BOR ACADEMIC AND STUDENT AFFAIRS COMMITTEE
AGENDA
Friday, June 3, 2022 at 9:30 a.m.
Conducted via Remote Participation
Meeting will live stream at: https://youtu.be/D-N4HGMgcsk

1. Approval of Minutes
   a. May 6, 2022 – *Page 1*

2. Consent Items
   a. Discontinuations
      i. Gerontology – Official Certificate Program – Central CT State University – *Page 7*
      ii. Early Childhood Teaching Credential – Eastern CT State University – *Page 12*

3. Action Items
   a. Modifications
      i. Criminal Justice – AS – Manchester CC - [Significant modification of courses/course substitutions] – *Page 17*

   b. New Programs
      i. Applied Data Science – Master of Science – Eastern CT State University – *Page 28*
      ii. Paralegal – AS – Tunxis CC – *Page 42*

   c. CSU Promotions and Tenures
      i. Eastern CT State University - *Page 60*

   d. Faculty Research Grants
      i. Central CT State University - *Page 63*
      ii. Eastern CT State University - *Page 67*
      iii. Western CT State University - *Page 69*

   e. Community College Emeritus
      i. Middlesex Community College – *Page 73*
      ii. Tunxis Community College – *Page 74*

   f. Refugee Policy for BOR Committee Review – *Page 75*

   g. CT State Community Colleges Areas of Study Policy Update - *Page 78*

   h. CT State Community College Aligned Curriculum – *Page 87*

4. Informational Items
   a. CSU Emeriti
      i. Southern CT State University (4) – *Page 334*

   b. Community College Promotion and Tenure
      i. Asnuntuck Community College – *Page 338*
      ii. Capital Community College – *Page 339*
      iii. Housatonic Valley Community College – *Page 340*
      iv. Middlesex Community College – *Page 342*

v. Naugatuck Valley Community College – *Page 343*
vi. Northwestern Community College – *Page 347*
vii. Quinebaug Valley Community College – *Page 348*
viii. Three Rivers Community College – *Page 349*
ix. Tunxis Community College – *Page 350*

c. ACME Report and Update – *Page 351*

d. Below Threshold
   i. Gerontology – Certificate Program – Central CT State University [New Academic Offering] - *Page 361*
   ii. Disaster Mental Health – Graduate Certificate – Southern CT State University [New Academic Offering] – *Page 364*
   iii. Political Economy – Minor – Southern CT State University [New Academic Offering] – *Page 368*
   iv. CT State Below Threshold Program Modifications Spring 2022 – *Page 371*

If any member of the public is unable to attend the meeting in real-time due to a lack of physical location or electronic equipment, they may request assistance by email to PHeleen@commnet.edu at least 24 hours before the meeting.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

ACADEMIC & STUDENT AFFAIRS COMMITTEE

Meeting – May 6, 2022 at 9:30 a.m.
Conducted via Remote Participation

MINUTES

Regents Present:	Ira Bloom, Aviva Budd, Holly Howery, Richard Porth, JoAnn Ryan, Colena Sesanker (ex officio)
Regents Absent:	Brandon Iovene (ex officio), Julia Noriega (ex officio)
Ex-Officio, Non-Voting BOR Members:	Dr. Manisha Juthani, Commissioner, CT Dept. of Public Health
Staff Present:	Kenneth Klucznik, Andrew Morris, Fran Rosselli-Navarra, Patricia Ryiz, Noreen Wilson
Other Attendees:	Missy Alexander (SCSU), Donna Bontatibus (MxCC), Saaid Elhadad (CCC), Teresa Foley (ACC), Andre Freeman (CCC), Kim Hogan (MxCC), H. Justin Moore (NVCC), Narendra Sharma (NVCC), Sheldon Watson (CCSU)

The meeting was called to order at 9:32 a.m. by Chair Ira Bloom.

An official roll call of the BOR Academic and Student Affairs Committee members was taken and a quorum was declared.

Regent Bloom noted that there will be additions to Item 2e. Community College Emeritus. Tunxis Community College and Middlesex Community College have submitted additional nominations for Emeritus.

1. Approval of Minutes
   a. April 8, 2022
   On a motion by H. Howery and seconded by A. Budd, a vote was taken and the minutes from the April 8, 2022, BOR ASA Committee meeting were approved unanimously.

2. Action Items
   a. Modifications
      i. Engineering Technology – Mechanical – Option – AS – Naugatuck Valley CC [Name change to Mechanical Engineering Technology]

Dr. H. Justin Moore, Interim Dean of Academic Affairs, and, Narendra Sharma, Professor/Coordinator of Mechanical Engineering Technology, presented. The modification to this program is a name change only. The program is currently listed as Engineering Technology – Mechanical and NVCC seeks to change the name to Mechanical Engineering Technology. The reasons for this request are to provide consistency with the program title for all the College's publications, to match the format of the Electrical Engineering Technology degree, and at the request of the program's accreditation body, The Accreditation Board for Engineering and Technology (ABET). Student transcripts will list the correct program title.

Chair Bloom called for a motion to approve the program modification, specifically, a name change from Engineering Technology – Mechanical, to Mechanical Engineering Technology for the Naugatuck Valley CC AS program option. The motion was moved by Regent Budd and seconded by Regent Porth.

A vote was taken and it was unanimous.

   b. New College of Technology (COT) Program
      i. Technology Studies: Artificial Intelligence – AS Degree Option – Capital CC

Dr. André Freeman, Professor of Mathematics, and Professor Saaid Elhadad, Cybersecurity, presented. The Artificial Intelligence Option is a new option in the COT Technology Studies program. The new program is a collaboration between the College of Technology and the Intel Artificial Intelligence Incubator Network which provides the curriculum to community colleges and technical community colleges across the nation to construct a workforce of individuals who have the artificial intelligence skills to develop AI solutions - natural language processing, artificial intelligence, and machine learning fundamentals. CCC is also developing TAP Agreements with Southern CT State University and Central CT State University and an Artificial Intelligence Certificate program which will give students the option to take course work without completing the AS degree. Dr. Freeman and Professor Elhadad attended training in the curriculum, resources, and skills necessary for students to attain employment in the artificial intelligence sector.

