lab.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Previous** HLT* 172**PHLB 2095 - Phlebotomy Practicum***Credits: 4*

Students will complete 120 hours of clinical training at an approved site under the direct supervision of a phlebotomy supervisor or medical laboratory technician- 60 hours performing phlebotomy procedures, and 60 hours training/working in the specimen processing area of the lab. Students will perform successful, unaided blood collections of varying types during this practicum. In addition, students will be required to complete the following assignments- project/paper on a phlebotomy-related topic and create their own resume using guidelines posted on Black Board.

Prerequisite: PHLB 1001 and PHLB 1072, both with a minimum grade of B-**Additional Info:** 120 Hours of Clinical Work **Previous** HLT* 294**PHYS 1001 - Physics for Today***Credits: 3*

Students will gain a broad base of scientific knowledge and methodologies in the natural sciences. This will enable them to develop scientific literacy, the knowledge and understanding of scientific concepts and processes essential for personal decision making and understanding scientific issues.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** LART, SCI**Previous** PHY* 101**PHYS 1009 - Fundamentals of Applied Physics***Credits: 4*

Students will gain a broad base of scientific knowledge and methodologies in the natural sciences. This will enable them to develop scientific literacy, the knowledge and understanding of scientific concepts and processes essential for personal decision making and understanding scientific issues.

Prerequisite: MATH 1002 or equivalent**General Education Code:** Scientific Reasoning (SCRX)**Elective Code(s):** LART, SCI**Previous** PHY* 109

PHYS 1100 - Introductory Physics*Credits: 4*

An introductory laboratory science course intended for nonscience majors, or for students who need only one semester of physics. Students with credit for high school physics should elect PHYS 1201 or PHYS 2201. Topics include concepts in classical and modern physics, such as the physics of motion, heat, sound, electricity, magnetism, light, optics, and the theory of the atom.

General Education Code: Scientific Reasoning (SCRX)**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous PHY* 110****PHYS 1101 - Physics for Life Sciences***Credits: 4*

Applies the principles of physics to health science. Students will become familiar with science as a method of inquiry. Students will develop a habit of mind that uses quantitative skills to solve problems and make informed decisions.

Prerequisite: MATH 1010**Corequisite:** MATH 1010**General Education Code:** Scientific Reasoning (SCRX)**Elective Code(s):** LART, SCI**Course Fees:** Supplemental Fee Level 2**Previous PHY* 111****PHYS 1104 - Mechanics***Credits: 4*

This course deals with the fundamental principles of classical mechanics using techniques of algebra and trigonometry. Topics covered include vectors, kinematics, translational and rotational equilibrium, Newton's laws of motion, gravitation, work, power, energy, impulse, momentum, and rotary motion.

Prerequisite: MATH 1600 and ENG 1010**General Education Code:** Scientific Reasoning (SCRX)**Elective Code(s):** LART, SCI

Additional Info: Three-hour lecture; one two-hour laboratory. **Course Fees:** Supplemental Fee Level 1 and Materials Fee

Previous PHY* 114**PHYS 1105 - Heat Sound Light***Credits: 4*

This is the second course in the physics sequence and provides coverage in the three areas of heat, light and sound. Topics include thermal equilibrium, heat transfer, harmonic motion and wave properties of sound and light.

Prerequisite: PHYS 1104 with a "C" grade or higher.**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** LART, SCI**Additional Info:** Three-hour lecture; one two-hourlaboratory. **Course Fees:** Supplemental Fee Level 1**Previous PHY* 115****PHYS 1201 - General Physics I***Credits: 4*

An algebra-based introduction to classical mechanics and heat. Topics include vectors, kinematics, Newton's laws, momentum, energy, rotational motion, fluids, heat and thermodynamics.

Prerequisite: MATH 1610 with a grade of C or higher**General Education Code:** Scientific Reasoning (SCRX)**Elective Code(s):** LART, SCI

Additional Info: Three hours of lecture and three hours laboratory each week. **Course Fees:** Supplemental Fee Level 2 and Materials Fee

Previous PHY* 121**PHYS 1202 - General Physics II***Credits: 4*

An algebra-based introduction to electricity, magnetism, and light. Topics include electrostatics, direct current circuits, magnetism, electromagnetic induction, electromagnetic waves, and properties of light.

Prerequisite: PHYS 1201 with a grade of C or higher**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** LART, SCI

Additional Info: Three hours of lecture and three hours laboratory each week. **Course Fees:** Supplemental Fee Level 2 and Materials Fee

Previous PHY* 122**PHYS 2201 - Calculus-Based Physics I***Credits: 4*

A calculus-based introduction to classical mechanics. Topics include vectors, kinematics, Newton's laws, momentum, energy, rotational motion, and fluids.

Prerequisite: MATH 2600 with a grade of C or higher**Elective Code(s):** LART, SCI

Additional Info: Three hours of lecture and three hours laboratory each week. **Course Fees:** Supplemental Fee Level 2 and Materials Fee

Previous PHY* 221

PHYS 2202 - Calculus-Based Physics II*Credits: 4*

A study of electricity, magnetism, waves, and optics. Topics include electric and magnetic fields, Gauss' Law, electric potential, capacitance, current, resistance, electrical circuits, electromagnetic induction, inductance, Maxwell's equations, electromagnetic waves, and optics.

Prerequisite: MATH 2610 and PHYS 2201, both with a grade of C or higher

Elective Code(s): LART, SCI

Additional Info: Three hours of lecture and three hours laboratory each week. **Course Fees:** Supplemental Fee Level 2 and Materials Fee

Previous PHY* 222

PMED 1011 - Paramedic I*Credits: 8*

This course introduces the student to the role and responsibilities of the paramedic. The student is provided with the fundamental knowledge and skills necessary to provide advanced life support to individuals of all ages requiring pre-hospital treatment.

Prerequisite: Admission to the Emergency Medical Technician (EMT) Paramedic Certificate or Paramedic Studies Degree Program.

Prerequisite/Corequisite: PMED 1020 or equivalent transfer credit

Previous PMD*111, EMT*111

PMED 1012 - Paramedic II*Credits: 8*

Building on concepts presented in PMED 1011, this course is designed to provide the student with knowledge concerning the pathophysiology and management of pre-hospital advanced life support of patients presenting with problems associated with selected body systems, including the cardiovascular and neurological systems. Concepts of pharmacology, shock, trauma, legal issues and trends are integrated into the discussion of the units planned in this course. Also included are principles of telemetry, emphasizing the role and responsibilities of the paramedic. Clinical laboratory experiences in and acute health care setting are selected for students to provide emergency care for adults and/or children on medical, surgical, cardiac, and/or emergency units. In addition, certification in Advanced Cardiac Life Support (ACLS) sponsored by the American Heart Association is provided and required.

Prerequisite: PMED 1011 and PMED 1020 with a minimum grade of "C" in each course.

Prerequisite/Corequisite: PMED 1021 or equivalent transfer credit

Previous PMD* 112

PMED 1013 - Paramedic III*Credits: 7*

Building on concepts presented in PMED 1011, PMED 1012, PMED 1020, and PMED 1021, this course is designed to provide the student with knowledge concerning the pathophysiology and management of pre-hospital advanced life support of patients presenting with problems associated with selected body systems, including the gastrointestinal, endocrine, and genitourinary systems. Concepts of pharmacology, shock, trauma, legal issues and trends are integrated into the discussion of the units planned in this course. Emphasis is placed on management of pediatric patients. Clinical laboratory experiences in and acute health care setting are selected for students to provide emergency care for adults and/or children on medical, surgical, obstetric, gynecologic, neonatal and/or emergency units. In addition, certification in Pediatric Advanced Life Support (PALS) sponsored by the American Heart Association is provided and required.

Prerequisite: PMED 1021 with a minimum grade of "C" in each course

Previous PMD* 115

PMED 1020 - Anatomy and Physiology for Emergency Care I*Credits: 2*

This two-credit course is designed to help the paramedic student master terminology, basic concepts, and principles important to an understanding of the human body. The course will cover a general organization of the human body as well as the integumentary, musculoskeletal, nervous, and cardiovascular systems. The course is taken to assist in the understanding of pathophysiology as it relates to illness and disease in the emergency medical field.

Prerequisite: Permission of the Department Chair

Previous PMD* 116

PMED 1021 - Anatomy and Physiology for Emergency Care II*Credits: 2*

This course is a continuation of PMED 1020. It discusses additional body systems as it relates to anatomy and physiology with an emphasis on health-related and clinical topics. Disease process and patient manifestations will be discussed as they relate to patient care in the emergency medical services arena.

Prerequisite: PMED 1020

Prerequisite/Corequisite: None

Corequisite: None

Previous PMD* 117

PMED 2014 - Paramedic IV*Credits: 7*

Utilizing concepts presented in PMED 1011, PMED 1012, PMED 1013, PMED 1020 and PMED 1021, this course is designed to allow the student to develop skills necessary to provide advanced life support to individuals of all ages requiring pre-hospital interventions. It affords the student opportunity to demonstrate proficiency in delivering pre-hospital care accomplished through the use of assigned preceptors by utilizing acute health care settings and mobile intensive care units. In addition, certification in Prehospital Trauma Life Support (PHTLS) sponsored by the National Association of Emergency Medical Technicians (NAEMT) is provided and required. Upon completion of this course, students will be eligible to take the National Registry of Emergency Medical Technicians (NREMT) certification examinations to become nationally certified as a paramedic.

Prerequisite: PMED 1021 with a "C" or higher.**Previous PMD* 211****POLH 1011 - Elementary Polish I***Credits: 4*

An introduction to the Polish language and Polish-speaking cultures with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the instructor.**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Arts and Humanities (ARHX)**Previous PLH* 111****POLS 1001 - Introduction to Political Science***Credits: 3*

The purpose of this course is to provide students with an overview of the discipline of political science, and an introduction to the study of political institutions, ideas, and behavior. The course will focus on basic theories, concepts, approaches, and enduring questions in the study of politics and government. Students will become familiar with the analytical tools used in the examination of political issues, institutions, and problems.

Prerequisite: Eligible for ENG 1010**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** LART, SSCI**Previous POL* 101****POLS 1002 - American Government***Credits: 3*

An introduction to the structure and functioning of American national political institutions with an emphasis on the theory and practice of American democracy. Students will study the political principles established by the U.S. Constitution and the roles played by the major institutions of the state: Congress, the Judicial Branch, and the Executive branch. Special attention will also be placed on such areas as interest groups, political ideologies, public opinion, and mass media.

Prerequisite: none**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** LART, SSCI**Previous POL* 111****POLS 1003 - State and Local Government***Credits: 3*

This course provides an introduction to the organization and functioning of American state and local governments. It focuses on the theory, institutions, processes, and problems of state and local governments, with special emphasis on the governance of the state of Connecticut and its towns and cities. Among the topics discussed will be the evolution of American federalism, the functions of state constitutions, the roles of state legislatures and governors in the policy-making process, the influence of political parties and interest groups, the role of state bureaucracies in the implementation of public policies, and the governance of towns and cities.

Prerequisite: Eligible for ENG 1010**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** LART, SSCI**Previous POL* 112****POLS 1005 - Introduction to Comparative Politics***Credits: 3*

An introductory course in comparative politics in which students will examine the political processes of established democracies, developing democracies, and non-democracies. The elements of culture, socialization, voting, political parties, and the institutional structures of a variety of nation-states will be studied.

Prerequisite: Placement in ENG 1010 or completion or required developmental English**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** GLKY, LART, SSCI**Previous POL* 102**

POLS 1006 - Introduction to International Relations*Credits: 3*

An introductory survey course in international relations designed to help students place international political events into a theoretical framework that allows for analysis of current events. Considerable attention will be given to the inevitable interconnectedness of our world, and how world events are studied.

Prerequisite: Placement in ENG 1010 or completion or required developmental English

General Education Code: Social and Behavioral Science (SBSX)

Elective Code(s): GLKY, LART, SSCI

Previous POL* 103

POLS 1020 - Introduction to Law*Credits: 3*

This course serves as an introduction to the study of law with an overview of fundamental concepts and principles of our legal system. A variety of legal topics, terminology, and areas of law are discussed in order to assist students in acquiring an appreciation of the dynamic role of law in our changing society. Students are introduced to the roles of legal professionals, including paralegals. Legal reasoning, legal ethics, and legal research methods are also presented.

Prerequisite: Eligible for ENG 1010 or permission of instructor

Elective Code(s): LART, SSCI

Previous POL* 120

POLS 1022 - Politics of Social Welfare*Credits: 3*

Review the basic concepts of social welfare and its social, economic, and political roots. Studies the influence of beliefs about the appropriate role of the government in the economy and in peoples' lives on the provision of welfare decision-making and services. Review of basic practices and procedures of federal and state-level social welfare programs.

Prerequisite: Eligible for ENG 1010

Elective Code(s): LART, SSCI

Previous POL* 122

POLS 1095 - Student Senate Internship*Credits: 1*

Students participate in student government, as well as create, manage, and participate in student-led activities. Students will also participate in the management of Student Senate funding for those activities and serve as student representatives in areas of shared governance. Can be taken for credit as many as three times.

Elective Code(s): LART, SSCI

Previous POL* 191

POLS 1600 - African Politics*Credits: 3*

This is a survey course of the African political experience, looking at traditional institutions, the colonial experience and post-colonial political systems. We will also spend significant time looking at current political systems by focusing on specific countries' political approaches to modern issues in Africa. Through your examination of the political process, we will study the history of African development, and learn why, in an interconnected world, we need to understand the dynamics of what is happening in Africa.

Prerequisite: Placement in ENG 1010 or completion or required developmental English

Elective Code(s): GLKY, LART, SSCI

Previous POL* 160

POLS 2001 - Democracy and Citizenship in Contemporary America*Credits: 3*

This course will explore the meaning of democracy and responsible citizenship in American life. It will focus on the basic structure and evolution of democratic institutions in the United States, the history of civic activity in America beginning with the early national period, extending to the vibrant 19th century, and the decline of civic associations in the 20th century. The course also will center on the necessity of rebuilding a culture of civic life in a 21st century consumer society and the importance of civic activity in a modern age of social division and discord, political polarization, and cultural upheaval. Issues such as poverty, race relations, and equality will be explored through the prism of civic activity. Emphasizing respect for diverse points of view as a necessity for democracy to flourish also will be of prime importance.

Prerequisite: Eligible for ENG 1010

Elective Code(s): LART, SSCI

Previous POL* 201

POLS 2010 - Constitutional Law*Credits: 3*

This course provides a comprehensive overview of the United States Constitution, with emphasis on those amendments to the Constitution that affect the administration of justice and police power. This course will conduct intensive analysis of principles and theories that limit the authority and powers of state and local governments as well as a review of court decisions which interpret the Constitution and the Bill of Rights.

Prerequisite: CJS 1010 with a C- or higher and ENG 1010 with a C- or higher

Elective Code(s): LART, SSCI

Cross-listed: CJS 2100

Previous POL* 210

POLS 2025 - The Constitution in American Society*Credits: 3*

Examines both the historical foundation of the U.S. Constitution and its current implementation. Provides students with an opportunity to understand and discuss some of the major Supreme Court decisions in American history and their impact on American society.

Prerequisite: Eligibility for ENG 1010 or ENG 0910**Elective Code(s):** LART, SSCI**Cross-listed:** HIST 2025**Previous POL* 225****POLS 2090 - Connecticut Legislature Studies***Credits: 3*

Includes an intensive introduction to the Connecticut General Assembly, the legislative process, research and legislative monitoring techniques, and constituent casework. Begins with a two-day orientation and continues with research and IT classes, technical workshops, and information seminars throughout the semester. Available in the spring semester only. Offered in Hartford and only open to students accepted into the Connecticut General Assembly Legislative Internship Program. See your Legislative Internship Program Campus Liaison for more information. Must have earned 20 college credits by program start, with no more than 3 of those credits being AP credits from high school. Minimum of 2.7 cumulative GPA. Must be 18 years of age or older by program start.

Corequisite: POLS 2095**Elective Code(s):** LART, SSCI**Previous POL* 290****POLS 2095 - Connecticut Legislative Internship***Credits: 3-9*

Interns are assigned to legislators to assist in bill analysis and tracking, research, drafting news releases and speeches, constituent casework, etc. Available during spring semester only. Part-time interns (3 credits) work two full days each week. Occasionally, three-full-day (6-credits), or five-full-day, full-time (9 credits) internships are available. Offered in Hartford and only open to students accepted into the Connecticut General Assembly Legislative Internship Program. See your Legislative Internship Program Campus Liaison for more information. Must have earned 20 college credits by program start, with no more than 3 of those credits being AP credits from high school. Minimum of 2.7 cumulative GPA. Must be 18 years of age or older by program start.

Corequisite: POLS 2090**Elective Code(s):** LART, SSCI**Previous POL* 294****POLS 2098 - Special Topics in Political Science***Credits: 3*

A faculty-developed seminar course dealing with a specific period, region, theme and/or interpretive thread in political science. Approved by the instructor.

Prerequisite: Eligible for ENG 1010**Elective Code(s):** LART, SSCI**Previous POL* 298****PSY 1000 - Personal Growth and Development***Credits: 3*

This course will assist students in developing a greater understanding of self and others. Students will be introduced to psychological principles to apply toward understanding individual changes and growth. Topics discussed will include theories of adjustment, belief systems, self-concept, health and stress, interpersonal relationships, and learning preferences and styles.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY 100 and PSY 104 and PSY 107****PSY 1003 - Introduction to Holistic Wellness***Credits: 3*

This course explores how cognition, emotion, stress, lifestyle, and the environment impact a person's health and sense of well-being. Students will review the psychological and behavioral factors which enhance wellness while preventing one's risk for illness. Students will journey toward wellness by studying and experiencing alternative, preventive and stress reducing techniques. Modalities explored are the mind/body connection, relaxation, nutrition, exercise, and spirituality.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, GLKY, LART**Previous PSY* 103****PSY 1004 - Psychology of Adjustment***Credits: 3*

This course examines personal adjustment, personal growth, and interpersonal relationships over the lifecycle. Designed to expand the student's awareness of self and others, and to allow students to 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.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY* 104**

PSY 1005 - The Psychology of Group Dynamics*Credits: 3*

This course explores the theoretical basis of group behavior including focus on the distinction between content and process variables from a psychological perspective. Topics emphasized in this course include concepts of group membership, functions of groups, conformity and deviancy pressures, styles of leadership, group problem solving, and group decision making.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 105**PSY 1011 - General Psychology I***Credits: 3*

This course will explore and review the field of psychology. Topics will include history of psychology, research methods, the biological basis of mind and behavior, motivation and emotion, learning, memory, health and stress, and life span development. The course is appropriate for those who are considering a career in psychology or have an interest in developing a better understanding of the basis of human behavior.

Prerequisite: Eligibility for ENG 1010**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** BHEL, LART**Previous PSY*** 111**PSY 1011H - General Psychology I Honors***Credits: 3*

This honors course will explore, review, and critique the field of psychology. Topics will include history of psychology, research methods, the biological basis of mind and behavior, motivation and emotion, learning, memory, health and stress, and life span development. The course is appropriate for those who are considering a career in psychology or have an interest in developing a better understanding of the basis of human behavior. Students will complete an original research study.