Questions/Comments from the Committee included:

i. *Are there job opportunities with only an AS degree? What is the timeline for SCSU/CCSU to have a BS in Artificial Intelligence for Transfer?*
   Response: SCSU and CCSU did not give a timeline for a BS in Artificial Intelligence. All courses are transferrable to a BS in Data Science except for the Artificial Intelligence courses. Of the 60 credits in the degree, a majority of courses would transfer to the CSUs.
ii. *Regent Howery noted that CCC offering a certificate in Artificial Intelligence is a smart move for employees working in Information Technology to add to their skills and expertise. Also, she stated that offering the AS in Artificial Intelligence at the community college level will offer students of color the opportunity to study artificial intelligence and, in turn, diversify the workforce in this area.*
iii. *What kinds of jobs will graduates with an AS in Artificial Intelligence qualify for?*

Response: Students from CCC's AS in Data Science have obtained jobs as software developers and entry-level computer science jobs. The Data Science AS is very similar to Artificial Intelligence AS degrees. Representatives from Intel noted that they seek employees with an understanding of technology who can develop and implement artificial intelligence solutions. Students with the AS degree and these skills qualify for entry-level positions and can provide support to companies. CCC seeks to establish a Program Advisory Board to develop a workforce in the Greater Hartford Region to compete for entry-level jobs.
Intel's survey of company needs indicate that this credential, the AS in Artificial Intelligence, will make graduates of the program competitive and employable. They stated that their data shows that the BS and beyond are not necessarily needed for entry-level jobs. Graduates with AS degrees in Computer Science, Cybersecurity and Data Science can get jobs. With employer buy in, CCC graduates would be competitive for entry-level jobs.

iv. *Regent Budd stated that she thinks the proposed AS in Artificial Intelligence is premature. She would rather see the BS in Artificial Intelligence in place before this program is implemented. She is concerned whether Guided Pathways advisors will inform students taking this program that two courses from the proposed AS in Artificial Intelligence are not transferrable.*

Chair Bloom called for a motion to approve the licensure of a program, College of Technology: Technology Studies: Artificial Intelligence Option leading to an Associate of Science at Capital Community College; and grant its accreditation for a period of seven semesters beginning with its initiation, such initiation to be determined in compliance with BOR guidelines for new programs approved on or after April 3, 2020. The motion was moved by Regent Budd and seconded by Regent Porth.

A vote was taken and it was unanimous.

c. CSU Promotions and Tenures
   i. Central CT State University
   ii. Eastern CT State University
   iii. Southern CT State University
   iv. Western CT State University

Chair Bloom called for a motion to approve the CSU Promotions and Tenures. Regent Budd moved the motion and Regent Porth seconded the motion.

A vote was taken and it was unanimous.

d. Faculty Research Grants
   i. Central CT State University
   ii. Eastern CT State University
   iii. Southern CT State University
   iv. Western CT State University

Chair Bloom noted that Board action is necessary to approve the CSU Faculty Research Grants.

Chair Bloom called for a motion to approve the CSU Faculty Research Grants. Regent Howery moved the motion and Regent Porth seconded the motion.

A vote was taken and it was unanimous.

Dr. Klucznik recognized four people from the CSUs for their hard work in providing the administrative support for the Faculty Research Grants:

- Brenda Lopez – Central CT State University
- Amanda Irwin – Eastern CT State University
- Jennifer Hudson – Southern CT State University
- Gabrielle Jazwiecki – Western CT State University

e. Community College Emeritus
   i. Northwestern CT Community College
   ii. Tunxis Community College

Chair Bloom read the following recommendations for Community College Emeritus which were submitted after the agenda packet for the May 6, 2022 BOR Academic and Student Affairs Committee was distributed:

- **From Middlesex Community College**
  - **Emily Canto**
  - **Janet Klinck**
- **From Tunxis Community College**
  - **Dr. Kimberly James**
  - **Susan Gentry**
  - **Marguerite Yawin**
  - **Lisa Celona**
  - **Salley Terrell**
  - **Judy Reilly-Roberts**

Kim Hogan, Interim CEO, Middlesex CC, asked for permission to include additional names of faculty Emeriti for consideration. Chair Bloom asked the Committee if there were any objections to reading these names and including them in the recommendations. There were no objections.

- **From Middlesex Community College**
  - **Dr. John Ambenge**
  - **Lionel Carmona**
  - **Donna Hylton**
  - **Richard Lenoce**
  - **Patricia Raymond**
  - **Dr. Judy Wallace**

Chair Bloom called for a motion to approve the Community College Emeritus with the addition of the eight Emeriti from Middlesex Community College and the six Emeriti

from Tunxis Community College who were not included in the agenda packet. Regent Budd moved the motion and Regent Porth seconded the motion.

A vote was taken and it was unanimous.

f. CT State Community College Aligned Curriculum

Chair Bloom called for a motion to approve the licensure and accreditation of the degrees and certificates for Connecticut State Community College (listed in the BOR Resolution) developed from degrees and certificates *previously approved by the Board for one or more of the 12 individually accredited colleges*. Regent Howery moved the motion and Regent Porth seconded the motion.

A vote was taken and the vote was unanimous.

g. Recognizing the CSCU Phi Theta Kappa (PTK) All-Connecticut Academic Team

Chair Bloom called for a motion to recognize the outstanding accomplishments of the students of the 2021 – 2022 All-CT Academic Team and their advisors. Regent Howery moved the motion and Regent Porth seconded the motion.

A vote was taken and the vote was unanimous.

h. 2022 Henry Barnard Award Recipients

Chair Bloom called for a motion to recognize the twelve students representing the Connecticut State Universities who have received a 2022 Henry Barnard Distinguished Student Award. Regent Budd moved the motion and Regent Porth seconded the motion.

Dr. Klucznik noted that to qualify for the Henry Barnard Award, students must achieve a 3.7 GPA and demonstrate a significant commitment to volunteerism.

A vote was taken and the vote was unanimous.

3. Informational Items were noted
   a. CSU Emeritus
      i. Southern CT State University

   b. Below Threshold
      i. Electronic Engineering Technology – AS – Naugatuck Valley CC [Program Modification]
      ii. Liberal Arts and Sciences – AA – Naugatuck Valley CC [Program Modification]
      iii. Environmental Science – AS – Naugatuck Valley CC [Program Modification]
      iv. Engineering Technology - Mechanical – AS – Naugatuck Valley CC [Program Modification]

Chair Bloom called for a motion to adjourn the meeting. The motion was moved by Regent Howery and seconded by Regent Budd.

A vote was taken, and it was unanimous. The meeting was adjourned at 10:10 am.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Program Discontinuation

June 23, 2022

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program, Gerontology, (CIP Code: 19.0702 / OHE# 18714), leading to a Graduate Certificate at Central Connecticut State University, effective June 2024.

A True Copy:

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Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

ITEM
Discontinuation of a program, Gerontology, leading to a Graduate Certificate at Central Connecticut State University, effective Spring 2023.

Name of Institution	Central Connecticut State University	
Name of Program	Gerontology, Official Certificate Program	
CIP Code	19.0702	
OHE# (Leave blank for new programs)	18714	
Degree Level	Graduate Certificate	
Number of Collegiate Credits		
Date of Action (Anticipated)	06/23/2022	
Nature of Request	__ Licensure and Accreditation __ Program Change X Phase-out Program X Terminate Program	
If Name Change, New Name	N/A	
Delivery	Current (If not a new program) X On Ground X Hybrid __ Online	Future __ On Ground __ Hybrid __ Online
Effective Term	N/A	
If a Discontinuation, date of Termination	June 2023	
If a Suspension, dates of Suspension	N/A	

BACKGROUND
Despite positive feedback from students and our best efforts to market and support this emerging OCP we have decided to discontinue the program due to low enrollment. A recent market analysis by Hanover Research revealed that entry-level managers in these areas typically hold a bachelor's degree or less. Furthermore, the analysis revealed a greater need for credentials at the undergraduate level and so resources will be redirected to supporting our interdisciplinary gerontology minor and developing gerontology credentials at the undergraduate level. Toward this end we have recently created an undergraduate gerontology certificate, which we believe will help support the state's workforce needs with regard to our aging population. We remain committed to gerontology education and preparing students to meet the growing need for expertise in the field of aging that cuts across a broad range of disciplines/professions and requires the coordination and cooperation of both public and private agencies and organizations.

Phase out:

At the end of Spring 2022, all students currently enrolled in the program will have completed the required core courses. The availability of elective courses for the program will not change so students will not have a problem completing the program. All students should have completed by Spring 2023.

There are no costs with this discontinuation.

RECOMMENDATION

Following its review and deliberative process, it is the recommendation of the Academic Council that the Board of Regents approve the discontinuation of this certificate program. The System's Provost and Senior Vice President for Academic and Students Affairs concurs with this recommendation.

06/03/2022 – BOR -Academic and Student Affairs Committee
06/23/2022 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
Connecticut State Colleges & Universities
APPLICATION FOR ***DISCONTINUATION OF EXISTING PROGRAM***

SECTION 1: GENERAL INFORMATION

Institution: Central CT State University	Date of Submission to CSCU Office of the Provost: 4/27/2022

Discontinued Program: GERO OCP CIP: 19.0702 OHE#: 18714 BOR Accreditation Date: October 20, 2016
Phase Out /Teach Out Period Spring 2023 Expected Date of Program Termination Spring 2023

Program Characteristics
Name of Program: Gerontology
Degree: Title of Award *(e.g. Master of Arts)* **Official Certificate Program**
Degree Certificate: *(specify type and level)*
Stand-Alone Certificate: *(specify type and level)* **OCP**
Modality of Program: On ground Online x Combined
Locality of Program: x On Campus Off Campus Both

Institution's Unit *(e.g. School of Business)* and Location *(e.g. main campus)* offering the Program: College of Liberal Arts and Social Sciences

Institutional Contact for this Proposal: Carrie Andreoletti	Title: Professor of Psychological Science, Gerontology Coordinator	Tel.: 860-832-1646 e-mail: andreolettic@ccsu.edu

SECTION 2: RATIONALE AND JUSTIFICATION FOR PROGRAM DISCONTINUATION

Narrative
Consider whether discontinuation: a) occurs in the context of a related academic improvement, e.g., the merging of programs with declining enrollment/completions into a new program that effectively addresses relevant state needs and students' interests; b) emerge as a result of the periodic Academic Program Review for all programs at each institution, under the guidance of existing BOR policy; c) other institutional considerations such as redirecting capacity, adoption of new mission, etc. Provide any quantitative information in support of the discontinuation, including any relevant financial information. Program discontinuation should not impact state priorities for workforce preparation.

Despite positive feedback from students and our best efforts to market and support this emerging OCP we have decided to discontinue the program due to low enrollment. A recent market analysis by Hanover Research revealed that entry-level managers in these areas typically hold a bachelor's degree or less. Furthermore, the analysis revealed a greater need for credentials at the undergraduate level and so we have decided to redirect our resources toward supporting our interdisciplinary gerontology minor and developing gerontology credentials at the undergraduate level. Toward this end we have recently created an undergraduate gerontology certificate, which we believe will help support the state's workforce needs with regard to our aging population.

Phase Out/Teach Out Strategy
Describe how the institution will ensure that students currently enrolled will be provided opportunities to complete the program. Provide quantitative information as needed (e.g. enrollments, any special resources needed, etc.)

GERO 500 was offered in Fall 2021 and GERO 510 is being offered currently in Spring 2022. At the end of this semester, all students currently enrolled in the program will have completed the required core courses. The availability of elective courses for the program will not change so students will not have a problem completing the program. All students should have completed by Spring 2023.

SECTION 3: RESOURCES

Close Out

What resources/costs would be employed and/or expended to discontinue program? What would be the total cost?

No costs are associated with this discontinuation.

SECTION 4: LESSONS LEARNED

(A debriefing exercise):

NOTE: Lessons Learned is knowledge or understanding gained from experience(s) that might be positive or negative, that might underscore strengths or weaknesses of an undertaking's preparation, design or implementation.

Are there lessons learned – experiences distilled from: (a) circumstances that precipitated this program discontinuation, (b) institutional or programmatic action(s) in the face of the referenced circumstances, (c) institutional or programmatic inaction(s) in the face of the referenced circumstances, and/or (d) some other occurrence(s); that can be **beneficially** shared with / taken into account by current and future programs?