Prerequisite: Eligibility for ENG 1010 and Honors Program Coordinator**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** SBSX**Elective Code(s):** BHEL, LART**Previous PSY*** 111H**PSY 1012 - General Psychology II***Credits: 3*

This course continues the exploration of the basic areas of study within the field of psychology begun in General Psychology I. Course topics include sensation, perception, thinking and language, intelligence, personality, social psychology, consciousness, psychological disorders, and treatment of psychological disorders.

Prerequisite: PSY 1011 with a grade of C- or higher**Prerequisite/Corequisite:** None**Corequisite:** None**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** BHEL, LART**Previous PSY*** 112**PSY 1025 - Psychology of Aging and Mental Health***Credits: 3*

The course will offer a realistic portrait of the personal experiences of late life and highlight the mental health issues that confront human beings as they age.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 125**PSY 1040 - The Psychology of Addiction***Credits: 3*

This course examines the nature of substance and behavioral addiction. It incorporates theoretical perspectives and contemporary research. Social, cultural, and familial contexts of drug use and addictive behaviors are explored. Students investigate the neurobiology of addiction. Prevention, assessment, and evidence-based treatment options and culturally relevant treatment options are examined.

Prerequisite: PSY 1011 with a grade of C- or higher or permission of the instructor**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 140

PSY 1163 - Children with Disabilities*Credits: 3*

This course is a general introduction to exceptional learners, their families, and their education. The course includes discussion of the psychological, medical, and sociological aspects of exceptional learners and their relationship to family, community, and especially the educational system. The course emphasis is on the inclusion of exceptional learners within family, community, and school. This course focuses on all exceptional learners, including gifted and/or talented students.

Prerequisite: Eligibility for ENG 1010**Prerequisite/Corequisite:** PSY 1011**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 163**PSY 1173 - Adults with Disabilities***Credits: 3*

This course is a general introduction to adults with disabilities and the issues faced by them in current American society. The emphasis is on issues relating to full inclusion in neighborhoods, community associations, workplaces, and leisure-recreation experiences. The Americans with Disabilities Act (ADA) and its powerful implications for full community inclusion by individuals with disabilities will be examined.

Prerequisite: Eligibility for ENG 0930**Prerequisite/Corequisite:** or ENG 0960**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 173**PSY 1183 - Learning Process and Disability***Credits: 3*

This course explores various learning theories, especially behavior modification, as they relate to children and adults with disabilities. Included will be an introduction to the biological aspects of the brain and learning. Ethical questions regarding the application of certain learning theories will be examined.

Prerequisite: Eligibility for ENG 1010**Prerequisite/Corequisite:** PSY 1011**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 183**PSY 1184 - Assistive Technology Across the Lifespan***Credits: 3*

The goal of this course is to promote an understanding of the use of assistive technology for people with disabilities. This course will further address assistive technology for people with physical, sensory, mental health, intellectual, learning,

and developmental disabilities and how assistive technology can promote independence and empowerment. In addition, this course will focus on the evolution of assistive technology and how it is utilized across the lifespan in a variety of settings. Settings include: the classroom, the community, the workplace, at home and in social and community environments.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 184**PSY 1185 - Issues and Trends in Disabilities***Credits: 3*

This course will examine current legal, ethical, community, family and personal support issues affecting children and adults with disabilities and their families. Through the study of literature, newsletters, and media accounts and by listening to the leaders and advocates of today, students will more fully understand the challenges and opportunities of people with disabilities.

Prerequisite: Eligibility for ENG 0930**Prerequisite/Corequisite:** or ENG 0960**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 193**PSY 2001 - Lifespan Development***Credits: 3*

This course will provide an overview and introduction to the study of development through the lifespan. Genetic and environmental influences on the biological, cognitive, and social aspects of development from conception to death will be examined. Students will gain an understanding and appreciation for the complexities of development by investigating prominent theories, research studies, issues of diversity, and global perspectives within lifespan development.

Prerequisite: PSY 1011 with a grade of C- or higher or permission of instructor or department**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 201

PSY 2004 - Child and Adolescent Development*Credits: 3*

This course will study human development from conception through adolescence. It will focus on the theories of physical, cognitive, social, and emotional growth along with research methodologies in child development. Hereditary and environmental influences are explored.

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART, GLKY

Previous PSY* 122, PSY* 202, PSY* 203, PSY* 204, and PSY* 216

PSY 2008 - Psychology of Adult Development and Aging*Credits: 3*

A study of behavior dynamics and developmental processes from early adulthood through late adulthood. The physical, cognitive, and psychosocial aspects of aging will be studied. Students will develop an understanding of normal, healthy aging and the biopsychosocial challenges of the aged.

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY 208 and PSY 209

PSY 2010 - Death and Dying*Credits: 3*

Examines the processes of death, dying and grieving. Death and loss as they relate to major developmental life tasks are also studied, including the effect of death and loss upon survivors. Both Eastern and Western perspectives are considered.

Prerequisite: Eligible for ENG 1010

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, GLKY, LART

Previous PSY* 210

PSY 2011 - Psychology of Women*Credits: 3*

In this introduction course, students study the psychology of women. Using the feminist theory, research and leading psychological theories, women's issues in contemporary society, and the social expectations for women will be examined.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 211

PSY 2012 - Health Psychology*Credits: 3*

This course examines the relationship of psychological and emotional states on physical wellness. Students will learn a variety of theories about the relationship between acute and chronic illness and psychological health. Also, students will learn a variety of coping skills to promote sound psychological and physical well-being. Overall emphasis is placed upon those psychological factors which can prevent or reverse and sustain or recapture health.

Prerequisite: PSY 1011 with a grade of C- or higher or permission of instructor or department

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 212

PSY 2015 - Psychology of Dreaming*Credits: 3*

This course surveys the physiology of the dreaming process in the context of stages of sleep and the neurobiology of dream states. Theories of Freud, Jung, Adler, and Gestalt psychologists are applied to an understanding of the dream process and dream interpretation. The course also examines the influence of culture and myth upon the dreaming process and the dreamer.

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 215

PSY 2017 - Psychology of Criminal Behavior*Credits: 3*

This course approaches the knowledge and understanding of criminal behavior and its impact upon individuals and society from a developmental, biological, social, and other psychological perspectives. Topics include: criminological theories, biological and psychological models of criminal behavior, crime and mental disorders, juvenile delinquency, human aggression and violence, multiple murders, psychopathy, and criminal homicide. Students will be familiarized with different perspectives on criminal behavior as well as etiology, risk factors, assessment and treatment in relation to different criminal behaviors.

Prerequisite: PSY 1011

Elective Code(s): BHEL, LART

Previous PSY* 217

PSY 2020 - Educational Psychology*Credits: 3*

The course will examine the application of psychological theory and research in educational settings. Topics will include cognitive and social development, intelligence,

individual abilities, learning and assessment along with effective teaching and classroom management techniques. The course is appropriate for those who are considering a career in teaching or have interest in developing inclusive educational situations.

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 220

PSY 2021 - Data Analysis in Psychology

Credits: 4

Psychological research enables psychologists to describe, predict, and explain human behavior and thought. Such research often relies on the analysis of quantitative data. In this course, you will learn how to describe, analyze, interpret, and report psychological data. Course content includes coverage of both descriptive and inferential analytic procedures. Students will gain practical experience in writing reports of research according to the standard conventions of the American Psychological Association and in the use of data analysis software commonly employed by research psychologists.

Prerequisite: PSY 1011 with a grade of C- or higher and MATH 1010 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 221

PSY 2022 - Research Methods in Psychology

Credits: 3

This course introduces psychological research, with a focus on developing the skills required to conduct responsible and valid research. Topics include conducting library research, developing hypotheses, measuring variables, research ethics, research design, data collection and analysis, interpretation of results, evaluating research, and writing research reports. Students will gain practical experience in the design and implementation of research by planning and conducting independent research projects, analyzing data using software commonly employed by research psychologists, and writing reports of research according to the standard conventions of the American Psychological Association.

Prerequisite: PSY 2021 with a grade of C- or higher or permission of course instructor/department

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 222

PSY 2040 - Social Psychology

Credits: 3

This course involves an in-depth examination and analysis of situational (i.e., social) factors which influence behavior, cognition, and emotion. The course emphasizes the presentation, evaluation, and application of theories and research in topic areas such as social cognition, group processes, attribution, conformity, attitude formation and change, prejudice, and interpersonal behavior (e.g., altruism and aggression).

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 240

PSY 2043 - Theories of Personality

Credits: 3

This course examines the current theories and research in the psychological study of human personality to understand the underlying causes of individual behavior and experience. Emphasis will be placed on views which discuss the unique qualities of personality, genetic factors, interpersonal dynamics, and the influence of the family. Current research questions, such as stability of the personality over time and in various situations and cultural differences in personality development, will also be considered. Psycho-dynamic, humanistic, trait, biological, existential, and learning theorists will be analyzed.

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 243

PSY 2044 - Sports Psychology

Credits: 3

A comprehensive study of the psychological concepts related to fitness and sports behavior. The course examines the history, evolution, and foundations of this emerging field of study and practice. Emphasis is on personal goal setting, motivation, imaging, personality characteristics of athletes, competitive anxiety, psychology of coaching, team cohesion, and the effects of sports on spectators.

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 244

PSY 2045 - Abnormal Psychology*Credits: 3*

This advanced course examines etiology, signs and symptoms, classification, treatment, and prevention of the most prevalent mental disorders/abnormal behavior. Students will examine psychology's multiple contemporary and historical models/theories of abnormality and psychopathology.

Prerequisite: PSY 1011 with a grade of C- or higher**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 245**PSY 2046 - Psychology and Religion***Credits: 3*

This course will introduce students to the major issues, research, and theoretical approaches to the psychology of religion. The study of religion has prompted more questions than answers regarding various phenomena such as religious conversion, the nature of cults, understanding religious belief and behavior, and the socio-cultural blending of mysticism, religion, and science. The course will examine religiosity from the psychological perspective as it pertains to personality development, mental health, social behavior, and human existential experience. The focus of study in this course will be on the human mind as it grapples with the psychological realm of religion and does not attempt to validate or negate the tenants of any specific religion.

Prerequisite: PSY 1011 with a grade of C- or higher**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 246**PSY 2047 - Industrial & Organizational Psychology***Credits: 3*

A survey of the psychological factors that influence the individual in the work setting. Includes employee attitudes, motivation, group dynamics, decision making, leadership, assessment, and training as an introduction to human resource management.

Prerequisite: ENG 1010**Elective Code(s):** BHEL, LART**Cross-listed:** BMGT 2100 - Organizational Behavior**Previous PSY*** 247**PSY 2049 - Disorders in Childhood and Adolescence***Credits: 3*

This course examines abnormal behavior within the scope of development. The course reviews normative development and examines it against a myriad of disorders that arise beginning in early childhood extending through adolescence

and genetic, cultural, and environmental factors. Evaluation and treatment perspectives will be explored.

Prerequisite: PSY 2004 with a grade of C- or higher**Elective Code(s):** BHEL, LART**Cross-listed:** SPED 2749 - Disorders in Childhood and Adolescence**Previous PSY*** 249 and PSY* 251**PSY 2050 - Psychology of Human Sexuality***Credits: 3*

This course surveys scientific theories and studies relevant to understanding human sexuality. Contemporary research, modern medical, sexological, and psychological insights into human sexual experience and behavior are emphasized.

Prerequisite: PSY 1011 with a grade of C- or higher**Elective Code(s):** BHEL, LART**Previous PSY*** 250**PSY 2053 - Multicultural Psychology***Credits: 3*

This course is designed to provide students with an understanding of diversity and related issues from a psychological perspective through healthy dialogue on a variety of multicultural topics. Emphasis is placed on relations and interactions between diverse groups and the impacts on individual members of groups.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART, GLKY**Previous PSY*** 253**PSY 2058 - Behavior Modification***Credits: 3*

This course focuses on the basic theories and principles of learning with applications to the field of business, health, education, and psychotherapy. Students explore how people learn to overcome fears and undesirable habits as well as adhere to positive regimens. Classical and operant conditioning, human learning and motivation, and behavior modification are examined in this course.

Prerequisite: PSY 1011**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** BHEL, LART**Previous PSY*** 258**PSY 2070 - Psychology of Trauma***Credits: 3*

This course is designed to introduce students to the psychology of trauma. The course will include a brief history of the field, as well as current approaches to understanding trauma from cognitive, neuropsychological, developmental,

and clinical viewpoints. Students will learn about responses to a variety of trauma including childhood trauma, adult sexual assault, domestic violence, natural and human caused disasters.

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 270

PSY 2073 - Introduction to Neuropsychology

Credits: 3

This course is an introduction to the neural foundations for behavior. Students will examine how a neuroscientist studies the brain and nervous system, organization of the brain and nervous system, and major brain circuits, functions, diseases, and disorders. This course will also discuss how brain disorders and diseases are related to human behavior and mental health disorders.

Prerequisite: PSY 1011 with a grade of C- or higher.

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 273

PSY 2085 - Positive Psychology

Credits: 3

Positive psychology is the scientific study of the strengths and virtues that enable individuals and communities to thrive. This course will explore psychological strengths and optimal functioning, including (1) subjective states such as happiness; (2) individual traits such as wisdom and resilience; and (3) institutions such as healthy families, work environments, and communities.

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 285

PSY 2087 - Forensic Psychology

Credits: 3

Students analyze and reflect critically on such issues as Profiling, Eyewitness Testimony, Capital Punishment, Insanity Defense, False Confessions, Innocence, Domestic Violence, and Sexual Offenders. In examining these issues, students explore multiple perspectives (specifically related to offenders), examine real life cases, and analyze multiple moral and ethical perspectives.

Prerequisite: PSY 1011 with a grade of C- or higher

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): BHEL, LART

Previous PSY* 290

PTA 1200 - Introduction to Physical Therapy

Credits: 3

Learning opportunities in this course assist the student to recognize the roles of physical therapy within various practice settings. Students differentiate functions of physical therapists and physical therapist assistants as members of the health care team through study of history of physical therapy, ethical and legal principles, evidence-based practice, documentation, and medical terminology important to the provision of services. Learning also includes development of knowledge and abilities within the domains of professional conduct, professional and interpersonal communication, and sensitivity to individual and cultural differences.

Prerequisite: Program Admission

Previous PTA* 120

PTA 1250 - Foundational Skills in Physical Therapy

Credits: 4

This lecture and lab-based course provides the student with introductory concepts and techniques regarding physical therapy interventions for function and mobility. Emphasis is placed on enhancing the students' problem-solving abilities and comprehension of the physical therapist assistant's role in delivering the plan of care. The importance of modification of physical therapy interventions within the plan of care developed by the supervising physical therapist is highlighted. The laboratory section of this course allows the student to develop psychomotor skills, critical thinking, and affective skills through simulated patient scenarios.

Prerequisite: Program Admission

Previous PTA* 125

PTA 1300 - Clinical Anatomy & Kinesiology

Credits: 3

This course is designed to enable students to identify the structure and function of the human body including the spine, upper, and lower extremities through computer simulation and application. The course includes the study of skeletal, muscular, connective tissue, nervous, and circulatory structures involved in human movement. Students will understand movement control and elements of movement dysfunction. The student will also gain an understanding of biomechanical forces, neuromuscular control, and pathological influences through analysis of biomechanical forces on the body.

Prerequisite: PTA majors only

Previous PTA* H130, PTA* D235, PTA* D198 (fall 2022)

PTA 1450 - Physical Agents in Physical Therapy

Credits: 3

This course develops the student's competence with problem-solving and application of physical therapy interventions using physical agents, including therapeutic applications of heat, cold, water, electricity, light, and mechanical forces or

devices. The student will be exposed to lecture-based facilitation and laboratory experiences regarding therapeutic application of physical agents that will include scientific theory, common pathologies that would reflect best practice usage of physical agent interventions, indications, contraindications, and precautions to use. Patient simulation and case scenarios allow for problem solving and discussion of expected patient outcomes from the use of physical agents, patient education and communication, and appropriate documentation for provided physical agent interventions.

Prerequisite: C or higher in PTA 1200, PTA 1250, PTA 1300

Previous PTA* H145, PTA* D230, PTA* D199 (spring 2023)

PTA 1500 - Physical Therapy Interventions in Orthopedics

Credits: 4

This course uses a case study approach to enhance problem solving skills and provide integration of various patient examination, goal setting, and intervention techniques within the scope of physical therapist assistant (PTA) practice. Topics covered include foundational physical therapy (PT) skills of goniometric and muscle strength assessment and exercise prescription. The student will achieve competency in the following patient care techniques: data collection skills, exercise prescription, communication, and documentation skills including appropriate billing, and patient safety. Professionalism, verbal and written communication skills, and ethics are considered throughout.

Prerequisite: PTA 1200, PTA 1250 and PTA 1300 all with a C or higher

Previous PTA* 150 (NVCC) PTA* 235 (NCC)

PTA 1550 - Pathology for the Physical Therapist Assistant I

Credits: 3

This is the first course of a two-course pathology sequence designed to provide the physical therapist assistant student with the knowledge of human pathology of selected body systems including implications for patient management and the effects of exercise. Topics covered include inflammation, lab tests & values, and the immune, lymphatic, cardiovascular, respiratory, integumentary, and musculoskeletal systems. This foundational course promotes an understanding of the disease processes and guides the student in application and analysis of medical pathology to evidence-based patient care. Emphasis is placed on the relationship of medical presentation signs/symptoms/treatment and its implication on physical therapy treatment.

Prerequisite: PTA major, C or higher in PTA 1200, PTA 1250, PTA 1300

Previous PTA* H155, PTA* D299 (spring 2023)

PTA 2500 - Physical Therapy Interventions in Special Populations

Credits: 3

This course uses a case study approach to enhance problem solving skills and provide integration of various patient intervention techniques within the scope of physical therapy practice. Topics covered include interventions for special populations such as status post amputation, neurological diagnoses, and pediatric conditions. The student will achieve competency in advanced patient care techniques and will expand on knowledge from previous courses. Emphasis will be placed on appropriate application of advanced treatment techniques, critical thinking, and progression in order to facilitate patient recovery with the goal of improving functional outcomes.

Prerequisite: C or higher in PTA 1450, PTA 1500, PTA 1550

Previous PTA 251 (NVCC) PTA 250 (NCC)

PTA 2550 - Pathology for the Physical Therapist Assistant II

Credits: 3

This is the second course of a two-course pathology sequence designed to provide the physical therapist assistant student with knowledge of human pathology of selected body systems including implications for patient management and the effects of exercise. Topics covered include disorders of the nervous system, the hepatic, pancreatic and biliary systems, the endocrine and gastrointestinal systems, the male and female reproductive systems, as well as amputation, oncology, and hematology. This foundational course promotes an understanding of the disease processes and guides the student in application and analysis of medical pathology to evidence-based patient care. Emphasis is placed on the relationship of medical presentation signs/symptoms/treatments and its implication on physical therapy treatment.