Despite positive feedback from students and our best efforts to support this emerging OCP, after careful consideration of the market analysis conducted by Hanover Research discussed above, we decided that our time and resources would be better spent focusing on gerontology education at the undergraduate level and the development of programs that will better meet market demand at this time. We remain committed to gerontology education and preparing students to meet the growing need for expertise in the field of aging that cuts across a broad range of disciplines/professions and requires the coordination and cooperation of both public and private agencies and organizations.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Program Discontinuation

June 23, 2022

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program, Early Childhood Teaching Credential, (CIP Code: 13.1210 / OHE# 01382), at Central Connecticut State University, effective May 2022.

A True Copy:

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Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

ITEM
Discontinuation of a program, Early Childhood Teaching Credential, at Central Connecticut State University, effective Spring 2023.

Name of Institution	Eastern Connecticut State University	
Name of Program	Early Childhood Teaching Credential (ECTC)	
CIP Code	13.1210	
OHE# (Leave blank for new programs)	01382	
Degree Level	none	
Number of Collegiate Credits		
Date of Action (Anticipated)	06/23/2022	
Nature of Request	__ Licensure and Accreditation __ Program Change X Phase-out Program X Terminate Program	
If Name Change, New Name	N/A	
Delivery	Current (If not a new program) __ On Ground X Hybrid __ Online	Future __ On Ground __ Hybrid __ Online
Effective Term	N/A	
If a Discontinuation, date of Termination	May 2022	
If a Suspension, dates of Suspension	N/A	

BACKGROUND
The Early Childhood Teaching Credential (ECTC) at Eastern is embedded within the Bachelor in General Studies (BGS) program and provides graduates with the credentials to work in child care centers as head teachers. The program started in 2016 with nine students. Of these, four have graduated, three have completed all the ECTC requirements and are finishing the pending BGS requirements, and the remaining two are taking courses towards the BGS and will be counseled to join the Early Childhood Education (ECE) program. Any graduate with the ECE certification is automatically waived from ECTC requirements by the State Department of Education and graduates from this program would be eligible to work in childcare centers AND public school settings.

Our plan is to discontinue the ECTC but maintain the BGS program. This will provide a track for any interested transfer students to enroll in Eastern and to be counseled to join the ECE certification major. Students transferring into Eastern from community colleges are primarily interested in the ECE certification program. This is a thriving major at Eastern and we will continue to support all transfer students into this program. We will continue to strengthen our communications with community colleges

to ensure that transfer tickets are advised on the appropriate program and school for their career progression.

Phase out:
The two students who have not yet completed their ECTC courses will be counseled to complete the ECE certification major. Should these students decide to continue to pursue ECTC, we will offer the necessary courses and clinical experiences as independent studies. We have three ECE faculty who are willing to offer these independent studies.

There would be no additional monetary cost associated with this discontinuation.

RECOMMENDATION

Following its review and deliberative process, it is the recommendation of the Academic Council that the Board of Regents approve the discontinuation of this program. The System's Provost and Senior Vice President for Academic and Students Affairs concurs with this recommendation.

06/03/2022 – BOR -Academic and Student Affairs Committee
06/23/2022 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
Connecticut State Colleges & Universities
*APPLICATION FOR **DISCONTINUATION OF EXISTING PROGRAM***

SECTION 1: GENERAL INFORMATION

Institution: Eastern CT State Univ	Date of Submission to CSCU Office of the Provost: April 2022

Discontinued Program: ECTC CIP: 131210 OHE#: 01382 BOR Accreditation Date: n/a
Phase Out /Teach Out Period Fall 22-Spring 23 Expected Date of Program Termination May 2022

Program Characteristics

Name of Program: Early Childhood Teaching Credential (ECTC)
Degree: Title of Award *(e.g. Master of Arts)* **n/a**
Degree Certificate: *(specify type and level)* **n/a**
Stand-Alone Certificate: *(specify type and level)* n/a
Modality of Program: On ground Online x Combined
Locality of Program: x On Campus Off Campus Both

Institution's Unit *(e.g. School of Business)* and Location *(e.g. main campus)* offering the Program: School of Education & Professional Studies, Willimantic campus

Institutional Contact for this Proposal: Sudha Swaminathan	Title: Chair, Education Department	Tel.: 8604654535 e-mail: swaminathans@easternct.edu

SECTION 2: RATIONALE AND JUSTIFICATION FOR PROGRAM DISCONTINUATION

Narrative

Consider whether discontinuation: a) occurs in the context of a related academic improvement, e.g., the merging of programs with declining enrollment/completions into a new program that effectively addresses relevant state needs and students' interests; b) emerge as a result of the periodic Academic Program Review for all programs at each institution, under the guidance of existing BOR policy; c) other institutional considerations such as redirecting capacity, adoption of new mission, etc. Provide any quantitative information in support of the discontinuation, including any relevant financial information. Program discontinuation should not impact state priorities for workforce preparation.

The Early Childhood Teaching Credential (ECTC) at Eastern is embedded within our BGS (Bachelor in General Studies) program and provides graduates with the credentials to work in child care centers as head teachers. When we started the program in 2016, 9 students joined the program. Of these 9 students, 4 have graduated, 3 have completed all the ECTC requirements and are finishing the pending BGS requirements, and the remaining 2 are taking courses towards the BGS and will be counseled to join the ECTC program. Any graduate with the ECE certification is automatically waived from ECTC requirements by SDE.

Our plan is to discontinue the ECTC but maintain the BGS program. This will provide a track for any interested transfer students to enroll in Eastern and to be counseled to join the ECE certification major. Graduates from this program would be eligible to work in child care centers AND public school settings.

Phase Out/Teach Out Strategy

Describe how the institution will ensure that students currently enrolled will be provided opportunities to complete the program. Provide quantitative information as needed (e.g. enrollments, any special resources needed, etc.)

As stated before, we have only 2 students who have pending ECTC courses. They will be counseled to complete the ECE certification major. Should these students decide to pursue ECTC, we will offer the necessary courses and clinical experiences as independent studies. We have three ECE faculty in staff who are willing to offer these independent studies.

SECTION 3: RESOURCES

Close Out

What resources/costs would be employed and/or expended to discontinue program? What would be the total cost?

There would be no additional monetary cost associated with this discontinuation. Any additional research to determine if any community college students are actively pursuing this transfer ticket and support for those students, including course/program advising, are already included in the workload of our ECE faculty.

SECTION 4: LESSONS LEARNED

(A debriefing exercise):

NOTE: Lessons Learned is knowledge or understanding gained from experience(s) that might be positive or negative, that might underscore strengths or weaknesses of an undertaking's preparation, design or implementation.

Are there lessons learned – experiences distilled from: (a) circumstances that precipitated this program discontinuation, (b) institutional or programmatic action(s) in the face of the referenced circumstances, (c) institutional or programmatic inaction(s) in the face of the referenced circumstances, and/or (d) some other occurrence(s); that can be **beneficially** shared with / taken into account by current and future programs?

Students purposefully transferring into Eastern from community colleges are primarily interested in the ECE certification program. This is a thriving major at Eastern and we will continue to support all transfer students into this program. The students who are interested in ECTC are intentionally choosing other CSUS schools. We will continue to strengthen our communications with community colleges to ensure that transfer tickets are advised on the appropriate program and school for their career progression.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Modification of a Program

June 23, 202

RESOLVED: That the Board of Regents for Higher Education approve the modification of a program – Criminal Justice (CIP Code: 43.0104 / OHE# 000315), specifically modification of courses and course substitutions – leading to an Associate of Science at Manchester Community College.

A True Copy:

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Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

ITEM

Modification of a program – Criminal Justice, specifically modification of courses and course substitutions – leading to an Associate of Science at Manchester Community College.

BACKGROUND

The Criminal Justice, A.S. degree has been offered at Manchester Community College (MCC) for many years and has a proven track record. Our communities rely on professionals in the criminal justice field to ensure the safety and well-being of citizens and to uphold and maintain the constitutional rights of individuals with the utmost integrity and professionalism. Accordingly, the program's curriculum provides students with critical skills and knowledge to serve as effective public servants.

The Criminal Justice, A.S. curriculum at MCC is being revised to better align the degree with the Criminology Studies, A.A. CSCU Transfer Pathway degree and the anticipated CT State Criminal Justice, A.S. curriculum. These proposed modifications will provide a smoother transition for students switching between the Criminal Justice A.S. degree program and the Criminology Studies, A.A. TAP Pathway degree program. It will also allow benefit students entering in AY 2022-2023 as the modifications better align the curriculum with the approved CT State Criminal Justice, A.S. curriculum. The revised curriculum also better reflects current trends in the professional and academic area of criminal justice including the integration of a required diversity course.

The program directly addresses CT workforce needs and the safety of the community. Criminal justice agencies throughout the state of Connecticut are facing significant staffing shortages and it is anticipated that these deficits will worsen with a quarter of the state's workforce eligible to retire before the end of FY 2022. A July 2021 study by the Boston Consulting Group examined ways that Connecticut might best mitigate the risk to service continuity brought about by the anticipated retirements among state employees in 2022. Notably, 18% of the Department of Corrections (DOC) and 21% of Department of Emergency Services and Public Protection (DESPP) employees are eligible to retire before June 30, 2022. The Connecticut State Police which falls under DESPP has 145 employees eligible to retire, creating additional strain to the agency that has already seen a 16% significant reduction in its ranks over the last three years. The report also emphasizes the reciprocal relationship between the shortage of essential public safety employees and state overtime spending, a factor that results in state fiscal strain and impact to taxpayers. Specifically, the report emphasizes the importance of lowering inmate-to-correctional officer staffing ratios as critical for DOC and increasing police academy sizes to address the significant shortage of state troopers, representing direct opportunities for students studying criminal justice. Municipal law enforcement agencies throughout the state of Connecticut face similar challenges and are struggling to attract and recruit qualified applicants (see *State facing Police Officer Shortage*; *Police: Hiring CT officers more difficult after COVID, national protests*). These shortages directly impact the safety and security of Connecticut residents. In demonstration**,** Connecticut staffs 2.7 protective personnel for every 10,000 residents, compared to neighboring states' average of 5.1 (MA, MD, RI, NY). MCC's Criminal Justice program prepares students to directly enter the field after graduation and students graduating from the program will have the opportunity to directly impact the critical shortages in public safety personnel.

Currently, 11 of the 12 Connecticut Community Colleges offer a Criminal Justice, A.S. degree. Criminal Justice program coordinators from these colleges worked together to create a common Criminal Justice degree for CT State that provides both standard curricular experiences for all students regardless of their location and unique specializations by campus. The program at MCC has historically been one of the

largest enrolled programs in the state. Students are drawn from throughout the MCC service region as well as surrounding areas. The program offers unique courses and concentrations. For example, the criminal justice program at MCC is the only program in the CT Community College system that has a dedicated crime laboratory, allowing students to gain hands on experience. The proposed modifications will allow currently enrolled students and those enrolling in the program in the 2022-2023 academic year a smoother transition to the CT State curriculum.

The program modifications also help eliminate some barriers to transfer. Specifically, the inclusion of additional social science options in the general education portion of the degree and the inclusion of CJS*201/SOC*240 Criminology reflect necessary courses that students need upon transfer to criminal justice related programs at CSCU institutions. Similarly, the removal of the second courses in the areas of concentration eliminate courses that have historically been difficult for students as far as transfer equivalencies.

Fiscal Impact

No additional resources are needed to implement this modification – the proposed curricular changes reflect courses already being offered and will not require any additional institutional resources.

RECOMMENDATION

Following its review and deliberative process, it is the recommendation of the Academic Council that the Board of Regents approve this program modification. The System's Provost and Senior Vice President for Academic and Student Affairs concurs with this recommendation.

05/07/2021 – BOR -Academic and Student Affairs Committee
05/20/2021 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

Connecticut State Colleges & Universities

APPLICATION FOR ***MODIFICATION OF ACCREDITED PROGRAM***

SECTION 1: GENERAL INFORMATION

Institution: Manchester Community College | Date of Submission to CSCU Office of the Provost: **4/20/2022**

Most Recent NECHE Institutional Accreditation Action and Date: **March 7, 2014**

Original Program Characteristics
CIP Code No. **43.0104**
Title of CIP Code **Criminal Justice/Safety Studies**
Name of Program: **Criminal Justice, A.S.**
Degree: **Associate of Science**
Stand-Alone Certificate: *(specify type and level)*
Date Program was Initiated: OHE#:
Modality of Program: **X** On ground Online Combined
If "Combined", % of fully online courses?
Locality of Program: **X** On Campus Off Campus Both

Original Program Credit Distribution
Credits in General Education: **21-22**
Credits in Program Core Courses: **27**
Credits of Electives in the Field: **9**
Credits of Free Electives: **3**
Cr Special Requirements *(include internship, etc.)*: **0**
Total # Cr in the Program *(sum of all #Cr above)*: **60-61**
From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: **60-61**

Type of Program Modification Approval Being Sought (mark all that apply):
X Significant Modification of Courses/Course Substitutions*
Offering of Program at Off-Campus Location (specify new location)
Offering of Program Using an Alternate Modality (e.g. from on ground to online)
Change of Degree Title or Program Title
***Significant** is defined as "more than 15 credits in a previously approved undergraduate degree program or more than 12 credits in a previously approved graduate degree program.