Prerequisite: PTA major, C or higher in PTA 1450, PTA 1500, and PTA 1550

Previous PTA* 255

PTA 2580 - PTA in the Healthcare Arena*Credits: 1*

This course is an introduction and preparation to clinical education experience for the Physical Therapist Assistant (PTA) student. Students will learn about the different types of physical therapy settings and become oriented with the clinical education process. Students will learn about legal and professional standard practices, PTA reporting responsibilities, responses to ethical situations, effective communication as healthcare providers, accurate and timely billing, and professional development opportunities to remain current in the physical therapy field.

Prerequisite: C or higher in PTA 1450 PTA 1500 and PTA 1550

Previous PTA* H258, PTA* D259

PTA 2694/2694P - Physical Therapist Assistant Part-Time Clinical Experience*Credits: 1*

This course is an integrated part-time clinical experience. Students will apply principles of the curriculum and physical therapy services as a Student Physical Therapist Assistant (SPTA). Students will implement general skills, data collection, and interventions in a physical therapy clinical setting under the direction and supervision of a licensed Physical Therapist.

Prerequisite: C or higher in PTA 1450, PTA 1500 and PTA 1550

Additional Info: *Students with Norwalk as their home campus enroll in PTA 2694.*

Students with Naugatuck Valley as their home campus enroll in PTA 2694P.

Previous PTA* 261

PTA 2794 - Physical Therapist Assistant Full-Time Clinical Experience I*Credits: 3*

This course is an advanced clinical experience designed for students to integrate and apply physical therapy concepts to effectively perform interventions and data collection as a physical therapist assistant under the direction and supervision of a licensed physical therapist. Students will develop daily organizational and management skills of a patient caseload and effectively contribute to the health care team. This course is a full-time clinical experience (approximately 40 hours per week) in the first half of the semester.

Prerequisite: C or higher in PTA 2500, PTA 2550, PTA 2580, PTA 2694/2694P

Previous PTA* 262

PTA 2894 - Physical Therapist Assistant Full-Time Clinical Experience II*Credits: 3*

This course is the final clinical experience designed for students to integrate and apply physical therapy concepts to effectively perform interventions and data collection as a physical therapist assistant under the direction and supervision of a licensed physical therapist. Students will develop daily organizational and management skills of a patient caseload and effectively contribute to the health care team consistent with entry-level performance. This course is a full-time clinical experience (approximately 40 hours per week) in the second half of the semester.

Prerequisite: C or higher in PTA 2794

Previous PTA* 265

PTA 2990 - Physical Therapy Seminar*Credits: 3*

This course will provide the physical therapist assistant (PTA) student with the necessary knowledge for understanding the healthcare processes of the clinical setting as well as facility standards and design. Research based decision-making will also be covered. Other topics such as licensure, continuing education, data collection, and problem-oriented management will be discussed.

Prerequisite: C or higher in PTA 2500, PTA 2550, PTA 2580, PTA 2694/2694P

Previous PTA* 260

RAD 1001 - Introduction to Radiologic Sciences and Patient Care*Credits: 3*

This course is an introduction to the hospital environment, developing an understanding of the role of a Radiographer. Students will learn medical terminology to better communicate with other healthcare professionals and their patients. The history of radiography as well as developing technologies will be presented. Introduction to prime factors.

Prerequisite: Program Admission

Corequisite: CCC, GWCC, MxCC and NVCC: RAD 1002, RAD 1002L, RAD 1094

Previous new

RAD 1002 - Radiographic Procedures I*Credits: 3*

This course introduces task objectives and competencies in general radiographic procedures, related anatomy, and image evaluation. Recommended topics include Chest, Abdomen, and appendicular skeleton.

Prerequisite: Program Admission

Corequisite: RAD 1002L, RAD 1001, RAD 1094

Previous RAD* 120

RAD 1002L - Radiographic Procedures I Lab*Credits: 1*

In conjunction with Radiographic Procedures I, students will attend weekly lab instruction to reinforce the content presented in the classroom.

Prerequisite: Program Admission

Corequisite: RAD 1001, RAD 1002, RAD 1094

Previous RAD* 120L

RAD 1010 - Radiographic Procedures II*Credits: 3*

This course is a continuation of Radiographic Procedures I and continues to emphasize task objectives and competencies in general radiographic procedures, related anatomy and image evaluation. Recommended topics include completion of appendicular skeleton, and introduction to axial skeleton imaging.

Prerequisite: RAD 1001, RAD 1002, RAD 1002L, RAD 1094, and/or RST 1000 and/or RST 1005, and/or RAD 1094A

Corequisite: RAD 1010L, RAD 1011, RAD 1194, and/or RST 2000

Previous RAD* 130, RAD* 204

RAD 1010L - Radiographic Procedures II Lab*Credits: 1*

In conjunction with Radiographic Procedures II, students will attend weekly lab instruction to reinforce the procedures learned in the classroom.

Prerequisite: RAD 1001, RAD 1002, RAD 1002L, and RAD 1094

Corequisite: RAD 1010, RAD 1011, and RAD 1194

Previous RAD* 225L

RAD 1011 - Imaging/Exposure I*Credits: 3*

This introductory course will cover radiographic equipment with emphasis on image formation, radiation protection and safety, and the production and interaction of x-rays with matter. Imaging accessories and their effect on radiographic quality will be discussed.

Prerequisite: RAD 1001, RAD 1002, RAD 1002L, and RAD 1094

Manchester campus only: RST 1021, RST 1005, RAD 1094A

Gateway campus - Acceptance into Gateway Campus Radiography program

Corequisite: RAD 1010, RAD 1010L, RAD 1194 **AND** Gateway only: RAD 1001 and RAD 1011L, MATH 1600

Middlesex campus only: RAD 1013

RAD 1011L - Imaging/Exposure I Lab*Credits: 1*

This course is the laboratory component of the Imaging/Exposure I course. It is meant to give the student hands on lab practice to learn the basics of prime factors and their effect on radiographic image quality. Basic digital imaging characteristics will also be introduced.

Prerequisite: RAD 1001, RAD 1002, RAD 1002L, RAD 1094, and RAD 1094A

Corequisite: RAD 1010, RAD 1010L, RAD 1011, and RAD 1194

Course Fees: Supplemental Course Fee Level 1

Previous new

RAD 1012 - Imaging/Exposure II*Credits: 3*

This course provides the student with advanced study of fluoroscopy, physics, computed radiography, digital radiography, digital fluoroscopy, and quality assurance/quality control techniques used to evaluate radiographic imaging equipment.

Prerequisite: Pre-Req: RAD 1010, RAD 1010L, RAD 1011, and RAD 1194

GWCC and MCC: RAD 1094A

GWCC only: RAD 1011L

MxCC only: RAD 1013

Corequisite: GWCC, MCC, and NVCC: RAD 1294

MxCC: RAD 2001, RAD 2001L, and RAD 1294

CCC: RAD 1294 and RAD 2015

Previous RAD* 200

RAD 1013 - Advanced Patient Care*Credits: 2*

This course is a continuation of the Introduction to Radiologic Science and Patient Care Course, delving more deeply into Patient Care issues. Patient interactions, medical emergencies, Pharmacology, and ethical and medical issues will be discussed. Additional reflection on patient care skills will be included.

Prerequisite: MxCC - RAD 1001, RAD 1002, RAD 1002L, and RAD 1094

Corequisite: MxCC - RAD 1010, RAD 1010L, RAD 1011, and RAD 1194

Previous RAD* 209

RAD 1094 - Radiography Clinical I*Credits: 2*

This course introduces the clinical setting and general radiographic areas of Diagnostic Imaging with supervised clinical practice. Students will develop patient positioning skills, image evaluation, patient communication skills, and basic patient care skills.

Prerequisite: Program Admission**Corequisite:** RAD 1002, RAD 1002L, RAD 1001

MCC only: RST 1000 and RST 1005

Previous RAD* 190, RAD* 171**RAD 1094A - Radiography Winter Clinical I***Credits: 0.5*

Students will practice clinical skills, at a campus clinical affiliate, in the general radiographic areas of Diagnostic Imaging with supervised clinical practice.

Prerequisite: RAD 1001, RAD 1002, RAD 1002L, RAD 1094

AND MCC only: RST 1000 and RST 1005

Corequisite: None; only assigned class for the winter session**Course Fees:** Lab Fee**Previous RAD*** 190w**RAD 1194 - Radiography Clinical II***Credits: 2*

This course is a continuation of Radiography Clinical I. Students will continue to practice clinical skills in the general radiographic areas of Diagnostic Imaging with supervised clinical practice.

Prerequisite: RAD 1001, RAD 1002, RAD 1002L, RAD 1094

MCC only: RST 1000, RST 1005, and RAD 1094A

GWCC and MCC only: RAD 1094A

Corequisite: RAD 1010, RAD 1010L, and RAD 1011

CCC and MCC only: RAD 2022

Previous RAD* 191, RAD* 172**RAD 1294 - Radiography Clinical III***Credits: 2*

Students continue to develop clinical skills, at a campus clinical affiliate, in the general radiographic areas of Diagnostic Imaging with supervised clinical practice.

Prerequisite: RAD 1010, RAD 1010L, RAD 1011, and RAD 1194

CCC and MCC only: RAD 2022

Corequisite: RAD 1012

MxCC only: RAD 2001, RAD 2001L

Previous RAD* 192, RAD* 240**RAD 1394 - Radiography Clinical Internship III***Credits: 1*

This course is a supervised clinical practice experience for students transitioning from first year to second year radiography courses. Students continue to develop skills at a clinical facility.

Prerequisite: RAD 1010, RAD 1011, RAD 1194, COMM 1301 and PSY 1011**RAD 2001 - Radiographic Procedures III***Credits: 3*

This course is a continuation of Radiographic Procedures II. It introduces more advanced imaging procedures and continues to emphasize task objectives and competencies in general radiographic procedures, related anatomy, and image evaluation. Procedures covered completion of axial skeleton and Digestive System, Urinary System, Reproductive System and Advanced imaging for fluoroscopy.

Prerequisite: RAD 1010, RAD 1010L, RAD 1011, RAD 1194

And GWCC: RAD 1294

Also, MxCC only: RAD 1013

Corequisite: RAD 2002, RAD 2002L, and RAD 2001L

MxCC only: RAD 1294, RAD 2001L, RAD 1012

NVCC only: RAD 2015

GWCC only: RAD 2001L, RAD 2022, RAD 2094

Previous RAD* 225**RAD 2001L - Radiographic Procedures III Lab***Credits: 1*

In conjunction with Radiographic Procedures III, students will attend weekly lab instruction to reinforce the procedures learned in the classroom.

Prerequisite: RAD 1002 and RAD 1002L

MxCC only: RAD 1194

Corequisite: RAD 2002 and RAD 2002L

MxCC only: RAD 1294, RAD 1013, and RAD 2094

GWCC and NVCC only: RAD 2015

Course Fees: Supplemental Course Fee Level 2**Previous RAD*** 130L

RAD 2002 - Imaging/Exposure III*Credits: 3*

This course is a continuation in the advanced study of fluoroscopy, computed radiography, digital radiography, digital fluoroscopy, and the techniques and testing to evaluate and assess quality assurance.

Prerequisite: RAD 1012 and (RAD 1294 or RAD 1394)

OR MxCC only: RAD 1012, RAD 1294, RAD 2001, RAD 2001L

Corequisite: MxCC: RAD 2002L, RAD 2015, RAD 2022, and RAD 2094

OR MCC: RAD 2015 and RAD 2094

OR CCC and NVCC: RAD 2090, RAD 2094

Previous new

RAD 2002L - Imaging/Exposure III Lab*Credits: 1*

This course is the laboratory component of the Imaging/Exposure III course that is a continuation of advanced study of fluoroscopy, computed radiography, digital radiography, digital fluoroscopy, and the techniques and testing to evaluate and assess quality assurance.

Prerequisite: RAD 1012 and RAD 1294

MxCC only: RAD 2001 and RAD 2001L

Corequisite: RAD 2001L and RAD 2094

MCC and MxCC: RAD 2015

Previous new

RAD 2015 - Radiographic Pathology*Credits: 3*

This course provides an overview of pathologic conditions that are demonstrated by diagnostic imaging.

Prerequisite: CCC: Summer: RAD 1010, RAD 1010L, RAD 1011, and RAD 1194

MCC: RAD 1012 and RAD 1294

MxCC: RAD 2001, RAD 2001L, RAD 1011, RAD 1011L, and RAD 1294

Both MCC and MxCC are offering this course in the fall of the second year.

Corequisite: RAD 2090 and RAD 2194

Previous new

RAD 2022 - Radiobiology & Radiation Safety for the Radiographer*Credits: 3*

This course is designed to present a clear understanding of all sources and use of medical radiation and the various types of equipment used in a radiology department. This course also includes the study of radioisotopes, the production of x-rays, imaging measurements of radiation and a basic understanding of the ways in which radiation interacts with the biological system. Emphasis is also placed on the various methods of protection for technologists and patients.

Prerequisite: MxCC: RAD 1011, RAD 1011L, RAD 2001, RAD 2001L, and RAD 1194

CCC: RAD 1001, RAD 1002, RAD 1002L, and RAD 1094

MCC: RAD 1002, RAD 1002L, RST 1000, RST 1005, RAD 1094, and RAD 1094A

NVCC: RAD 1012 and RAD 1294

GWCC: RAD 2094A

Corequisite: MxCC: RAD 2002, RAD 2002L, RAD 2015, and RAD 2094

CCC and MCC: RAD 1010, RAD 1010L, and RAD 1011

GWCC and NVCC: RAD 2090 and RAD 2194

Previous RAD* 222

RAD 2090 - Senior Seminar*Credits: 3*

This course is the culmination of all radiographic technology courses. Students will look at future technology and will research and present on a chosen topic that utilizes imaging technology for diagnosis and/or treatment.

Prerequisite: RAD 2002 and RAD 2002L

GWCC and MCC only: RAD 2094A

MxCC: RAD 2022 and RAD 2015

Corequisite: RAD 2194

GWCC only: RAD 2022 and RAD 2015

MxCC only: RADT 2295

Previous RAD* 218

RAD 2094 - Radiography Clinical IV*Credits: 3*

Students will practice clinical skills in the general radiographic areas of Diagnostic Imaging, including Advanced Imaging Procedures with supervised clinical practice.

Prerequisite: RAD 1294 or RAD 1394

MCC and NVCC: RAD 1012

MxCC only: RAD 2001, RAD 2001L, and RAD 1012

Corequisite: RAD 2001 and RAD 2001L

MxCC only: RAD 2015, RAD 2022, RAD 2002, and RAD 2002L

Previous RAD* 288

RAD 2094A - Radiography Winter Clinical II*Credits: 0.5*

This course is designed to present a clear understanding of all sources and use of medical radiation and the various types of equipment used in a radiology department. This course also includes the study of radioisotopes, the production of x-rays, imaging measurements of radiation and a basic understanding of the ways in which radiation interacts with the biological system. Emphasis is also placed on the various methods of protection for technologists and patients.

Prerequisite: GWCC and MCC campuses only: RAD 2001, RAD 2001L, RAD 2002, RAD 2002L

MCC only: RAD 2015

Corequisite: None; single clinical course for winter session

Previous RAD* 290w

RAD 2095 - Radiographic Clinical Internship*Credits: 4*

The student will have the opportunity to refine skills learned earlier in the program with indirect supervision. Students will complete all required clinical competency procedures in preparation to apply for the ARRT national certification examination in radiography.

Prerequisite: MxCC: RAD 2002, RAD 2002L, RAD 2015, RAD 2002, and RAD 2094

Corequisite: RAD 2090

Course Fees: Supplemental Course Fee Level 2 and Materials Fee

Previous new

RAD 2194 - Radiography Clinical V*Credits: 3*

Students will practice clinical skills in the general radiographic areas of Diagnostic Imaging, including Advanced Imaging Procedures with supervised clinical practice.

Prerequisite: RAD 2094

Corequisite: RAD 2090

GWCC and NVCC only: RAD 2015

Previous RAD* 289

RADT 1001 - Principles and Practices of Radiation Therapy I*Credits: 3*

Content is designed to provide an introduction to radiation therapy. The responsibilities of the radiation therapist will be examined to include instruction in treatment techniques, delivery and patient anatomy. Lab assignments will be utilized to simulate clinical settings and to further the students understanding of the roles of a radiation therapist.

Prerequisite: Program Admission

Corequisite: RADT 1195

Additional Info: Lecture hours: 2, Lab hours: 3 **Course**

Fees: Lab Fee

Previous RDT* 101

RADT 1002 - Principles and Practices of Radiation Therapy II*Credits: 3*

A continuation of RADT 1001. Historic and current aspects of cancer treatment are covered, along with the roles and responsibilities of the radiation therapist for the more complex radiation techniques. The treatment prescription, techniques, delivery, side effect management and equipment components are discussed. Lab assignments will be utilized to simulate clinical settings.

Prerequisite: RADT 1001

Corequisite: RADT 1395

Additional Info: Lecture hours: 2, Lab hours: 3 **Course**

Fees: Lab Fee

Previous RDT* 102

RADT 1040 - CT Imaging and Sectional Anatomy*Credits: 3*

Content will introduce students to computed tomography imaging methods. Students will identify normal anatomical structures via a variety of imaging formats.

Prerequisite: BIO 2112

Course Fees: Lab Fee

Previous RDT* 140

RADT 1195 - Clinical Practice I*Credits: 2*

Supervised clinical experience involving introduction of the student to radiation therapy practices. Students will apply principles learned in the classroom to develop skills in patient care, communication, clinical procedures, and radiation protection.

Prerequisite: Admission to the program.

Corequisite: RADT 1001

Course Fees: Lab Fee

Previous RDT* 111

RADT 1295 - Clinical Practice II*Credits: 1*

Supervised clinical experience involving the continued development of student skills for general radiation therapy practices. Students will apply principles learned in the classroom to develop skills in patient care, communication, clinical procedures, and radiation protection. Students will begin to demonstrate proficiency on ARRT competencies. Students will be assigned to clinical affiliates.

Prerequisite: RADT 1001**Course Fees:** Supplemental Course Fee Level 1**Previous RDT* 112****RADT 1395 - Clinical Practice III***Credits: 2*

Supervised clinical experience involving the continued development of student skills for general radiation therapy practices. Students will apply principles learned in the classroom to develop skills in patient care, communication, clinical procedures, and radiation protection. Students will continue to demonstrate proficiency on ARRT competencies. Students will be assigned to clinical affiliates.

Prerequisite: RADT 1295**Corequisite:** RADT 2020**Course Fees:** Supplemental Course Fee Level 1**Previous RDT* 113****RADT 1495 - Clinical Practice IV***Credits: 3*

Supervised clinical experience involving the continued development of student skills for general radiation therapy practices. Students will apply principles learned in the classroom to continue to develop skills in patient care, communication, clinical procedures, and radiation protection. Students will demonstrate proficiency on ARRT competencies. Students will be assigned to clinical affiliates.