Modified Program Characteristics
Name of Program: **Criminal Justice, A.S.**
Degree: Title of Award *(e.g. Master of Arts)* **Associate of Science**
Certificate[1]: *(specify type and level)*
Program Initiation Date: **Fall 2022**
Modality of Program: **X** On ground Online Combined
If "Combined", % of fully online courses?
Locality of Program: **X** On Campus Off Campus Both

Modified Program Credit Distribution
Credits in General Education: **21-22**
Credits in Program Core Courses: **27**
Credits of Electives in the Field: **9**
Credits of Free Electives: **3**
Cr Special Requirements *(include internship, etc.)*: **0**
Total # Cr in the Program *(sum of all #Cr above)*: 60-61
From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution:

Total Number of courses and course credits to be modified by this application: **5/15 credits**

If program modification is concurrent with discontinuation of related program(s), list information for such program(s):
Program Discontinued: CIP: OHE#: Accreditation Date:
Phase Out Period Date of Program Termination

Other Program Accreditation:
- If seeking specialized/professional/other accreditation, name of agency and intended year of review:
- If program prepares graduates eligibility to state/professional license, please identify:

(As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)

Institutional Contact for this Proposal: Kathryn Kleis Title: Professor Tel.: 860-512-2795 e- mail: kkleis@manchestercc.edu

[1] If creating a Stand-Alone Certificate program from existing courses belonging to a previously approved baccalaureate/associate degree program, enter information about that program in the "Original Program" section.

Institution's Unit *(e.g. School of Business)* and Location *(e.g. main campus)* Offering the Program: **Social Science, Business and Professional Careers Division, main campus**

SECTION 2: BACKGROUND, RATIONALE AND NATURE OF MODIFICATION

(Please Complete Sections as Applicable)

Background and Rationale *(Please provide the context for and need for the proposed modification, and the relationship to the originally approved program)*

The curriculum is being revised to better align the Criminal Justice, A.S. degree with the Criminology Studies, A.A. TAP Pathway degree and the anticipated CT State Criminal Justice, A.S. curriculum. These proposed modifications will provide a smoother transition for students switching between the Criminal Justice A.S. degree program and the Criminology Studies, A.A. TAP Pathway degree program. It will also allow benefit students entering in AY 2022-2023 as the modifications better align the curriculum with the approved CT State Criminal Justice, A.S. curriculum. Curriculum is also being updated to reflect current trends in the professional and academic area of criminal justice including the integration of a required diversity course.

As applicable, please describe:

How does the program address CT workforce needs and/or the wellbeing of CT society/communities? ***(Succinctly present as much factual evidence and evaluation of stated needs as possible)***

This is a modification to an existing program that has been offered at MCC for many years and has a proven track record. Our communities rely on professionals in the criminal justice field to ensure the safety and well-being of citizens and to uphold and maintain the constitutional rights of individuals with the utmost integrity and professionalism. Accordingly, the program's curriculum provides students with critical skills and knowledge to serve as effective public servants.

The program directly addresses CT workforce needs and the safety of the community. Criminal justice agencies throughout the state of Connecticut are facing significant staffing shortages and it is anticipated that these deficits will worsen with a quarter of the state's workforce eligible to retire before the end of FY 2022. A July 2021 study by the Boston Consulting Group examining ways that Connecticut might best mitigate the risk to service continuity brought about by the anticipated retirements among state employees in 2022. Notably, 18% of the Department of Corrections (DOC) and 21% of Department of Emergency Services and Public Protection (DESPP) employees are eligible to retire before June 30, 2022. The Connecticut State Police which falls under DESPP has 145 employees eligible to retire, creating additional strain to the agency that has already seen a 16% significant reduction in it's ranks over the last three years. The report also emphasizes the reciprocal relationship between the shortage of essential public safety employees and state overtime spending, a factor that results in state fiscal strain and impact to taxpayers. Specifically, the report emphasizes the importance of lowering inmate-to-correctional officer staffing ratios as critical for DOC and increasing police academy sizes to address the significant shortage of state troopers, representing direct opportunities for students studying criminal justice. Municipal law enforcement agencies throughout the state of Connecticut face similar challenges and are struggling to attract and recruit qualified applicants (see *State facing Police Officer Shortage*; *Police: Hiring CT officers more difficult after COVID, national protests*). These shortages directly impact the safety and security of Connecticut residents. In demonstration, Connecticut staffs 2.7 protective personnel for every 10,000 residents, compared to neighboring states' average of 5.1 (MA, MD, RI, NY). Students graduating from Manchester Community College's Criminal Justice program have the opportunity to directly impact these critical areas.

How does the program make use of the strengths of the institution (*e.g. curriculum, faculty, resources)* and of its distinctive character and/or location?

Full-time faculty have terminal degrees in the field or a related field. A significant strength of the program is the integration of a diverse contingent of approximately 15 adjunct faculty members, most still working in the field, that bring a broad range of expertise, academic preparation, and teaching proficiency to the classroom. The criminal justice program at Manchester Community College is the only program in the CT Community College system that has a dedicated crime laboratory, allowing students to gain hands on experience.

Please describe any transfer agreements with CSCU institutions that will become instituted as a result of the approval of this program ***(Please highlight details in the Quality Assessment portion of this application, as appropriate)***

While formal agreements will not be pursued due to the CT State transition, this program modification does eliminate some barriers to transfer. Specifically, the addition of additional social science options in the general education portion of the degree and the inclusions of CJS*201/SOC*240 Criminology reflect necessary courses that students need upon transfer to criminal justice related programs at CSCU institutions. Similarly, the removal of the second courses in the areas of concentration eliminate courses that have historically difficult as far as transfer equivalencies.