Prerequisite: RADT 1395**Course Fees:** Supplemental Course Fee Level 1**Previous RDT* 114****RADT 2001 - Principles and Practices of Radiation Therapy III***Credits: 3*

The principles and practice content for radiation therapy examines the management of neoplastic disease and promotes both critical thinking and ethical decision-making. The epidemiology, etiology, detection, diagnosis, treatment and prognosis of neoplastic disease are evaluated in relation to histology, anatomical site and patterns of spread. The radiation therapist's responsibility in the management of neoplastic disease will be examined and linked to specific professional skills within their scope. This course covers cancers of the breast, respiratory, genitourinary,

gastrointestinal, gynecologic, and central nervous system.

Addresses all disease discussed in Oncology I.

Prerequisite: RADT 1002**Corequisite:** RADT 2222**Additional Info:** Lecture hours: 2, Lab hours: 3 **Previous RDT* 202****RADT 2002 - Principles and Practices of Radiation Therapy IV***Credits: 3*

This course builds on skills learned in RADT 2001, focusing on radiographic anatomy, cross-sectional anatomy, simulator techniques, and treatment planning through lectures and laboratory experiments. Addresses all diseases discussed in Oncology II.

Prerequisite: RADT 2001**Corequisite:** RADT 2395 and RADT 2025**Additional Info:** Lecture hours: 2, Lab hours: 3 **Previous RDT* 203****RADT 2018 - Understanding Cancer***Credits: 3*

Content is designed to provide the student the fundamentals of cancer biology and cancer treatment. The management of neoplastic disease will be examined and evaluated including epidemiology, etiology, prevention, detection, diagnosis, patient condition, treatment, and prognosis.

Prerequisite: Eligibility for ENG 1010; and BIO 1210 with a "C" or higher**Course Fees:** Supplemental Course Fee Level 1**Previous BIO* 218****RADT 2020 - Treatment Planning I***Credits: 3*

Treatment planning content explains factors that influence clinical planning of patient treatment. This includes isodose descriptions, patient contouring, radiobiologic considerations, dosimetric calculations, and basic treatment planning.

Prerequisite: RST 1005 (MCC)**Corequisite:** RADT 1395**Additional Info:** Lecture hours: 2; Lab hours: 3 **Previous RDT* 220**

RADT 2021 - Treatment Planning II*Credits: 3*

Clinical applications of treatment planning including treatment planning considerations, evaluation, and implementation. This includes isodose descriptions, patient contouring, radiobiologic considerations, dosimetric calculations, compensation, and clinical application of treatment beams.

Prerequisite: RADT 2020**Corequisite:** RADT 2001**Additional Info:** Lecture hours: 2, Lab hours: 3 **Previous RDT* 221****RADT 2024 - Radiobiology and Protection***Credits: 3*

Radiation biology content presents basic concepts and principles including interactions of radiation with cells, tissues and the body as a whole, and resultant health effects. This content discusses the theories and principles of tolerance dose, time-dose relationships, fractionation schemes and the relationship of these principles to the clinical practice of radiation therapy. Radiation protection content presents the basic principles of radiation protection and safety for the radiation therapist. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are included, as well as the specific responsibilities of radiation therapists.

Prerequisite: RST 1005**Previous RDT* 224****RADT 2025 - Radiation Therapy Physics***Credits: 3*

Content is designed to review and expand concepts and theories in the radiation physics course. Detailed analysis of the structure of matter, properties of radiation, nuclear transformations, x-ray production and interactions of ionizing radiation are emphasized. Also presented are treatment units used in external radiation therapy, measurement and quality of ionizing radiation produced, absorbed dose measurement, dose distribution and scatter analysis.

Prerequisite: RST 1005**Previous RDT* 225****RADT 2032 - Radiation Oncology II***Credits: 2*

Content is designed to examine and evaluate the management of neoplastic disease. The epidemiology, etiology, detection, diagnosis, patient condition, treatment and prognosis of neoplastic disease will be presented, discussed and evaluated in relationship to histology, anatomical site and patterns of spread.

Prerequisite: RADT 2222**Corequisite:** RADT 2395**Previous RDT* 233****RADT 2040 - Operational & Quality Management in Radiation Therapy***Credits: 2*

Quality management, quality assurance, safety and operations content describe the development of a culture of safety through quality control and assurance checks. This process includes the clinical aspects of patient care, medical records, treatment delivery, localization equipment and treatment planning equipment. The role of the various therapy radiation team members in quality management will be discussed as well as the legal and regulatory implications for maintaining optimal patient care. Accreditation agencies and the radiation therapist's role in the accreditation process will also be covered.

Prerequisite: RADT 2020**Previous RDT* 240****RADT 2090 - Radiologic Science Seminar***Credits: 3*

This course will contribute to the body of knowledge and allow the student to effectively analyze resources to promote growth in the profession, foster the future and increase awareness of the profession in the global community. This content is geared to increase and disseminate intellectual inquiry, information literacy and the use of scholarly research methods. This course also includes a comprehensive review of the curriculum with testing in preparation for The American Registry of Radiologic Technologists (ARRT) examination.

Prerequisite: RADT 2021**Previous RDT* 250****RADT 2098 - Special Topics in Radiation Therapy***Credits: 1***RADT 2195 - Clinical Practice V***Credits: 3*

Supervised clinical experience involving the continued development of student skills for general radiation therapy practices. Students will apply principles learned in the classroom to advance skills in patient care education, communication, clinical procedures, and radiation protection. Students will demonstrate proficiency on The American Registry of Radiologic Technologists (ARRT) competencies. Students will be assigned to clinical affiliates.

Prerequisite: RADT 1495**Previous RDT* 211****RADT 2222 - Radiation Oncology I***Credits: 2*

Content is designed to examine and evaluate the management of neoplastic disease. The epidemiology, etiology, detection, diagnosis, patient condition, treatment and prognosis of

neoplastic disease will be presented, discussed and evaluated in relationship to histology, anatomical site and patterns of spread.

Prerequisite: RADT 1002

Corequisite: RADT 2001

Previous RDT* 222

RADT 2295 - Clinical Practice VI

Credits: 1

Supervised clinical experience involving the continued development of student skills for general radiation therapy practices. Students will apply principles learned in the classroom to advance skills in patient care education, communication, clinical procedures, radiation protection and treatment planning. Students will demonstrate proficiency on The American Registry of Radiologic Technologists (ARRT) competencies. Students will be assigned to clinical affiliates.

Prerequisite: RADT 2195

Previous RDT* 212

RADT 2395 - Clinical Practice VII

Credits: 3

Supervised clinical experience involving the continued development of student skills for radiation therapy practices. Students will apply principles learned in the classroom to develop skills in patient care, communication, advanced clinical procedures, and radiation protection. Students must complete proficiency on The American Registry of Radiologic Technologists (ARRT) competencies. Students will be assigned to clinical affiliates.

Prerequisite: RADT 2195

Corequisite: RADT 2002 and RADT 2025

Previous RDT* 213

RESP 1021 - Cardiopulmonary Anatomy and Physiology

Credits: 3

This course includes an in-depth study of the structure and function of the pulmonary and cardiac system. Topics include the circulatory system, applied physiology and physical principles of the respiratory system, and gas exchange.

Prerequisite: Admission to Program

Corequisite: RESP 1041 and RESP 1041L

Previous RSP* 121

RESP 1031 - Respiratory Care Pharmacology

Credits: 3

General principles of respiratory care pharmacology will be covered including review of the anatomic nervous system, the process of drug approval in the United States, principles of drug action, calculating drug dosages, administration of aerosolized agents, administration of surfactants,

neuromuscular blocking agents and smoking cessation agents.

Prerequisite: RESP 1021

Previous RSP* 131

RESP 1041 - Principles of Respiratory Care I

Credits: 3

This course introduces students to fundamental principles and practice of respiratory care. Topics covered include basic patient assessment, principles of infection control, medical gas therapy and physical properties of gases, oxygen therapy devices, oxygen analyzers, and aerosol and humidity therapy devices.

Prerequisite: Admission to Program

Corequisite: RESP 1021 and RESP 1041L

Previous RSP* 141

RESP 1041L - Principles of Respiratory Care I Lab

Credits: 1

This course introduces students to fundamental principles and practice of respiratory care in a laboratory setting. Topics covered include professionalism, patient assessment and monitoring, principles of infection control, medical gas therapy, oxygen therapy devices, oxygen analyzers, aerosol and humidity therapy devices, and medical terminology and documentation. The emphasis of the course will be hands-on practice with respiratory care devices.

Prerequisite: Admission to Program

Corequisite: RESP 1021 and RESP 1041

Previous RSP* 141L

RESP 1042 - Principles of Respiratory Care II

Credits: 5

This course builds on the concepts introduced in RESP 1041. Topics presented include patient assessment, airway clearance, lung inflation therapy, airway management, non-invasive ventilation, arterial blood gases, ethics and professionalism, medical documentation, communication, and cultural competencies. This course integrates theory with laboratory and clinical practice.

Prerequisite: RESP 1021, RESP 1041, RESP 1041L

Corequisite: RESP 1031

Previous RSP* 160

RESP 1094 - Clinical Practicum*Credits: 2*

This is a clinical course designed to enhance the student's practice of respiratory care modalities to adult and pediatric patients. Students will perform supervised floor therapies on adult and pediatric patients in the clinical setting. Students will develop respiratory care plans that integrate respiratory care theory and practice.

Prerequisite: RESP 1031, RESP 1042 or RESP 2051**Corequisite:** RESP 2051 or RESP 2060**Previous RSP*** 181**RESP 2001 - Future Trends***Credits: 2*

This is a seminar course focusing on current issues affecting respiratory care. Students will present future trends topics to the class throughout the semester.

Prerequisite: RESP 2051, RESP 2060, RESP 2094**Previous RSP*** 201**RESP 2051 - Cardiopulmonary Pathophysiology***Credits: 3*

The course material covers etiology, clinical manifestations, diagnostic testing, and treatment of diseases affecting the cardiopulmonary system. Students are expected to integrate previous knowledge of cardiopulmonary anatomy and physiology, pharmacology, and treatment modalities into the course content. Students will evaluate case-studies and recommend procedures to gather additional clinical data. Critical thinking and decision making will be stressed in this course.

Prerequisite: RESP 1031, RESP 1042 and BIO 2112**Previous RSP*** 251 or RSP* 151**RESP 2060 - Mechanical Ventilation***Credits: 4*

This course is designed to introduce the student to the principles and practices of invasive and non-invasive mechanical ventilation. Classification, modes of operation, indications, applications, physiologic effects, complications, and discontinuation of mechanical ventilation will be studied. Laboratory practices will include hands on manipulation of state-of-the-art mechanical ventilators and simulation experiences. Troubleshooting, clinical simulations, and case-study presentations will be incorporated into the lecture and laboratory sections.

Prerequisite: RESP 1042 or RESP 2051**Corequisite:** RESP 1094 or RESP 2094**Previous RSP*** 260**RESP 2065 - Advanced Critical Care***Credits: 3*

This course focuses on the critical care patient assessment, the study of invasive and non-invasive hemodynamics to assess oxygenation, heart function and fluid balance, with special attention given to the disease states that may cause an abnormality in any one of these areas. Critical care pharmacology, neurologic assessment and advanced modes of mechanical ventilation will also be discussed.

Prerequisite: RESP 2060**Previous new****RESP 2071 - Diagnostic Respiratory Care***Credits: 3*

The student will learn to perform and interpret bedside spirometry tests as well as interpret the results of advanced pulmonary function studies including quality control techniques, exercise testing, cardiovascular stress testing and metabolic monitoring. The student will be introduced to pulmonary rehabilitation, in-home respiratory care, and respiratory care in alternative care settings.

Prerequisite: RESP 1021 or RESP 2051**Corequisite:** RESP 2051 and/or RESP 2094**Previous RSP*** 271, RSP* 274**RESP 2085 - Perinatal and Pediatric Respiratory Care***Credits: 2*

This course provides the student with a comprehensive study of pediatric and neonatal respiratory care. Topics include embryology, fetal development, and neonatal transition diagnostic and therapeutic procedures, cardiopulmonary pathophysiology, ventilation management, and critical care techniques. This course will also include neonatal and pediatric diseases and disorders.

Prerequisite: RESP 2060, RESP 2094**Corequisite:** RESP 2194**Previous RSP*** 261, RSP* 291**RESP 2094 - Advanced Clinical Practicum I***Credits: 2*

This course provides supervised clinical experience in providing respiratory therapy to intensive care patients. Clinical experiences will focus on mechanical ventilation of the adult patient. Students will develop respiratory care plans that integrate respiratory care theory and practice.

Previous RSP* 281

RESP 2194 - Advanced Clinical Practicum II*Credits: 2*

This course provides supervised clinical experiences in the adult, neonatal and pediatric intensive care units. Clinical experiences will focus on hemodynamic monitoring and assessment, respiratory care in the emergency setting, and continuous mechanical ventilation of the adult, neonate, and pediatric patient. Students are required to complete a capstone project involving the independent management of critical care patients receiving mechanical ventilation.

Prerequisite: RESP 2060**Previous** RSP* 282**RRET 1001 - History of Railroading***Credits: 3*

Covers the history and traditions of railroading and the industry's role in the North American economic development.

Prerequisite: ENG 0930 or Placement into ENG 0940 or Higher**Previous** RET* 101**RRET 1010 - Careers in Railroad***Credits: 2*

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.

Prerequisite: RRET 1001**Previous** RET* 110**RRET 1020 - Railroad Rules, Regulations, Standards & Practices***Credits: 3*

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.

Prerequisite: RRET 1001**Previous** RET* 120**Electricity***Credits: 4*

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. Three hours of lecture / three hours of laboratory.

Prerequisite/Corequisite: None**Corequisite:** None**Previous** EET 103**RRET 2020 - Safety in the Railroad Workplace***Credits: 3*

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: RRET 1020**Previous** RET* 220**RRET 2030 - Reading & Interpreting Railroad Diagrams***Credits: 2*

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.

Prerequisite: EETA 1010**Previous** RET* 230**RRET 2040 - Railroad Pneumatics & Hydraulic Controls***Credits: 4*

Introduces participants to the basic components, controls and functions of railroad pneumatics & hydraulics. Course topics include standard symbols, pumps, control valves, control assemblies, actuators, maintenance procedures and switching and control devices.

Prerequisite/Corequisite: MECH 2034**Course Fees:** Supplemental Fee Level 1**Previous** RET* 240**RRET 2042 - Railroad HVAC Systems***Credits: 4*

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, thermodynamics 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.

Prerequisite: MECH 2034

Course Fees: Supplemental Fee Level 1

Previous RET* 242

RRET 2044 - Railroad Electromechanical Troubleshooting

Credits: 4

Introduces participants to the tools, methods and techniques for troubleshooting electromechanical problems in machines and rolling stock equipment (trains).

Prerequisite: MECH 2034

Course Fees: Supplemental Fee Level 1

Previous RET* 244

RRET 2050 - Railroad Signaling & Switching

Credits: 4

Provides participants a basic understanding of a railroad signal system, including track circuits and applicable federal laws/guidelines.

Prerequisite: EETA 1010 and RRET 1020

Course Fees: Supplemental Fee Level 1

Previous RET* 250

RRET 2052 - Railroad Communications

Credits: 4

Introduces participants to a basic understanding of railroad communications. Course topics include frequency and pulse modulation, AM & FM transmitters and receivers, electromagnetic radiation, digital data communication, and applicable laws and regulations.

Prerequisite: RRET 2050

Course Fees: Supplemental Fee Level 1

Previous RET* 252

RRET 2054 - Railroad Maintenance, Troubleshooting and Repair

Credits: 4

Introduces students to the tools, methods and techniques for troubleshooting signal and communication problems in switch machines and communication equipment.

Prerequisite: MECH 2034

Course Fees: Supplemental Fee Level 1

Previous RET* 254

RRET 2095 - Practicum in Passenger Railroad Technology

Credits: 1

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: RRET 2020

Course Fees: Supplemental Fee Level 1

Previous RET* 270

RRET 2195 - Practicum in Freight Railroad Technology

Credits: 1

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: RRET 2020

Course Fees: Supplemental Fee Level 1

Previous RET* 271

RSCH 2011 - Mentored Research Project I

Credits: 3

Mentored Research Project I engages students in the development of a research proposal for hypothesis-driven research in their chosen discipline. Over the course of the semester the student will use existing peer reviewed literature to develop a research question, hypothesis, and a data collection plan, including the development of questionnaires or other tools for data collection. Students are encouraged to enroll in RSCH 2012 - Mentored Research Project II during the subsequent semester. In that course they will collect and analyze the data for this project.

Previous RES* 211

RSCH 2012 - Mentored Research Project II

Credits: 3

Mentored Research Project II engages students in data collection, analysis, and presentation of hypothesis driven research on a topic in their chosen discipline. The student will use a previously established research plan to complete a project culminating in a written paper and poster presentation. The previous work will usually be completed in RSCH 2011 - Mentored Research Project I, but enrollment will be considered for students who have completed that phase in a different course or under the mentorship of a faculty member without a formal course.

Prerequisite: Grade of C or higher in RSCH 2011 or permission of the instructor.

Previous RES* 212

RST 1000 - Introduction to Patient Care for Radiologic Sciences*Credits: 2*

This course is designed to provide an orientation to patient care and the basic principles of radiation protection for the radiologic sciences professions. Patient assessment, patient care, venipuncture, medical terminology, and student success strategies will be presented. Students must pass this course with a grade of C or higher in order to remain in their designated program.

Prerequisite: Acceptance into the Gateway Campus Nuclear Medicine Technology, Radiation Therapy or Radiography program

Previous RST* 100

RST 1000L - Introduction to Patient Care for Radiologic Sciences Lab*Credits: 1*

This course is offered in conjunction with the Introduction to Patient Care in the Radiologic Sciences course. Through hands on lab practice, students will learn appropriate patient care techniques, radiation safety and venipuncture. Students will be assessed through hands on lab practice and must pass a lab practical exam in order to begin the clinical component of their designated program. A minimum grade of C is required to begin the program.

Prerequisite: Acceptance into the Gateway Campus Nuclear Medicine Technology, Radiation Therapy or Radiography program

Corequisite: RST 1000

Previous RST* 100L

RST 1005 - Radiologic Science Physics*Credits: 3*

Content is designed to establish a basic knowledge of physics pertinent to developing an understanding of radiations used in the clinical setting. Fundamental physical units, measurements, principles, atomic structure, and types of radiation are emphasized. Also presented are the fundamentals of x-ray generating equipment, x-ray production and its interaction with matter.

Prerequisite: Program Admission

Corequisite: RADT 1195

Previous RDT* 105

RST 1021 - Radiologic Science Patient Care*Credits: 3*

Introduction to the field of Radiologic Sciences to include specialties in the field, professional organizations, other professionals comprising the health care team, communication skills, critical thinking and problem solving, body mechanics, vital signs and infection control procedures. As part of this course, students will participate in a minimum

of one community service project. Students will learn medical terminology in a body systems approach.

Prerequisite: Acceptance to a Radiologic Science program.

RST 2000 - Cross Sectional Anatomy*Credits: 3*

This course focuses on the physical relationships between anatomic structures. During the course the student will review basic structures and work to develop a three-dimensional understanding of anatomy. Computer generated sectional images (CT, MRI, US) are used to reinforce the relational anatomy in multiple planes (sagittal, axial, coronal). The student will study both bony and soft tissue structures, with an emphasis on the natural boundaries and spaces of the body. To demonstrate the application of this knowledge selected pathology is included as supplemental information.

Prerequisite: BIO 2112

Previous RST* 200

RUSN 1011 - Elementary Russian I*Credits: 4*

An introduction to the Russian language and Russian-speaking cultures with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the instructor.

Prerequisite/Corequisite: None

Corequisite: None

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): LART

Previous RUS* 111

SCI 1003 - Critical Issues in Science*Credits: 3*

This course teaches critical issues in science by studying recent developments and critical issues in various scientific disciplines. Course content will be topical and dependent upon both current scientific issues and the areas of interest of course participants.

Prerequisite: ENG 1010 or permission of instructor

General Education Code: Scientific Knowledge & Understanding (SCKX)

Previous SCI* 103

SCI 1014 - Survey of Science*Credits: 4*

This non-science majors course with lab surveys content in biology, physics, and chemistry with an emphasis on the interdisciplinary nature of these fields of science and how they relate to everyday life. Topics will include the scientific method and process of science, heat, refraction, energy, acids and bases, electrolytes, microscopy, cellular structure, heredity, and basics of ecology. Laboratory experiments will both integrate and reinforce material discussed in lecture, as well as foster collaboration and teamwork among students. Students should check for transferability with the institution they wish to transfer to if they take an online lab.

Previous SCI* 114**SCI 2260 - Introduction to Forensic Science***Credits: 3*

A study of how the disciplines of Biology, Chemistry, Earth Science, Physical Science, and Physics meld to form the field of forensic science. The course will focus 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 will be 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. Students may take either CJS/SCI 2260 or CJS/SCI 2850. Students cannot earn credit for both of these classes.

Prerequisite: ENG 1010 with a C- or higher**General Education Code:** Scientific Knowledge & Understanding (SCKX)**Elective Code(s):** SCI**Cross-listed:** CJS 2260**Previous SCI*130****SCI 2850 - Forensic Science with Laboratory***Credits: 4*

A study of how the disciplines of Biology, Chemistry, Earth Science, Physical Science, and Physics meld to form the field of forensic science. The course will focus on developing the scientific vocabulary necessary for investigators to communicate with scientists. This course is meant to assist student who are pursuing a career in criminal justice. Emphasis of the course be 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. The laboratory component will provide hands on opportunities to integrate scientific methodology as it relates to criminal justice and the limitations of scientific testing.

Prerequisite: ENG 1010 with a C- or higher**General Education Code:** Scientific Reasoning (SCRX)**Cross-listed:** CJS 2850**Course Fees:** Supplemental Level 2 Fee and Materials Fee**Previous SCI 2850****SLM 1001 - Introduction to Recreation and Sports Leisure Studies***Credits: 3*

This course surveys the organization and operation of recreational programs offered by community agencies, recreation service centers, industry, hospitals, camps and municipal and state recreation departments.

Previous RLS* 101**SLM 1010 - Introduction to Sports Management***Credits: 3*

This introductory course explores the field of Sports Management. The student will learn the history, current trends, and career opportunities. Other topics include: an introduction to sports law, event management, sports marketing, and ethics.

Prerequisite: ENG 1010**Previous RLS* 110****SLM 1028 - Lifetime Fitness***Credits: 3*

This course is designed to provide a basic understanding of exercise physiology, physical fitness and the physiologic basis of sport performance, health and wellness. Information involving nutrition and lifestyle will also be presented.

Previous RLS* 128**SLM 2002 - Event Management***Credits: 3*

This course explores theoretical concepts and practical applications designed to provide a framework for the

management of resources associated with the planning, implementation and evaluation of special events.

Prerequisite: SLM 1010

Previous RLS* 202

SLM 2018 - Organization and Administration for Sports and Leisure

Credits: 3

This course will focus on the many administrative roles that an Athletic Director/Manager assumes when developing, maintaining or improving sports programs. Topics will include facility design, staffing, equipment, operating practices, risk management, programming, budgeting and insurance.

Prerequisite: SLM 1010

Previous RLS* 218

SLM 2035 - Prevention and Treatment of Athletic Injuries

Credits: 3

This course covers risk management, injury prevention, medical conditions, disabilities and illness. The course emphasizes the management of specific injuries, sports liability and basic rehabilitation. Students will become certified in First Aid and cardiopulmonary resuscitation (CPR)/automated external defibrillator (AED).

Previous RLS* 235

SLM 2095 - Sport and Leisure Practicum

Credits: 3

This practicum is designed to give the student an opportunity to implement the skills and knowledge gathered through their Sports and Leisure Management course work. This real-world experience will enable the student to grow their knowledge, increase their professional development and gain valuable work experience.

Prerequisite: SLM 1010 or permission of program coordinator

Previous RLS* 294

SLP 1011 - Speech-Language Pathology I

Credits: 3

This course introduces language science by discussing semantics, pragmatics, syntax, morphology, phonology, communication, hearing, form, content, use, and speech. Students demonstrate knowledge of language sciences by creating original work and then explaining 'how' and 'why' these materials relate to working with children or adults. A detailed discussion about careers in speech-language pathology is discussed, which includes the history of the field and national organization, scope of practice, education/training, roles/responsibilities, employment

settings, ethical conduct/guidelines, and supervisory requirements.

Prerequisite: Eligibility for ENG 0930 or concurrently taking ENG 0960

Previous SLP* 111

SLP 1012 - Speech and Language Development: Birth-to-Five

Credits: 3

This course focuses on typical development of speech and language in children from birth through five years of age. Basic and applied research is explored with an emphasis on the major approaches utilized to study language development. Language development theories are discussed with explanations of how these frameworks influence everyday practice. Students practice calculating the number of morphemes per utterance to estimate the syntactic complexity of children's utterances, identify sentence types and communicative functions expressed by children, and compare arguments of 'nature vs. nurture.'

Prerequisite/Corequisite: SLP 1011

Previous SLP* 112

SLP 1020 - Language Disorders & Treatment in School-Age Children

Credits: 3

This course studies the development of phonology, morphology, semantics, syntax, pragmatics, nonverbal, and cognitive aspects of language. A description of the language milestones that are acquired during school-age and adolescent years are provided. This includes differentiation of various etiologies for primary, secondary, and acquired language disorders. Information regarding current theories and an explanation of intervention techniques are provided. Pupils describe common language disorders affecting children's language and match signs and symptoms generally presented by patients to the correct speech/language disorders.

Prerequisite/Corequisite: SLP 1011

Previous SLP* 120

SLP 1021 - Phonetics for Speech-Language Pathologists*Credits: 3*

A general overview of phonology, voice, and fluency disorders in preschool and school aged children, with a focus on phonology (i.e., speech) problems and evidenced-based interventions. This course will prepare Speech/Language Pathology Assistants for their role in providing assistance to children with phonology disorders in educational settings and will also prepare them to work with students with significant/severe communication needs (e.g., non-verbal/low verbal children requiring assistive technology [AT] or augmentative/alternative communication [AAC] systems).

Prerequisite/Corequisite: SLP 1011**Previous SLP*** 121**SLP 1025 - Speech Sound Disorders and Treatment in Children***Credits: 3*

This course offers a study of the basic clinical principles and treatment of disorders of speech sound production. An explanation of the current theories regarding the development of articulation and phonology are provided. Information regarding causal factors and the major treatment approaches for articulatory and phonological disorders are discussed. The characteristics of common languages and dialects are reviewed. Students describe the articulatory and phonological characteristics of various pediatric populations presented by the instructor.

Prerequisite/Corequisite: SLP 1011**Previous SLP*** 125**SOC 1000 - Community Engagement***Credits: 3*

This course provides students with an enhanced understanding of the local community. Students are required to perform structured community service throughout the semester and to reflect and engage with other students on the meaning of community. Through readings, critical reflection, group discussions, and volunteer service, students will understand the impact of civic engagement on the community and its members. This course will require 1-3 hours of community service per week (or the equivalent).

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** LART, SSCI**Previous SOC*** 100**SOC 1001 - Principles of Sociology***Credits: 3*

This class provides a general introduction to the science of sociology, including the "sociological imagination," theory and methods. Students are taught what is unique about the

way in which sociologists view and analyze human behavior. The role of the social structure and how it affects our lives will be emphasized. There will also be an emphasis on how sociologists develop and test their hypotheses, as well as on various aspects of social life such as culture, groups and institutions, deviance and social control, inequality, ethnicity, and family.

Prerequisite: Eligibility for ENG 1010**General Education Code:** Social and Behavioral Science (SBSX)**Elective Code(s):** LART, SSCI**Previous SOC*** 101/SOC*101S**SOC 1003 - Social Problems***Credits: 3*

Selected contemporary American social problems are studied from the sociological perspective. Problem areas such as poverty, race, crime and violence, marriage and family problems, drugs and alcoholism, unemployment and work, gender roles and sexism, and other relevant issues are covered. Emphasis is also on the subjective and objective aspects of social problems.

Prerequisite: eligibility for ENG 1010**Elective Code(s):** GLKY, LART, SSCI**Previous SOC*** 201**SOC 1014 - Sociology of Aging***Credits: 3*

Examines the roles and status of older people in a changing social structure. Social issues of aging such as employment, retirement, family relations, and housing are analyzed.

Prerequisite: ENG 1010 and SOC 1001**Elective Code(s):** LART, SSCI**Previous SOC*** 114**SOC 1035 - The History of Social Welfare***Credits: 3*

The Introduction to Social Welfare will introduce students to services and techniques used in providing social services. Emphasis will be placed on the historical development of social services, public and private agencies as social work providers, and research of services provided to individuals in need. Myths and factors about social welfare will be discussed as well as resources and solutions will also be examined. Students will study the relationship between helping efforts and the political and economic structures of society as they relate to social welfare policy. To complete this course you MUST complete service-learning hours.

Prerequisite: ENG 1010 with a C- or better, ENG 1010 co-requisite, or permission of the instructor**Previous SOC*** 235

SOC 2003 - Introduction to Public Health*Credits: 3*

This course is designed to introduce the student to the world of public health as it deals with biological, physical, social and man-made threats to human health and wellbeing. Topics specific to this course will include the viral pandemics, food and water safety, the obesity epidemic, natural disasters, bioterrorism and other health concerns. During the course students will be exposed to the many places where public health is found in our local and global society, how public policy is established to ensure healthier communities, a sensitivity to cultural differences within each community, and the many career paths associated with public health. This course is appropriate for any student who is pursuing careers in allied health, health care administration and finance, public policy, environmental studies, and/or social behavioral studies.

Prerequisite: ENG 1010 and SOC 1001**Elective Code(s):** GLKY, LART, SSCI**Previous SOC* 203****SOC 2010 - Sociology of the Family***Credits: 3*

This course examines the history, structure, functions, and varieties of modern American families. Changing definitions of marriage, sexual expression, child rearing, sex roles, and divorce rates will be examined from a sociological perspective that considers the family in comparative and historical perspective. Racial and ethnic diversity in family life will also be considered, along with the variety of family forms that exist today. Emphasis is less on personal adjustment in marriage and more on sociological explanations for why current trends are occurring and what implications they hold for the individual, family, and society.

Prerequisite: SOC 1001**Elective Code(s):** GLKY, LART, SSCI**Previous SOC* 210****SOC 2011 - Sociology of Gender***Credits: 3*

This class examines how gender and sexuality shape our everyday lives and are shaped by our everyday lives. We will explore the social organization, construction and politics of gender within historical and cultural contexts, and how gender inequalities are maintained and perpetuated through social institutions and processes of socialization, including (but not limited to) family, economy, education, media, politics and violence, while remaining sensitive to the diversity of gendered experiences across class, racial-ethnic groups, cultures, and regions. Topics include gender, sexuality, family, work, politics, power, education, media, violence, intersectionality, and inequality.

Prerequisite: SOC 1001**Elective Code(s):** GLKY, LART, SSCI**Previous SOC* 211****SOC 2013 - Health and Aging***Credits: 3*

A consideration of normal physical and psychosocial changes that occur with aging, as well as the effects of selected acute and chronic age-related conditions. Healthy lifestyles, healthcare policies and programs for the older adult will be examined.

Prerequisite: None**Prerequisite/Corequisite:** None**Corequisite:** None**Elective Code(s):** LART, SSCI**Previous SOC* 213****SOC 2016 - Human Sexuality***Credits: 3*

This course explores the social aspects of sexualities as they exist across different social groups. Students will analyze the Western hegemonic ideal of "sexuality" and expand their understanding of the many influences on patterns of sexual behavior. This includes a close examination of sexualities in relation to ethnic and racial boundaries and evolutionary, historical and cross-cultural perspectives.

Prerequisite: Any 1000-level anthropology, economics, history, political science, psychology or sociology course or permission of instructor

Elective Code(s): LART, SSCI**Previous SOC* 216**

SOC 2017 - Introduction to Gerontology*Credits: 3*

A multidisciplinary course that introduces the student to issues associated with the aging process. Topics considered include: demographics, the biological basis of aging, health status, behavioral and social sciences issues and the cultural aspects of aging.

Prerequisite: SOC 1001**Elective Code(s):** GLKY, LART, SSCI**Previous SOC*** 217**SOC 2018 - World Issues***Credits: 3*

This course surveys social issues confronting the people of the United States and other nations due to ever-increasing global interdependence. Topics vary from semester to semester depending on current concerns and interests, but often include global poverty, economic globalization, sustainability, population growth, global health issues, the survival of indigenous peoples, and women's rights as human rights. Attention is paid to both the underlying social patterns giving rise to world problems, and to solutions proposed by actors on the world scene, including elites, grassroots movements, and international organizations such as the United Nations.

Prerequisite: SOC 1001**Elective Code(s):** LART, SSCI, GLKY**Previous SOC*** 218**SOC 2020 - Racial and Ethnic Diversity***Credits: 3*

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.

Prerequisite: ENG 1010 and SOC 1001**Elective Code(s):** LART, SSCI**Previous SOC*** 220**SOC 2021 - Social Inequality***Credits: 3*

This course examines the types and possible causes of inequality in contemporary U.S. society, from a sociological perspective. How to recognize and analyze likely determinants of inequality will be explored through an examination of key issues such as gender, race, and class, among others. In this context, social inequality in the U.S. will likewise be examined for its potential relationship to global social patterns and processes.

Prerequisite: SOC 1001**Elective Code(s):** LART, SSCI**Previous SOC*** 221**SOC 2022 - The African American Experience***Credits: 3*

An examination of the historical, economic, social, political, and cultural experiences of Africans in America. The course emphasizes the diverse nature of those experiences and the different ways they have been interpreted.

Prerequisite: SOC 1001**Elective Code(s):** LART, SSCI**Previous SOC*** 222**SOC 2023 - The Puerto Rican Experience***Credits: 3*

A survey of Puerto Rican society, both in Puerto Rico and in the United States. The course will explore the history, culture, values, traditions, relationships, politics, art literature, and daily life of Puerto Ricans from Pre-Columbian times to the present.

Prerequisite: SOC 1001**Elective Code(s):** LART, SSCI**Previous SOC*** 223**SOC 2025 - Death and Dying***Credits: 3*

An in-depth exploration of human emotions, attitudes and behaviors associated with death and dying. Topics include the study of historic and religious foundations, suicide, euthanasia, bereavement, preparations, coping with fear, dealing with children, and theories concerning life after death and reincarnation. The course is designed to provide stimulus for introspection of individual problem areas.

Prerequisite: ENG 1010 and SOC 1001**Elective Code(s):** LART, SSCI**Previous SOC*** 225**SOC 2026 - Social Movements and American Society***Credits: 3*

Theoretical and historical analyses of reform and revolutionary movements will provide the overall focus of this course. Case studies will be used to examine the societal roots, characteristics, and impact of particular movements.

Prerequisite: SOC 1001**Elective Code(s):** LART, SSCI**Previous SOC*** 226**SOC 2030 - The City***Credits: 3*

This course will discuss the development of modern cities in the United States, as well as focusing on contemporary urban social issues such as housing and homelessness, urban poverty, racial and ethnic segregation, urban sprawl, environmental issues, and urban redevelopment, and how these issues promote and are affected by socio-economic and

racial/ethnic inequalities in society. Urbanization and urban issues will also be considered from a global perspective.

Prerequisite: SOC 1001

Elective Code(s): GLKY, LART, SSCI

Previous SOC* 230

SOC 2040 - Criminology

Credits: 3

This course provides an introduction to the principles and concepts of criminology; analysis of the social context of criminal behavior, including a review of criminological theory, the nature and distribution of crime, the sociology of criminal law and the societal reactions to crime and criminals.

Prerequisite: ENG 1010 **AND** (CJS 1010 **OR** SOC 1001) both with a C- or higher

Elective Code(s): LART, SSCI

Cross-listed: CJS 2010 - Criminology

Previous SOC* 240

SOC 2041 - Juvenile Delinquency

Credits: 3

Examines the social aspects of juvenile delinquency and the factors that cause this behavior to emerge. The organization, functions and jurisdiction of the juvenile court system, as well as the processing, detention, case disposition and juvenile delinquency statutes are examined.

Prerequisite: C- or higher in SOC 1001 or CJS 1010 and C- or higher in ENG 1010

Elective Code(s): LART, SSCI

Cross-listed: CJS 2020 - Juvenile Delinquency

Previous SOC* 241

SOC 2042 - Sociology of Deviance

Credits: 3

A sociological analysis of deviant behaviors and subcultures. Sociological theories of deviance will be examined and applied to the following topics: alcohol and drug use, violence, mental illness, crime, and sexual behavior. Special attention will also be given to social groups and communities whose customs and way of life are considered to be unconventional by contemporary standards.

Prerequisite: ENG 1010 and SOC 1001

Elective Code(s): LART, SSCI

Previous SOC* 242

SOC 2050 - Sociology of Work

Credits: 3

This course will examine issues and concerns related to work in the United States today from a sociological perspective. Participants will learn to recognize and analyze key social, political, economic, and cultural factors shaping the experience of contemporary U.S. workers. They will also

learn to recognize a range of key theoretical approaches to the study of work which mark the diversity within the social scientific disciplines. In addition, they will examine work from an historical, cross-cultural, and global-economic perspective to help understand what shapes the changing experience of workers in the United States.