Please indicate what similar programs exist in other institutions within the CSCU System, and how unnecessary duplication is being avoided

Currently, 11 of the 12 Connecticut Community Colleges offer a Criminal Justice, A.S. degree. While there is duplication, the program at MCC has historically been one of the largest enrolled programs in the state. Students are drawn from throughout the MCC service region as well as surrounding areas. The program offers unique courses and concentrations that are not found at other community colleges within the state. With the impending merger and the development of curriculum for CT State, duplication from one physical campus to another will be the standard.

Please provide a description/analysis of employment prospects for graduates of this proposed program.

As discussed above, there is currently a shortage of public safety personnel in the state of Connecticut. National data reflects similar trends in other states. This career-focused program prepares students to directly enter the field after graduation a

The most current statistics available (grad year 2019-2020, 2021 Q3 employment) from the Connecticut Department of Labor *Higher Education/Workforce Report Card* reflects 76.9% of MCC Criminal Justice graduates as employed, slightly higher than the total CT Community College rate.

CT Department of Labor projections identify law enforcement patrol positions as an in-demand profession and short-term projections reflect an anticipated growth of 5% for the period of 2021-2023. Labor Department statistics also reflect significant earning potential for those at entry level in the protective services fields.

Employment Projections (2018-2028) – CT Department of Labor

Occupational Title	Est Employ 2018	Project Employ 2028	10 Year Net Change	10 Year % Change	Annual Total Openings	Minimum Education	Prior Work Exper.	Hourly Median Salary	Annual Median Salary
Correctional Officers and Jailers	2,985	2,824	-161	-5.4	241	High school diploma or equivalent	None	$25.40	$52,832.00
Detectives and Criminal Investigators	894	936	42	4.7	63	High school diploma or equivalent	< 5 years	$43.30	$90,079.00
Police and Sheriff's Patrol Officers	6,046	6,350	304	5.0	465	High school diploma or equivalent	None	$36.57	$76,060.00
Court, Municipal, and License Clerks	1,123	1,183	60	5.3	113	High school diploma or equivalent	None	$24.53	$51,018.00
Police, Fire, and Ambulance Dispatchers	1,078	1,126	48	4.4	110	High school diploma or equivalent	None	$27.73	$57,676.00

Present side-by-side listing of curricular modification: (From **Original** to **Modified**)

Please see pages 6 & 7

Description of Related Modification *(Provide a summary of other changes necessitated by curricular modification such as admissions or graduation requirements ,mode of delivery etc., and concisely describe how the institution will support these changes.)*

Modification of graduation requirements – curricular changes reflect courses already being offered and will not need any additional institutional resources

Description of Resources Needed *(As appropriate please summarize faculty and administrative resources, library holdings, specialized equipment, etc. Details to be provided in the next section, as appropriate)*

No additional resources needed

Other Considerations

Previous Three Years Enrollment and Completion for the Program being Modified

ACTUAL Enrollment	Fall Term, Year **2019-2020**		Fall Term, Year **2020-2021**		Fall Term, Year **2021-2022**	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Transfers In	4	12	3	9	4	2
New Students	32	25	18	14	10	14
Returning Students	52	89	34	58	22	67
ACTUAL Headcount Enrollment	88	126	55	81	36	83
Fall FTE accounted for by Program Majors	131		83		66	
Size of Credentialed Group(s) for Given Year	26		32		Est. 22	

Curriculum Details for a Program Modification *(to be used as appropriate for specific modification request)*[2]

[2] **Details of course changes for Community College institutions should be provided with enough detail to introduce necessary changes in the centralized programmatic database for that system.**

Course Number and Name [3]	L.O. #	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Program Core Courses				**Other Related/Special Requirements**		
CJS*101 Introduction to Criminal Justice	1,2,3,4	None	3			
CJS*105 Introduction to Law Enforcement or CJS*120 Police & Community	1,2,3,4	None	3			
CJS*213 Evidence and Courtroom Procedure	2,3,4	CJS*101	3			
CJS*211 Criminal Law I	1,2,3,4	ENG*101 with C- or better, completion CJS*101	3			
CJS*212 Criminal Law II	1,2,3,4	ENG*101 with C- or better, completion CJS*211 with C- or better	3			
CJS*245 Diversity & Multiculturalism in Criminal Justice OR CJS*247 Fair & Impartial Policing OR CJS*255 Ethical Issues in Criminal Justice OR CJS*294 Contemporary Issues in Criminal Justice	2,4	Concurrent enrollment or completion ENG*101 with C- or better	3			
CJS*289 Careers in Criminal Justice OR CJS*293 Coop Ed/Work Experience	1,4	CJS*101	3			
CJS*201/SOC*240 Criminology	3,4	CJS*101 or SOC*101	3			
POL*212 Constitutional Law	1,2,3,4	POL*111 or POL*112	3			
Core Course Prerequisites				**Elective Courses in the Field**		
				CJS* Elective		3
				CJS* Elective		3
				CJS*Elective		3
				Open Elective		3
Total Other Credits Required to Issue Modified Credential 24-25 (general education credits)						

Learning Outcomes - L.O. *(Please list up to seven of the most important student learning outcomes for the program, and any changes introduced)*

1. Demonstrate an understanding of the role of law enforcement, the courts and corrections and explain the functions they serve within the criminal justice system and the community.
2. Apply principles of constitutional and criminal laws that protect the rights of citizens and regulates conduct in a culturally diverse society.
3. Demonstrate knowledge of theories, principles, and processes of the criminal justice system.
4. Prepare written documents and deliver oral presentations related to the criminal justice field

[3] Make any detailed annotations for individual courses as needed to understand the curricular modifications taking place

SECTION 3: RESOURCE AND FINANCIAL CONSIDERATIONS

Cost Effectiveness and Availability of Adequate Resources

(Please complete the Pro-Forma Budget – Projected Revenues and Expenditures on the following page. Provide any necessary annotations for the Pro-Forma Budget and other commentary regarding the cost effectiveness and availability of adequate resources for the proposed modification below:

PRO FORMA Budget - Projected Revenues and Expenditures
(Whole Dollars Only)