Prerequisite: SOC 1001

Elective Code(s): LART, SSCI

Previous SOC* 250

SOC 2054 - History of Rock & Roll: The Post-WWII Generation

Credits: 3

This course traces the evolution of that most American of musical forms from its roots in African and European musical traditions to its melding of blues, country, gospel, folk, and pop into something truly unique and revolutionary. We will examine rock and roll's lasting impact on American society and culture, from the initial formation of a new, teenage social class, to the rise in juvenile delinquency, the breakdown of racial and sexual barriers, the formation of various subcultures (drugs, bikers, surfers), and the role it played in the civil rights, anti-war, and feminist movements. From the r&b juke joints and rockabilly honky-tonks of post-war America, to Alan Freed, American Bandstand, Motown, and the British Invasion, this course will examine and illustrate the growth and development of a uniquely American musical form that reflected, challenged, changed and ultimately redefined, the society from which it sprang.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LART, SSCI

Previous SOC* 254

SOC 2057 - Sociology of Mental Health & Illness

Credits: 3

Examines mental health & illness from a sociological perspective and considers how the organization of social life, including socioeconomic status, marital status, age, and community ties affects psychological states. This course critically examines how the definitions of both mental health and mental illness reflect the normative ideologies of the broader dominant culture, how these definitions change within the sociopolitical and historical context, and to what degree mental illness is socially constructed.

Prerequisite: ENG 1010 and SOC 1001

Elective Code(s): LART, SSCI

Previous SOC* 257

SOC 2061 - School and Community

Credits: 3

A guided field experience for students entering the fields of teaching, psychology, sociology, social welfare, child care,

law enforcement urban technology, health care services, and other areas of community development. Based on the individual student's needs and career objectives, the course provides the opportunity for volunteer work in schools and community agencies under the guidance of college faculty and agency professionals. Most of the semester will be spent in the community placements. Students will keep a journal. The class will meet as a seminar only a few times to share experiences, resources, ideas, and to discuss the relevance of the readings to the community service.

Prerequisite: SOC 1001

Elective Code(s): LART, SSCI

Previous SOC* 261

SOC 2065 - Sociology of Culture

Credits: 3

This class will introduce students to sociological study of culture. We will start by discussing important theoretical perspectives (culture as system of classification, as an instrument of power, as linked to social positions, as a product of social interaction, as a system of signs) and then move on to specific empirical topics (artistic production; culture and organization; identity). The last part of the course will explore the cultural differences of "American" culture. Throughout the semester, we will use empirical examples when studying themes such as gentrification, innovation, high-technology capitalism, and inequality.

Prerequisite: SOC 1001

Elective Code(s): LART, SSCI

Previous SOC* 265

SOC 2078 - Community Research

Credits: 3

In this course, you will volunteer with a community organization, carrying out activities that will have some concrete result in addressing structural inequality and meeting the needs of the community. You will gain experience in one or more primary research methods used by sociologists: participant observation, interviews, survey research, content analysis, or the use of existing documents.

Prerequisite: SOC 1001

Elective Code(s): LART, SSCI

Previous SOC* 278

SOC 2085 - Community Organization

Credits: 3

A critical analysis and evaluation of the social needs of the community and organizational efforts undertaken by both governmental and private organizations to meet these needs are examined in depth. This course meets the service-learning requirement for the social services degree program.

Prerequisite: SOC 1001

Elective Code(s): LART, SSCI

Previous SOC* 285

SOC 2098 - Special Topics in Sociology

Credits: 3

This course will be used by a department when a course is in the development stage or if there is a pressing social issue or event where students would benefit from a focused course relevant to the topic at hand.

Prerequisite: SOC 1001

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LART, SSCI

Previous SOC* 298

SOSC 2094 - Cooperative Education/Work Experience

Credits: 3

This course provides students with the opportunity to apply classroom theory in an actual work setting, in paid and unpaid supervised positions, related to their majors. Completion of approximately 15-20 hours per week of work (150 hours for unpaid placements, depending on major; 300 hours for paid placements) and participation in Cooperative Education Online are required. In addition to the work placement, students are required to attend and complete classroom work (online) to enhance their cooperative education work experiences.

Prerequisite: Minimum GPA of 2.0 and 12 completed credit hours in Human Services, Disability Specialist with Speech-Language Pathology, or Therapeutic Recreation program.

SPAN 1000 - Getting Started in Spanish

Credits: 1

This course introduces students to the essentials of the Spanish language. This course will expose students to basic speaking and listening skills. Vocabulary needed to interact in Spanish using simple phrases and common expressions is presented.

Previous SPA* L105

SPAN 1011 - Elementary Spanish I

Credits: 4

An introduction to the Spanish language and Spanish-speaking cultures with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is a four-credit course with an embedded language lab component.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the Instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous SPA* 101, SPA* 111

SPAN 1012 - Elementary Spanish II*Credits: 4*

A continuation of Elementary Spanish I, this course builds upon previous introduction to the Spanish language and Spanish-speaking cultures with a continued emphasis on the development of the four basic skills: listening, speaking, reading and writing. This is the second part to the beginning sequence for students who have had some prior study of this language either in high school, Elementary Spanish I or life experience. This is a four-credit course with an embedded language lab component.

Prerequisite: SPAN 1011 with a C- or higher or complete a Language and Culture placement test, or obtain permission of the Instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous SPA* 102, SPA* 112

SPAN 1013 - Elementary Spanish I-II*Credits: 8*

An introduction to the Spanish language and Spanish-speaking cultures with emphasis on the development of the four basic skills: listening, speaking, reading, and writing in order to prepare students for successful entry into the target language. This is a beginning course for students who have had very limited or no prior study of this language. This is an eight-credit course with an embedded language lab component. This is an intensive beginning Spanish course in which two college semesters of Spanish are completed in one semester.

Prerequisite: Students with previous language experience must complete a Language and Culture placement test or permission of the Instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous SPA* 108

SPAN 1014 - Spanish for Health Personnel*Credits: 4*

A course containing the same language skills development as SPA* 112 with an emphasis on vocabulary and content related to the medical field. It provides medical personnel with the basic Spanish skills to deal with Spanish speaking patients in the health care delivery system. It also describes the diverse Spanish cultures and explains their role in health idioms and phraseology. This is the second part to the beginning sequence for students who have had some prior study of this language either in high school, Elementary Spanish I, or life experience. This is a four -credit course with an embedded language lab component.

Prerequisite: Students must have earned a grade of C- or higher in SPAN 1011, complete a Language and Culture placement test, or obtain permission of the instructor.

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LACU, LART

Previous SPA* 113

SPAN 1020 - Beginning Spanish Conversation I*Credits: 3*

This is an introductory course for students who wish to develop basic conversational skills in Spanish. It focuses on everyday situations that students may encounter when living or traveling in Spanish-speaking environments and dealing with Spanish-speaking people in the United States. This is a beginning level course designed for students who have no more than 1 year of elementary Spanish. It emphasizes practical, everyday situations and provides a variety of opportunities to develop listening, speaking, reading, and writing skills while enhancing cultural understanding and appreciation of the Spanish-speaking world.

Previous SPA* 155

SPAN 1021 - Beginning Spanish Conversation II*Credits: 3*

This is a second semester introductory course for students who wish to continue developing their basic conversational skills in Spanish. It focuses on everyday situations that students may encounter when living or traveling in Spanish-speaking environments and dealing with Spanish-speaking people in the United States. This is a beginning level course designed for students who have no more than 1 year of elementary Spanish or have completed Beginning Spanish Conversation I. It emphasizes practical, everyday situations and provides a variety of opportunities to develop listening, speaking, reading, and writing skills while enhancing cultural understanding and appreciation of the Spanish- speaking world.

Prerequisite: A grade of C- or higher in SPAN 1020 - Beginning Spanish Conversation I, SPAN 1011 - Elementary Spanish I, SPAN 1012 - Elementary Spanish II, or SPAN

1013 - Elementary Spanish I-II or permission of instructor
Previous SPA* 135

SPAN 1030 - Elementary Spanish Composition I

Credits: 3

In this high elementary course, students continue to develop writing skills through vocabulary development, spelling exercises, and composition. This course is designed to develop and refine writing skills and analysis through original compositions with attention to common problems of accentuation, punctuation, spelling, and grammar.

Prerequisite: A grade of C- or higher in SPAN 1013 **OR** SPAN 1012, or complete a Language and Culture placement test, or permission of the instructor

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LACU, LART

Previous SPA* 160

SPAN 2010 - Spanish for Heritage Speakers

Credits: 4

This course is designed for native or heritage speakers of Spanish who have had little or no formal training in the language, but they possess oral proficiency. The main goal is to enhance and further develop their reading and writing skills, so students are well prepared to enroll in the upper-level Spanish courses; however, this course prepares students to express themselves with fluency and accuracy while enhancing cultural understanding and gaining a deep appreciation of their linguistic and culture heritage. This is a four-credit course with an embedded language lab component.

Prerequisite: A grade of C- or higher in one of the following courses: SPAN 1012 or SPAN 1013, or complete a Language and Culture placement test and be able to communicate orally in Spanish or obtain permission of the Instructor.

Elective Code(s): LACU, LART

Previous SPA* 210

SPAN 2011 - Intermediate Spanish I

Credits: 4

This course is for students who have already attained a working knowledge of the language by either completing 4 years of high school Spanish, Intermediate Spanish I, or the equivalent. Students continue to develop and strengthen speaking, listening comprehension, reading and writing skills, as well as learn more about Spanish-speaking cultures. Students are introduced to cultural and literary materials that will develop an appreciation of the arts, history, culture, and the literature of Spanish-speaking peoples and create an awareness of cultural, social, and linguistic differences and similarities. Instruction focuses on oral and written communication. This is a four-credit course with an embedded language lab component.

Prerequisite: A grade of C- or higher in one of the following courses: SPAN 1012 or SPAN 1013, or Language and Culture placement test, or permission of the instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous SPA* 201, SPA* 211

SPAN 2012 - Intermediate Spanish II

Credits: 4

This course is for students who have already attained a working knowledge of the language by either completing 4 years of high school Spanish, Intermediate Spanish I, or the equivalent. Students continue to develop and strengthen speaking, listening comprehension, reading and writing skills, as well as learn more about Spanish-speaking cultures. Students are introduced to cultural and literary materials that will develop an appreciation of the arts, history, culture, and the literature of Spanish-speaking peoples and create an awareness of cultural, social, and linguistic differences and similarities. Instruction focuses on oral and written communication. This is a four-credit course with an embedded language lab component.

Prerequisite: A grade of C- or higher in SPAN 2011, Language and Culture placement test, or permission of the Instructor.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous SPA*202, SPA* 212

SPAN 2013 - Intermediate Spanish I-II

Credits: 8

This course is for students who have already attained a working knowledge of the language by either completing 4 years of high school Spanish, Elementary Spanish II, or the equivalent. Students continue to develop and strengthen speaking, listening comprehension, reading, and writing skills, as well as learn more about Spanish-speaking cultures. Students are introduced to cultural and literary materials that will develop an appreciation of the arts, history, culture, and the literature of Spanish-speaking peoples and create an awareness of cultural, social, and linguistic differences and similarities. Instruction focuses on oral and written communication. This is an intensive intermediate course in which two college semesters of Spanish are completed in one semester.

Prerequisite: A grade of C- or higher in SPAN 1012 - Elementary Spanish II, SPAN 1013 - Elementary Spanish I-II, or complete a Language and Culture placement test, or permission of the instructor

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): FLNG, LACU

Previous SPA* 208

SPAN 2030 - Intermediate Spanish Composition I*Credits: 3*

In this high intermediate course, students continue to develop deeper fluency in Spanish language skills with an emphasis on academic reading and writing. Students continue to refine reading comprehension, writing proficiency, listening, and speaking skills, and grammatical accuracy. Assigned college level readings, which may include whole works and academic writings, form the basis for small and whole class discussions and writing assignments. Students learn to appropriately integrate multiple sources into a research-based paper. Collaborative activities help students further develop linguistic clarity and accuracy, academic vocabulary, critical thinking, and development of ideas appropriate for academic study in Spanish.

Prerequisite: A grade of C- or higher in SPAN 1011 or SPAN 2013, or complete a Language and Culture placement test, or permission of the instructor.

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LACU, LART

Previous SPA* 232

SPAN 2095 - Teaching Assistant in Spanish*Credits: 4*

In this assistantship, students will assist a faculty member in conducting an academic course offered in the field of Spanish. Students may lead discussion groups, work with the individuals, organize field trips, make presentations, conduct research, coordinate tutoring sessions, evaluate and revise material collaborate with the class, and/or other work to be arranged based on learning objectives.

Prerequisite: Permission of the Instructor

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LACU, LART

Previous SPA* 296

SPAN 2098 - Special Topics in Spanish*Credits: 3*

This course covers topics of special interest in Spanish. Topics vary by campus and semester but focus on literature and/or cultural study.

Prerequisite: SPAN 2012 and either SPAN 2011 or SPAN 1012 or permission of Instructor

Prerequisite/Corequisite: None

Corequisite: None

Elective Code(s): LACU, LART

Previous SPA* 298

SPAN 2111 - Advanced Spanish I*Credits: 3*

This course is an advanced systematic review of the Spanish language and Spanish speaking cultures, which continues the gradual development of the four basic skills: listening comprehension, speaking, reading, and writing. Emphasis will be placed on reading and writing, detailed explanation of the principles of grammar, and training in reading comprehension to facilitate writing skills. Prose and poetry from a wide array of Latin American and Spanish writers will be introduced to enhance writing abilities. This course is designed for students versed in conversational Spanish, and for Spanish speakers.

Prerequisite: A grade of C- or higher in SPAN 2012, or complete a Language and Culture placement test, or permission of the Instructor.

Elective Code(s): FLNG, LACU, LART

Previous SPA* 251

SPAN 2112 - Advanced Spanish II*Credits: 3*

A continuation of Advanced Spanish I, this course is an advanced systematic review of the Spanish language and Spanish speaking cultures, which continues the gradual development of the four basic skills: listening, speaking, reading, and writing. Emphasis will be placed on reading and writing, detailed explanation of the principles of grammar, and training in reading comprehension to facilitate writing skills. Prose and poetry from a wide array of Latin American and Spanish writers will be introduced to enhance writing abilities. This course is designed for students versed in conversational Spanish, and for Spanish speakers.

Prerequisite: A grade of C- or higher in SPAN 2111, or complete a Language and Culture placement test, or permission of the Instructor.

Elective Code(s): FLNG, LACU, LART

Previous SPA* 252

SPAN 2199 - Independent Study in Spanish*Credits: 1-3*

Students will have the opportunity to pursue with greater depth a topic within the Spanish discipline guided by a faculty member. Students should have a high academic standing in Spanish language.

Prerequisite: Permission of the Supervising Faculty.

All Independent Studies must be arranged in the semester prior to registration, with advance departmental approval and the permission of a full-time Language and Culture faculty member.

SPED 1012 - Introduction to Special Education for Young Children*Credits: 3*

This course is an introduction to the field of early childhood special education and is designed to familiarize students with current information regarding early intervention for infants and toddlers, children with disabilities through the age of eight, and developmental delays or deviations. Field work may be required in this course.

Prerequisite: ENG 1010 and PSY 2004 or ECED 1002**Previous ECS* 112****SPED 1402 - Introduction to the Role of Educational Paraprofessional***Credits: 3*

This course introduces students to the roles and responsibilities of educational paraprofessionals working with young children (ages 2.9 to 8) in public-school settings. Emphasis is on providing educational paraprofessionals and students interested in paraprofessional opportunities with knowledge and skills for aiding certified and licensed professional staff in schools.

Cross-listed: ECED 1202 - Introduction to the Role of Educational Paraprofessional**Previous SPED* 1402****SPED 2307 - Advanced Exceptional Learners***Credits: 3*

The course provides an advanced study of concepts and theories associated with all disabilities and exceptionalities. In this course, students examine and practice instructional competencies that improve student achievement. Students learn the skills required to support, supplement, and deliver differentiated content; and assess to meet the needs of all students in their classroom. Authentic assessment and instructional best practices for children with learning, physical, health, and intellectual disabilities and developmental delays is emphasized in this course.

Prerequisite: BS or BA in Education, Special Education, or related discipline, or SPED 1012 or ECED 2515, or permission of program coordinator**Previous ECS* 207****SPED 2695 - Student Teaching Special Education***Credits: 3*

In this course, students complete 100-200 hours of field work designed to develop, practice, and improve their knowledge and skills in classroom management, environmental planning, behavior and guidance, and curriculum development.

Students will apply developmental and learning theories and use pedagogical best practices in a learning environment that includes and accommodates all children (ages 0 to 8) including those with disabilities and developmental delays.

While in field work, students are closely guided, supervised,

and mentored by a classroom teacher and/or special education professional, and are required to participate in a seminar

Prerequisite: Permission of the program coordinator, within 9 credits of graduation, ECED or SPED courses with a grade of C- or higher**Previous ECS* 230****SPED 2749 - Disorders in Childhood and Adolescence***Credits: 3*

This course examines abnormal behavior within the scope of development. The course reviews normative development and examines it against a myriad of disorders that arise beginning in early childhood extending through adolescence and genetic, cultural, and environmental factors. Evaluation and treatment perspectives will be explored.

Prerequisite: PSY 2004**Cross-listed:** PSY 2049 - Disorders in Childhood and Adolescence**Previous PSY* 249, PSY* 251****SUR 1090 - Operating Room Skills Seminar***Credits: 4*

The seminar provides the students with the opportunity to practice with supervision, the skills, techniques, standards, and principles that are taught in SUR 1110. This course prepares students for the clinical experience by teaching them the care and handling of surgical supplies, instruments, suture materials, and surgical drapes using hands on skills, simulation, and mock surgery for laparotomy and laparoscopic procedures. This seminar is not only an introduction to the operating room environment but includes a 5- week clinical rotation. After passing the seminar skills competencies, students will have a clinical rotation as a member of the surgical team under direct supervision. The rotation gives the student the opportunity to build on didactic and clinical skills learned in the seminar. It focuses on minimally complex and specialty surgical procedures that take place in a clinical facility. This rotation is 24 hours per week over the last 5 weeks of the course

Prerequisite: CSA 1110, ENG 1010, (HIMT 1000, MDAS 1025 or BOT 1800), MATH 1001 or higher all with a grade of C or higher; BIO 1100 with a grade of C+ or higher.**Corequisite:** SUR 1110 and ENG 1080**Previous SUR* 111****SUR 1109 - Microbiology for Surgical Technologists***Credits: 2*

Gives a broad overview of general microbiology and clinical microbiology most necessary for the surgical technologist to understand. Emphasizes the importance of sterile technique and infection control in the operating room. While covering basic information such as bacterial staining, microscopy, how

bacteria can be cultured and identified in the laboratory, the most significant human pathogens and how the immune system responds to them.

Prerequisite: CSA 1110, ENG 1010, (HIMT 1000, BOT 1800 or MDAS 1025), MATH 1001 *or higher* all with a grade of C or higher; BIO 1111 with a grade of C+ or higher

Corequisite: SUR 1090 and ENG 1080

Previous SUR* 109

SUR 1110 - Operating Room Techniques

Credits: 4

A theoretical introduction to the roles and responsibilities of the surgical technologist, the health care team, and the surgical environment. Teaches the basic principles of aseptic technique, fundamentals of surgical technology, and patient care concepts. Incorporates surgical scrub, gowning, gloving, case preparation, patient care and safety. Prepares students for entry level into the surgical environment and basic surgical procedures.

Prerequisite: CSA 1110, ENG 1010, (HIMT 1000, MDAS 1025, or BOT 1800), MATH 1001 *or higher* all with a grade of C or higher; BIO 1100 with a grade of C+ or higher

Corequisite: SUR 1090 and ENG 1080

Previous SUR* 110

SUR 2094 - Clinical Surgical Experience I

Credits: 6

Provides students the opportunity to build on didactic and clinical skills learned in the classroom as a member of the surgical team under direct supervision. Focuses on moderately complex specialty surgical procedures and takes place in a clinical facility. This course is 24 hours per week over 15 weeks.

Prerequisite: CSA 1110, ENG 1080

Corequisite: SUR 2215, PSY 1011

Previous SUR* 211

SUR 2194 - Clinical Surgical Experience II

Credits: 6

Provides students the opportunity to build on didactic and clinical skills learned in the classroom as a member of the surgical team under direct supervision. Focuses on moderately complex to complex specialty surgical procedures and takes place in a clinical facility. This course is 24 hours per week over 10 weeks. The last five weeks of the course prepares the students for the certification exam. Students sit for the certification exam at the end of the course.

Prerequisite: CSA 1110, ENG 1080, PSY 1011

Corequisite: SUR 2290

Previous SUR* 212

SUR 2213 - Surgical Procedures I

Credits: 3

Includes a review of relevant anatomy and pathophysiology, diagnostic procedures, and surgical interventions for surgical procedures in the following areas: obstetrical/gynecological surgery, urological surgery, minor/major orthopedic surgery, ear, nose, and throat surgery, oral, maxillary, facial surgeries, reconstructive plastic surgery, and burn surgery.

Laparoscopic, robotic, pediatric, simulation, and endoscopic procedures are integrated into this course.

Prerequisite: ENG 1080

Corequisite: SUR 2215, PSY 1011

Previous SUR* 213

SUR 2214 - Surgical Procedures II

Credits: 3

This course includes a review of relevant anatomy and pathophysiology, diagnostic procedures, and surgical interventions for surgical procedures in the following areas: major orthopedic surgery, neurological surgery, ophthalmology surgery, peripheral vascular surgery, thoracic surgery, cardiac surgery, emergency trauma surgery, all hazard preparation, and donor/procurement surgery. Laparoscopic, navigation, robotic, pediatric, simulation, and endoscopic procedures are integrated into this course.

Prerequisite: CSA 1110, ENG 1080, PSY 1011

Corequisite: SUR 2290

Previous SUR* 214

SUR 2215 - Surgical Technology Pharmacology

Credits: 3

Prepares the students for the safe care and handling of medications and solutions used during surgery. Students are provided with an introduction to pharmacology, principles of anesthesia administration and medications that are commonly used in the surgical environment.

Prerequisite: ENG 1080

Corequisite: SUR 2213, PSY 1011

Additional Info: Lecture Hours: 3 **Previous SUR* 215**

SUR 2290 - Advanced Seminar for Surgical Technologist*Credits: 3*

This course includes effective career seeking skills, interviewing techniques, resume preparation, role of the circulating surgical technologist, professional membership, and certification. Advanced skills such as vital sign monitoring, urinary catheterization, and surgical skin preparation are also introduced. This course reviews the objectives of the National Certification Examination for Surgical Technologist. The purpose is to prepare students to pass the Certification of Surgical Technologists that is often required for employment as a surgical technologist.

Prerequisite: CSA 1110, ENG 1080, PSY 1011**Corequisite:** SUR 2214**Previous SUR* 250****SURH 2010 - Surgical Technology Principles and Practices***Credits: 4*

This course provides introduction to the basic concepts, principles and theories of aseptic technique related to the non-sterile and sterile responsibilities of the surgical technologist. This course includes an introduction to wound classes/closure/healing/hemostasis, biomedicine, diagnostic procedures, emergency situations and all hazards preparation. The course instructs the student in the principles and skills required to assist in surgical procedures for general, obstetric/gynecologic, genitourinary, plastic, orthopedic, ear, nose, pharynx/larynx, ophthalmic, oral & maxillofacial, cardiothoracic, peripheral vascular and neurosurgery. This class includes a clinical laboratory component.

Prerequisite: BIO 2350, admission to the Manchester Campus Hartford Hospital Surgical Technology Program**Corequisite:** SURH 2210**Previous SUR* 101****SURH 2020 - Surgical Technology Peri-Operative Practice***Credits: 4*

The course provides instruction in the professional role and skill sets required of the surgical technologist in the peri-operative environment. It includes discussion and application of aseptic technique as related to the supplies and equipment used during the course of surgery. This course will cover the responsibilities of the surgical technologist in the first scrub role during the preoperative, intraoperative, and postoperative phases of the surgical procedure. This class includes a laboratory component.

Prerequisite: BIO 2350, admission to the Manchester Campus Hartford Hospital Surgical Technology Program**Corequisite:** SURH 2210**Previous SUR* 102****SURH 2050 - Medical Terminology for Surgical Technologists***Credits: 2*

This course is for the education of surgical technologists. Medical Terminology introduces the surgical technology (ST) student to the basic concepts of building the medical word from its component parts of prefix, suffix and word roots. Through word analysis and exercises, the student will learn the anatomical, physiological, pathological and surgical/clinical terms as they pertain to body cells, tissue and systems. Strong emphasis will be placed on diseases and surgical intervention terms to enhance the performance of the surgical technologist in the healthcare setting.

Prerequisite: Admission to the Manchester Campus Hartford Hospital Surgical Technology Program**Corequisite:** SURH 2210**Previous SUR* 105****SURH 2190 - Surgical Technologist Role and Responsibilities***Credits: 2*

This course provides introduction to patient care concepts, communication and teamwork required to assist the surgical technologist in the operating room environment. Course content includes an overview of the various levels of credentialing, hospital organization and healthcare professional organizations. It will cover the legal/ethical/moral responsibilities, including liability and scope of practice, in the surgical technologist role. This course includes mock surgery in a clinical lab setting and orientation to the Hartford Healthcare System facilities.

Prerequisite: COMM 1301 and admission to the Manchester Campus Hartford Hospital Surgical Technology Program**Corequisite:** SURH 2210**Previous SUR* 201**

SURH 2194 - Surgical Technologist Level I Skills*Credits: 2*

This course is to educate students in the clinical practice of surgical technology. This course is designed to provide the student with individualized surgical case scrub experience in the surgical technologist first/second scrub role. Emphasis is placed on developing quality patient care concepts and proficiency of Surgical Technologist Level I Skills as necessary for participation in basic surgical procedures. This course will offer the student opportunities to apply learned didactic and clinical skills to the scrub role of the surgical technologist. The student will spend 24 hours each week, for a duration of five weeks, in the clinical setting advancing their skill set as the surgical technologist in the scrub role. Upon successful course completion, the student will be able to demonstrate competency in all aspects of Surgical Technologist Level I Skills of perioperative practice.

Prerequisite: SURH 2210**Corequisite:** SURH 2290**Previous SUR* 220****SURH 2210 - Pathophysiology/Pharmacology for the Surgical Technologist***Credits: 3*

This course is for the education of surgical technologists. The focus is on topics related to pathophysiology and pharmacology as identified in the current edition of the Core Curriculum for Surgical Technology(ST). The ST student will be introduced to the basic concept of disease as a deviation from the body's normal homeostatic state and its ability to function properly. Through discussion, analysis and research, the student will learn the anatomic and physiologic anomalies each body system undergoes in response to the disease process. The ST student will be introduced to the basics of pharmacology and anesthesia as it relates to the surgical technologist role in the Operating Room. The most important points of pharmacology/anesthesia will include drug handling, prevention of drug errors, a basic understanding of drug categories, important anesthesia concepts, types of anesthesia, complications/adverse reactions and the related perioperative role of the surgical technologist.

Prerequisite: BIO 2350, admission to the MC (Manchester Campus) Hartford Hospital Surgical Technology Program**Corequisite:** SURH 2190**Previous SUR* 221****SURH 2290 - The Surgical Technologist Professional***Credits: 3*

This course is to educate students in the professional practice of surgical technology. This course prepares the surgical technology student to transition successfully from the classroom to the perioperative setting as a "competent, entry-

level surgical technologist professional". Students will be taught how to develop a professional portfolio and enhance interview skills. The course emphasizes review of surgical technology principles and practices and test taking strategies in preparation for the National Board of Surgical Technology and Surgical Assisting (NBSTSA) Certified Surgical Technologists (CST) exam.

Prerequisite: Permission of the Surgical Technology Program Director**Corequisite:** SURH 2394**Previous SUR* 225****SURH 2294 - Surgical Technologist Level II Skills***Credits: 4*

This course is to educate students in the clinical practice of surgical technology. This course is designed to provide the student with individualized, surgical case experience in the scrub role of the surgical technologist. Emphasis is placed on demonstrating proficiency in skills necessary for advancing participation in complex surgical procedures. This course will afford the student the opportunity to build on (ST) skills learned in Surgical Technologist Level I Skills and advance autonomy in the first scrub surgical technologist role of the surgical team in complex surgical specialties in the clinical environment. The student will spend 24 hours each week, for a duration of six weeks, in the clinical setting advancing their skill set as the surgical technologist in the scrub role. Upon successful course completion, the student will be able to demonstrate competency in all aspects of Surgical Technologist Level II Skills of perioperative practice.

Prerequisite: SURH 2194 with achievement and maintenance of a 2.5 GPA or greater**Corequisite:** SURH 2290**Previous SUR* 222****SURH 2394 - Surgical Technologist Level III Skills***Credits: 4*

This course is to educate ST students in the clinical practice of surgical technology. This course is designed to provide the ST student with individualized surgical case experience in the scrub role of the surgical technologist. Emphasis is placed on demonstrating proficiency in skills necessary for participation in advanced specialty, surgical procedures. This course will afford the student the opportunity to build on skills learned in Surgical Technologist Level II Skills and advance autonomy in the first scrub surgical technologist role of the surgical team in advanced surgical specialties in the clinical environment. The student will spend 24 hours each week, for a duration of ten weeks, in the clinical setting advancing their skill set as the surgical technologist in the scrub role at Surgical Technologist Level III. Upon successful course completion, the student will be able to demonstrate competency in all aspects of Surgical Technologist Level III

Skills of perioperative practice and be aptly prepared for an entry level surgical technologist position in a clinical facility.

Prerequisite: SURH 2294 with achievement and maintenance of 2.5 GPA or greater

Corequisite: SURH 2290

Previous SUR* 224

TECH 1010 - Introduction to Engineering Technology

Credits: 3

Students will conduct research, including interacting with professionals in the field of Engineering and Technology, to evaluate careers of interest to the student. Student teams will employ technical skills, appropriate software and technology to solve projects related to engineering and technology. They will also evaluate the use of information and technology and how it affects our society. Necessary skills for academic and professional success, such as critical thinking, problem solving, teamwork, study skills, time management and ethics in engineering, will be presented. Students will be required to write a research project and present their findings to the class in an oral presentation.

Prerequisite: None

Prerequisite/Corequisite: None

Corequisite: None

Previous TCN* 101

THR 1101 - Introduction to Theater

Credits: 3

A study of the basic theories and elements of theater arts, including the dramatic construction of scripts, performance techniques, and the administration of theater management are the focus in this course. Students learn through examination of theater concepts what makes theater work from page to the stage to the audience.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, LART

Previous THR* 101

THR 1102 - Theater History

Credits: 3

A concise study of the history of theater from the Greek and Roman Theater to the present. Each era of history will be examined through formal study, plays, skits, slides, and video.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, LART

Previous THR* 102

THR 1106 - The Movies

Credits: 3

This course is a basic study of film as a dramatic art form. The emphasis is on the history, development, and critique of films. In this course, students view films and/or film clips for discussion and analysis of the film's content, structure, and historical/cultural aspects.

Elective Code(s): ARTS, LART

Previous THR* 106

THR 1107 - Live Theater Study

Credits: 3

In this course, students study the creative arts with emphasis on the playwright, director, actor and designer and their collective contributions to contemporary American theater are studied in this course. Students attend plays at professional theaters. Students must attend a minimum of six live performances during the semester.

Elective Code(s): ARTS, LART

Previous THR* 127

THR 1110 - Acting I

Credits: 3

A practical approach to the art of acting, with special emphasis on the development of the actor's instrument, including voice, body, the senses, creativity, and interpretation. The experiential course combines individual and group exercises and assignments.

General Education Code: Arts and Humanities (ARHX)

Elective Code(s): ARTS, CRTY, LART

Previous THR* 110

THR 1111 - Acting for the Camera

Credits: 3

This course is a practical introduction to acting on camera and understanding basic concepts, work procedure, and basic acting technique are emphasized. The course is helpful for actors, directors, and curious students about technique and process in mediated performance.

Elective Code(s): ARTS, CRTY, LART

Previous THR* 113

THR 1112 - Voice and Diction

Credits: 3

The focus of this course is on the theories and exercises on the fundamentals of voice and diction for theatre. Emphasis is placed on relaxation and preparation, proper breathing techniques, correct vowel formation, knowledge of different resonators, power of projection, word association, and linking one's voice to character development.

Elective Code(s): ARTS, CRTY, LART

Previous THR* 112

THR 1113 - Improvisation*Credits: 3*

This course builds an understanding of the technique and application of improvisational practice. Students will learn through physical and vocal exercises, theater games, and improvised scene work with the goals of promoting concentration and creativity to free the actor's imagination. Students develop an ability to interact and react, work moment-to-moment to create characters and scenes, and gain a heightened awareness of improvised work, as well as in scripted theater performances.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, LART**Previous** THR* 115**THR 1114 - Movement and Expression***Credits: 3*

This course is an exploration of the basic techniques, styles, concepts and composition of theatrical dance and movement. Emphasis is placed on movement expression of emotion, intentions, gestures, and physical characterization. Music and theatrical texts used provide the foundation for course activities.

General Education Code: Arts and Humanities (ARHX)**Elective Code(s):** ARTS, CRTY, LART**Cross-listed:** DANC 1114**Previous** THR* 123**THR 1115 - Dance as Cultural Expression***Credits: 3*

This course is an introduction to the basic principles and technique of modern dance and its relationship to human culture. Class work will introduce students to technical concepts involved in training the body to be an articulate expressive instrument. The course examines the basic elements of dance including stretch, strength, coordination, building confidence, body awareness, cardiovascular, and dance vocabulary, explores basic elements of composition and improvisation, and facilitates creative group presentations as a path to understanding dance as a form of historical cultural expression.

Elective Code(s): ARTS, CRTY, LART**Cross-listed:** DANC 1115 - Dance as Cultural Expression**Previous** THR* 126**THR 1120 - Stagecraft***Credits: 3*

A survey of the various components of stagecraft and production techniques is the focus of this course. Students explore the underpinnings of theatrical productions and practice skills required in set, lighting, costumes, makeup, and sound design. Lectures are combined with studio activities.

Elective Code(s): ARTS, CRTY, LART**Previous** THR* 120**THR 1122 - Sound Design and Production***Credits: 3*

This course comprehensively examines sound design and technology for stage; emphasizing sound reinforcement, stage equipment, sound technology, sound space design, and techniques for collaboration.

Elective Code(s): ARTS, LART**Previous** new**THR 1123 - Lighting Design and Production***Credits: 3*

In this course, students explore theater and studio lighting with an emphasis on the elements of electricity, optics, stage lighting design, color in light, stage lighting instruments, design technology, and intensity controls. Students gain practical hands-on experience in designing, installing, and realizing lighting design concepts.

Elective Code(s): ARTS, LART**Previous** new**THR 1124 - Costume Design and Production***Credits: 3*

In this course, students investigate costume techniques based on historical, contemporary, and fantastical designs and apply the principles of costume design and construction to productions for the theater.

Elective Code(s): ARTS, LART**Previous** new**THR 1125 - Scenic Design and Production***Credits: 3*

This course explores the principles of contemporary scenic design for the theatre. Students examine the principles, practices, technology, and current techniques of scenic design for the stage.

Elective Code(s): ARTS, LART**Previous** new

THR 1195 - Theater Practicum I*Credits: 3*

In this course, theater students produce a play. Areas such as acting, the design and development of sets, props, costuming, make-up, lighting, sound, and theater administration and management are examined and practiced. Students explore play production through rehearsals and producing and prepare a play for performance.

Elective Code(s): ARTS, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** THR* 190**THR 2210 - Acting II***Credits: 3*

A continuation of THR 1110, intensifying the development of the fundamental tools of the actor. Students will gain knowledge of advanced techniques of script analysis and character development.

Prerequisite: THR 1110 or permission of the instructor**Elective Code(s):** ARTS, CRY, LART**Previous** THR* 210**THR 2216 - Musical Theater Training I***Credits: 3*

This course is a combination of theory and practice. In this course, students examine the history of musical theater and apply the concepts and terminology of musical theater performance. Musical Theater Training I is a performance-oriented course. Students participate in musical theater projects that incorporate singing, acting, and movement.

Prerequisite: THR 1110 or permission of the instructor**Elective Code(s):** ARTS, LART**Previous** THR* 228**THR 2217 - Musical Theater Training II***Credits: 3*

This is an advanced musical theater course and an extension of Musical Theater Training I. In this course, students further examine the history of musical theater, musical theater styles and advanced musical theater methodologies. Musical Theater Training II is a performance-oriented course. Students participate in musical theater projects that incorporate singing, acting, and movement.

Prerequisite: THR 2216**Elective Code(s):** ARTS, LART**Previous** THR* 229**THR 2219 - Directing***Credits: 3*

This course is a study of the basic methods and techniques of directing plays with special emphasis on script analysis, creative concept development, and methods of rehearsing and working with actors. Students are required to direct short play scenes.

Prerequisite: THR 1110 or permission of the instructor**Elective Code(s):** ARTS, LART**Previous** THR* 225**THR 2223 - Plays in Production II: Musical Theater***Credits: 3*

In this course, students will assume a leadership role in the production of a staged musical. After a successful audition, they will explore script analysis, ensemble performance, and what it means to assume a role in a theatre production. Additionally, students will engage in abstract theatrical concepts including Style, Relationship, Conflict, The Moment Before, Humor, Opposites, Discoveries, Competition, Importance, Urgency, Setting, Game Playing and Role Playing, Secrets and Mystery. One musical will be the focus of the course and will be presented at the end of the session.

Elective Code(s): ARTS, LART**Previous** THR* 223**THR 2229 - Stage Management***Credits: 3*

In this course, students develop the skills and operations essential for a stage manager and the theater production process. Organization, leadership, and communication skills in the context of mounting a theater production are emphasized.

Prerequisite: THR 1120 or permission of program coordinator**Elective Code(s):** ARTS, LART**Previous** new**THR 2230 - Playwriting***Credits: 3*

This course introduces the craft of playwriting, including basic techniques of dialogue, character development, conflict, and structure. Students will apply an understanding of different theatrical genres to their writing, learn to consider elements such as lighting, sound, movement, blocking, props, set design, etc., in creating a play, and utilize different revision strategies for their work.

Prerequisite: ENG 1010**Elective Code(s):** ARTS, LART**Previous** THR* 230

THR 2232 - Scriptwriting*Credits: 3*

Script Writing is a workshop course in which students explore the craft of writing scripts. Instruction in the techniques of writing for both stage and screen with a focus on structuring plot and action, writing dialogue, and developing strong characters are emphasized course along with critical assessment and rewriting. Students gain an understanding of the art and craft involved in writing for theatre and film and apply a variety of artistic and technical elements germane to each genre.

Prerequisite: ENG 1010**Elective Code(s):** ARTS, LART**Previous** THR* 232**THR 2295 - Theater Practicum II***Credits: 3*

This course is a continuation of THR 1195. Theater Practicum II further develops a student's skills, knowledge, understanding, and techniques of theater arts in the areas of management, technical, and performance.

Prerequisite: THR 1195**Elective Code(s):** ARTS, LART**Course Fees:** Supplemental Fee Level 2 and Materials Fee**Previous** THR* 290**THR 2298 - Special Topics in Theater***Credits: 3*

This course provides an opportunity to explore a variety of theater subjects/topics by faculty that are not directly or thoroughly covered in existing CSCC system Theater curriculum. Topics vary.

Prerequisite: ENG 1020**Elective Code(s):** ARTS, LART**Previous** THR* 298**THR 2299 - Independent Study in Theater Arts***Credits: 3*

In this course, students through independent study examine, research, and explore a specific area, topic, theme, conflict/challenge, or current trend/issue related to theater arts in agreement with and under the guidance of a THR faculty.

Prerequisite: Permission of faculty**Elective Code(s):** ARTS, LART**Previous** THR* 299**TREC 1001 - Introduction to Therapeutic Recreation***Credits: 3*

This course provides a background of study for the field of therapeutic recreation. It encompasses the history and development of the profession with an emphasis on understanding the persons who are served, their disabilities,

and the environments in which they live. An experiential approach facilitates understanding and empathy.

Previous RLS* 121**TREC 1002 - Processes and Techniques in Therapeutic Recreation***Credits: 3*

This course is designed to provide an overview of the process and techniques used in treatment-oriented programs. The course explores leadership skills that help professional through an in-depth look at facilitation techniques used in therapeutic recreation, including, but not limited too creative arts, physical/body movement, mental stimulation, and social interaction in relation to the needs of special population groups. Emphasis is placed on meeting clients' needs through proper activity selection, activity analysis, and program adaptation/modification.

Previous RLS* 122**TREC 2001 - Therapeutic Recreation Program Planning***Credits: 3*

In this course, students study the therapeutic recreation process with emphasis on program planning. Program planning meets the needs of the client through a well-planned process that includes assessing functional abilities and needs, program goals, and objectives, successfully implementing the program, and evaluating both the program and the client.

Prerequisite: TREC 1001, ENG 1010, and PSY 1011**Previous** TREC* 221**TREC 2015 - Therapeutic Recreation Leadership & Supervision***Credits: 3*

This course serves as an opportunity for students to explore application of theoretical and practical leadership methods and skills in therapeutic recreations supervision, leadership and program development. The course will prepare students to develop comprehensive programming and increase knowledge needed for accountability in recreational supervision. Students will gain knowledge in developing and supervising diverse programming.

Previous RLS* 215**TREC 2023 - Therapeutic Recreation Leisure and Aging***Credits: 3*

This course serves as an overview on the delivery of therapeutic recreation services to older adults. Students develop knowledge and an understanding of the elderly population and how activity intervention may be used to reach treatment and rehabilitation goals. This course focuses on issues such as the physical, psychological, and

socioeconomic factors of the aging, leisure resources, community and institutional services, and recreation in assisted living facilities, adult day care centers, community centers and agencies, home care settings, and long-term care settings.

Previous RLS* 223

TREC 2095 - Professional Practicum in Therapeutic Recreation

Credits: 4

This course provides the student with 200-hour practical work experience in a healthcare setting or community Therapeutic Recreation setting. The student is required participate with a passing grade in a 200-hour supervised work experience, participate in weekly Discussion Board Assignments, and complete a Therapeutic Recreation Professional Practicum Portfolio which includes but will not limited to, readings, on-line or in person conferences, care planning and activity planning. During this semester, the student will apply and expand upon the knowledge, methods, and leadership techniques which have been learned in academic courses.

Prerequisite: TREC 1001, TREC 1002, TREC 2001, TREC 2023, TREC 2015 or HSER 2600, HSER 2095 or HSER 2696

Previous RLS* 2095

VET 1001 - Introduction to Veterinary Technology

Credits: 3

Introduction to Veterinary Technology is an overview of the veterinary technology profession. This course introduces the role of the veterinary technician and employment opportunities in the field. Covered topics include overviews of breed differentiation, nutrition, reproduction, and animal behavior.

Prerequisite: Eligible for ENG 1010

Previous VET* 101

VET 1002 - Veterinary Office Management and Communication

Credits: 3

This is a business management course for Veterinary Technology students. Topics include office procedures and practices, staff management, triaging phone calls, recordkeeping, the human-animal bond, stress management, and client relations, including working with members of the public from diverse cultural, ethnic, religious, and socioeconomic backgrounds. Personnel administration and other administrative procedures common to veterinary medical practices including databases are reviewed.

Prerequisite: Admission to Veterinary Technology Program

General Education Code: Oral Communication (ORAX)

Previous VET* 102

VET 1003 - Animal Care and Handling

Credits: 3

This course provides practical knowledge and "hands-on" experience with exotic, laboratory, small and large animals. Common husbandry practices, diet, behavior and handling and restraint are discussed. Normal physiologic values and physical exam findings and common diseases affecting each species are reviewed, along with disease prevention methods. Restraint, basic examination, grooming and handling methodologies are practiced in lab.

Prerequisite: Admission to Veterinary Technology Program

Previous VET* 100

VET 1026 - Veterinary Terminology and Medical Math

Credits: 2

This two-credit course is an introduction to basic veterinary medical terminology, and to the mathematical calculations needed for the veterinary technology field. Veterinary terminology topics will include word roots, suffixes and prefixes, and medical abbreviations; directional terms; terminology describing the anatomy, physiology, and diseases of organ systems; and diagnostic, clinical and surgical procedures. Species-specific terms involving the anatomy, physiology, husbandry, and diseases that are unique to various domestic species will also be addressed. Mathematical topics will include: the metric system of measurement; decimals and percentages; ratios and proportions; dilutions; dimensional analysis; the calculation of clinical doses of oral and parenteral medications; intravenous fluid (IVF) rate calculations; and nutritional energy requirement calculations. The application of mathematics to the veterinary clinical setting will be stressed. Clinical cases will be utilized for assignments in this course.

Prerequisite: Admission to Veterinary Technology Program

Previous VET* 126

VET 1051 - Small Animal Clinical Nursing

Credits: 4

Nursing procedures in small animals and laboratory species are discussed. Topics include physical examinations, common medical nursing techniques, and emergency care. Long term nursing care of common animal conditions will be discussed including client education. The course includes vaccination protocols, nutritional support and specialized problems encountered in companion and laboratory animals. Relevant clinical cases will be utilized in lecture discussions.

Prerequisite: VET 1001, VET 1002, VET 1003, and VET 2001 - all with C or higher

Previous VET* 151

VET 1052 - Large Animal Clinical Nursing*Credits: 4*

The course focuses on the specifics related to large animal medicine and nursing practices including techniques. Lectures include clinical anatomy and physiology, nutrition, and breeding of agricultural species. The etiology of disease, transmission, prevention and disease control are discussed. Topics include nursing care, diagnostic techniques, reproduction, husbandry, and common diseases. Laboratory sessions include restraint, physical exams, specimen collection, drug administration, and principles of husbandry. Supervised clinical field work is required.

Prerequisite: VET 1001, VET 1003 , and VET 2001 - all with C or higher

Prerequisite/Corequisite: VET 2002 (with C or higher if prerequisite)

Previous VET* 152

VET 2001 - Veterinary Anatomy & Physiology I*Credits: 4*

Veterinary anatomy and physiology of domestic species presented as a two-course series. The anatomic structures and physiologic functions of domestic animals including companion species are discussed. The first semester reviews the basic chemical principles, foundations of structure and function of the most common species including the integumentary, skeletal, muscular, nervous, sensory, and endocrine systems. Comparative aspects of other species including farm animals are provided. Lecture and laboratory exercises emphasize the understanding of the organized body state and the relationship of various components including cells, tissues, organs and body systems.

Prerequisite: Admission to Veterinary Technology Program

Previous VET* 201

VET 2002 - Veterinary Anatomy & Physiology II*Credits: 4*

Veterinary anatomy and physiology of domestic species presented as a two-course series. The anatomic structures and physiologic functions of domestic animals including companion species are discussed. This course is a continuation of VET 2001 and continues the foundations of structure and function of the most common species including the hematopoietic, lymphatic, immune, cardiovascular, respiratory, digestive, urinary, and reproductive systems. Comparative aspects of other species including farm animals are provided. Lecture and laboratory exercises emphasize the understanding of the organized body state and the relationship of various components including cells, tissues, organs and body systems. This course also covers nutrition and metabolism along with the unique aspects of avian and reptile anatomy and physiology.

Prerequisite: VET 2001 with C or higher

Previous VET* 202

VET 2005 - Veterinary Laboratory Procedures*Credits: 2*

This course teaches the theory behind clinical sample analysis utilizing laboratory procedures, including specimen collection, hematology, cytology, blood chemistry, urinalysis, and serology. Emphasis is on manual performance of basic laboratory diagnostic procedures and discussion of the relevance of laboratory findings to the veterinary practitioner.

Prerequisite: VET 1026 and VET 2001 , both with C or higher

Prerequisite/Corequisite: VET 2002 (with C or higher if prerequisite)

Corequisite: VET 2006 OR VET 2031 with a C or higher

Previous VET* 205

VET 2006 - Clinical Application to Veterinary Laboratory Procedures*Credits: 1*

This lab is designed to prepare students to examine blood and urine for diagnostic and prognostic purposes in veterinary practice. Students will learn to perform various tests including complete blood counts, blood chemistries, serological tests, fecal testing cytology, and complete urinalyses.

Prerequisite: VET 2001, both with C or higher

Prerequisite/Corequisite: VET 2002 (with C or higher if prerequisite)

Corequisite: VET 2005

Previous VET* 206

VET 2012 - Principles of Veterinary Imaging*Credits: 1*

The principles of radiologic imaging and its safe use in patient diagnostics are presented as well as the technical skills needed to perform radiological procedures. Animal restraint, positioning, special diagnostic techniques and imaging are reviewed. Ultrasonography, Computerized Axial Tomography, Magnetic Resonance Imaging and Positron Emission Tomography will be discussed.

Prerequisite: VET 1026, VET 1051 ,and VET 2002 - all with C or higher

Prerequisite/Corequisite: VET 1052 (with C or higher if prerequisite)

Corequisite: VET 2013 or VET 2031

Previous VET* 212

VET 2013 - Clinical Diagnostic Imaging for the Veterinary Technician*Credits: 1*

This course prepares the veterinary technician to obtain diagnostic radiographic images in the veterinary patient. Animal restraint and positioning for a variety of common radiographic views and procedures are practiced, first in manikins and then in live patients. Radiation safety, proper

image labeling and filing, and image quality assessment are stressed throughout.

Prerequisite: VET 2002, all with C or higher

Prerequisite/Corequisite: VET 1052 (with C or higher if prerequisite)

Corequisite: VET 2012

Previous VET* 212

VET 2020 - Animal Pathophysiology

Credits: 3

The course encompasses health and diseases of the major domestic animal species. Clinical signs of organ dysfunction, pathophysiology, diagnostic tests, treatment, and prevention are reviewed. The lecture topics are approached in an organ system format including integumentary, musculoskeletal, neurosensory, cardiovascular, respiratory, digestive, renal and reproductive, hematologic and immunologic systems.

Prerequisite: VET 1051, VET 1052, VET 2002, VET 2005 and VET 2050 and VET 2006 or VET 2031 - all courses with a C or higher

Previous VET* 220

VET 2030 - Veterinary Anesthesia and Surgical Nursing

Credits: 3

This course is intended to prepare the student to administer anesthesia, prepare and monitor patients, and assist in surgical procedures. Surgical and anesthetic procedures, including a study of anesthetic drugs, patient preparation and post-op care, will be discussed.

Prerequisite: VET 1051, VET 2002, VET 2005, VET 2050 and VET 2095 - all with a C or higher

Corequisite: VET 2031 or VET 2032 or VET 2033

Previous VET* 230

VET 2031 - Combined Clinical Course for Veterinary Surgical Nursing, Lab Procedures, and Radiology

Credits: 3

This course is the combined clinical course for the lecture material covered in VET 2030. This course prepares students to administer and monitor anesthesia, prepare surgical patients and assist in surgical procedures, perform radiographic studies, and perform veterinary laboratory procedures. Training manikins and models are used for initial instruction, after which students will work with live cats and dogs receiving routine care.

Prerequisite: VET 2095, all with a C or higher

Corequisite: VET 2030

Previous VET* 230

VET 2032 - Clinical Anesthesia, Surgical Nursing and Dentistry for Veterinary Technicians

Credits: 1

This course prepares the veterinary technician student to administer and monitor anesthesia, prepare surgical patients and assist in surgical procedures, and perform dental prophylaxis and radiography. Training manikins and models are used for initial instruction, after which students will work with live cats, dogs and other small animal patients receiving routine surgical and dental care. While completing their clinical requirements, students will have the opportunity to practice previously learned nursing and physical exam skills, and will also gain exposure to clinical techniques that are best practiced on sedated patients, such as urinary catheter placement, orogastric tube placement, Buccal Mucosal Bleeding Time (BMBT) testing, and cystocentesis.

Prerequisite: VET 2095, all with a C or higher

Corequisite: VET 2040

Previous VET* 230L

VET 2033 - Clinical Approach to Veterinary Anesthesia and Surgical Nursing

Credits: 1

This course prepares students for a hands-on approach to veterinary anesthesia and surgical nursing. Students will administer anesthesia and perioperative monitoring of the patient. Emphasis will be placed on patient assessment, pain management, anesthetic protocols, anesthetic depth, surgical/anesthetic complications, and emergency techniques. Students will become familiar with common surgical procedures and anesthetic drugs usage and effects. Additional hands-on topics include sterile/aseptic techniques, identification of surgical instruments and equipment, and other special nursing considerations.

Prerequisite: VET 2095, all with a C or higher

Previous VET* 230

VET 2035 - Veterinary Microbiology and Immunology

Credits: 4

This course is an introduction to Veterinary Microbiology for the veterinary technician. Topics include microbial morphology, metabolism, genetics, growth and control, infection, immunity, veterinary commensals and pathogens. Veterinary relevant clinical applications are emphasized. Laboratory work emphasizes bacterial staining techniques, sample collection techniques, microscopic examination, culturing isolation and biochemical reactions.

Prerequisite: Admission into the Veterinary Technology Program and Instructor Approval

Previous VET* 235

VET 2038 - Veterinary Parasitology*Credits: 3*

This course is intended to familiarize students with the parasites of importance in the veterinary field with an emphasis on the diagnosis and treatment of parasitic diseases of domestic animals. A laboratory component focuses on clinical diagnostic procedures including immunodiagnostic techniques using both living and preserved specimens. Topics include prevention of infection and transmission, and zoonotic disease transmission, control and epidemiological concerns.

Prerequisite: VET 1051, VET 1052, VET 2005 and VET 2050 and VET 2006 or VET 2031 - all courses with a C or higher

Previous VET* 238

VET 2040 - Periodontology and Oral Radiology*Credits: 2*

This course is an introduction to the theory and clinical aspects of veterinary dentistry. Topics include oral anatomy, terminology, periodontology, oral radiography, endodontics, orthodontics and restorative dentistry. Tasks performed by veterinary technicians, including oral radiography will be discussed and taught in a clinical setting.

Prerequisite: VET 2005 - with C or higher

Prerequisite/Corequisite: (VET 2012 and VET 2030) and (VET 2031 or both VET 2013 and (VET 2032 or VET 2033)) - all with C or higher if prerequisite

Previous VET* 240

VET 2050 - Principles of Pharmacology for Veterinary Technicians*Credits: 3*

The study of dose and dosage in applied pharmacology. Topics include basic mathematics, conversions, measurements, drug calculations, drug orders and fluid rate calculations. The major classes of drugs used in therapeutics, dose response characteristics, mechanisms of action, major physiological effects, and toxicity and drug interactions are discussed. A review of laws applying to licensure and use of controlled substances in veterinary medicine is included.

Prerequisite: VET 1026 and VET 2001 both with C or higher

Prerequisite/Corequisite: VET 2002 (with C or higher if prerequisite)

Previous VET* 250

VET 2095 - Veterinary Technology Externship I*Credits: 1*

This externship is a student's first externship experience. The externship will offer a supervised experience under the direction of a licensed veterinarian, certified technician, or animal research technician through placement at an off-site veterinary hospital, private practice, or laboratory facility.

Students will refine skills learned in all previous veterinary technology courses. Students must complete 240 externship hours total throughout both externships as defined by the campus program coordinator. The externship site must be in a faculty-approved facility.

Prerequisite: VET 1002, VET 1051, and VET 2002, all with C or higher and instructor approval

Previous VET* 280

VET 2195 - Veterinary Technology Externship II*Credits: 1*

This externship is a student's final externship experience. Students must demonstrate competency in the defined learning objectives in order to meet program completion expectations. The externship will offer a supervised experience under the direction of a licensed veterinarian, certified technician, or animal research technician through placement at an off-site veterinary hospital, private practice, or laboratory facility. Students will refine skills learned in all previous veterinary technology courses. Students must complete 240 externship hours total throughout both Externship I and Externship II as defined by the campus program coordinator. The externship site must be in a faculty-approved facility.

Prerequisite: Instructor Approval

Previous VET* 290

WGS 1005 - Introduction to Women's and Gender Studies*Credits: 3*

Introduction to Women's and Gender Studies is an interdisciplinary course that examines the social construction of gender and how it intersects with race/ethnicity, class, religion, nationality, culture, and sexual orientation to develop an understanding of how privilege and oppression operate.

Prerequisite: Eligibility for ENG 1010 or permission of the instructor

General Education Code: ARHX

Elective Code(s): SSCI

Previous WGS* 105

WMTR 1001 - Water Treatment and Distribution*Credits: 6*

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.

Previous WMT* 101

WMTR 1002 - Special Topics in Water Treatment*Credits: 3*

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.

Previous WMT* 102**WMTR 1003 - Special Topics in Water Distribution***Credits: 3*

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.

Previous WMT* 103

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