PROJECTED Program Revenue	Fall 2022	Fall 20__	Fall 20__
Tuition (do not include internal transfers)	269,352	N/A – CT State	N/A – CT State
Program-Specific Fees	0.00	N/A – CT State	N/A – CT State
Other Revenue (Annotate in narrative)	0.00	N/A – CT State	N/A – CT State
Total Estimated Program Revenue	**$269,352**	**$ -**	**$ -**

PROJECTED Program Expenditures*	Fall 2022	Fall 20__	Fall 20__
Administration (Chair or Coordinator)	80,000	N/A – CT State	N/A – CT State
Faculty (Full-time, total for program)	83,000	N/A – CT State	N/A – CT State
Faculty (Part-time, total for program)	99,000	N/A – CT State	N/A – CT State
Support Staff	-	N/A – CT State	N/A – CT State
Library Resources Program	-	N/A – CT State	N/A – CT State
Equipment (List as needed)	-	N/A – CT State	N/A – CT State
Other (e.g. student services)	-	N/A – CT State	N/A – CT State
Estimated Indirect Costs (e.g. student services, operations, maintenance)	-	N/A – CT State	N/A – CT State
Total Estimated Program Expenditures	**$ 262,000**	**$ -**	**$ -**

*Note: Capital outlay costs, institutional spending for research and services, etc. can be excluded.

This PRO FORMA Budget provides reasonable assurance that the proposed program modification can be established and is sustainable. Some assumptions and/or formulaic methodology may be used and annotated in narrative on page 4 of Application.

Current		Credits	Proposed		Credits
CJS*101	Introduction to Criminal Justice	3	CJS*101	Introduction to Criminal Justice	3
Gen Ed	Gen Ed - MAT*	3	Gen Ed	Gen Ed - MAT*	3
Gen Ed - Humanities	COM*172 or COM*173 or COM*278: Interpersonal Comm, Public Speaking, Group Communication	3	Gen Ed - Humanities	COM*172 or COM*173 or COM*278: Interpersonal Comm, Public Speaking, Group Communication	3
ENG*101	ENG 101: English Composition	3	ENG*101	ENG 101: English Composition	3
Gen Ed - Social Sciences	POL*111: American Gov't OR POL*112: State & Local Gov't	3	Gen Ed - Social Sciences	POL*111: American Gov't OR POL*112: State & Local Gov't	3
		15			**15**
First course in area of concentration: CJS*105, CJS*102, CJS*225, CJS*201/SOC*240	**Law Enforcement - CJS* 105 Introduction to Law Enforcement; Corrections - CJS*102: Introduction to Corrections; Forensic Science - CJS*225: Forensic Science I; Crime and Deviance - CJS*201/SOC*240: Criminology**	**3**	**CJS*105 OR CJS*120**	**CJS*105: Introduction to Law Enforcement OR CJS*120: Police & Community**	**3**
Gen Ed - Social Sciences	**Choose one HIS course from Gen Ed - Social Sciences**	**3**	**Gen Ed - Social Sciences**	**SOC*101: Principles of Sociology OR PSY 111: General Psychology I OR HIS*101: Western Civ I OR HIS*102: Western Civ II OR HIS*201: U.S. History I OR HIS 202: U.S. History II**	**3**
Gen Ed	Physical & Natural Sciences	3-4	Gen Ed	Physical & Natural Sciences	3-4
ENG above 101	Any ENG* above 101	3	ENG above 101	Any ENG* above 101	3
CJS*220	**Criminal Investigations**	**3**	**CJS Diversity Designated Course**	**CJS*245 Diversity & Multiculturalism in Criminal Justice OR CJS*247 Fair & Impartial Policing OR CJS*255 Ethical Issues in Criminal Justice OR CJS*294 Contemporary Issues in Criminal Justice**	**3**
		15-16			**15-16**
CJS*288 or CJS*293	Careers in Criminal Justice OR CJ Cooperative Education/Work Experience	3	CJS*288 or CJS*293	Careers in Criminal Justice OR CJ Cooperative Education/Work Experience	3
CJS Elective	Any CJS* course	3	CJS Elective	Any CJS* course	3
Gen Ed - Art	Choose one course from Gen Ed - Arts	3	Gen Ed - Art	Choose one course from Gen Ed - Arts	3
Choose any course	Choose any course	3	Choose any course	Choose any course (CJS elective recommended)	3
CJS*211	Criminal Law I	3	CJS*211	Criminal Law I	3
		15			**15**

Second course in area of concentration	**Law Enforcement - CJS*120: Police & Community; Corrections - CJS*240: Correctional Administration; Forensic Science - CJS*226: Forensic Science II; Crime and Deviance: CJS*203/SOC*241: Juvenile Delinquency**	**3**	**CJS Elective**	**Any CJS* course**	**3**
CJS*213	Evidence & Courtroom Procedure	3	CJS*213	Evidence & Courtroom Procedure	3
POL*212	**Constitutional Law & Civil Rights**	**3**	**CJS*201/SOC*240**	**Criminology**	**3**
CJS*212	Criminal Law II	3	CJS*212	Criminal Law II	3
CJS Elective	Any CJS* course	3	CJS Elective	Any CJS* course	3
		15			**15**
	Minimum Credits Required	60-61		Minimum Credits Required	60-61

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Approval of a New Program

June 23, 2022

RESOLVED: That the Board of Regents for Higher Education approve the licensure of a program in Applied Data Science (CIP Code: 27.0304, OHE# TBD) leading to a Master of Science at Eastern Connecticut State University; and grant its accreditation for a period of seven semesters beginning with its initiation, such initiation to be determined in compliance with BOR guidelines for new programs approved on or after April 3, 2020.

A True Copy:

_____

Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

ITEM
Establishment of a new program, Applied Data Science, leading to a Master of Science at Eastern Connecticut State University.

Name of Institution	Eastern Connecticut State University	
Name of Program	Applied Data Science	
CIP Code	27.0304	
OHE# (Leave blank for new programs)		
Degree Level	Master of Science	
Number of Collegiate Credits	30	
Date of Action (Anticipated)	06/23/2022	
Nature of Request	X Licensure and Accreditation __ Program Change __ Phase-out Program __ Terminate Program	
If Name Change, New Name		
Delivery	Current (If not a new program) __ On Ground __ Hybrid __ Online	Future __ On Ground __ Hybrid X Online
Effective Term	Fall 2022	
If a Discontinuation, date of Termination	N/A	
If a Suspension, dates of Suspension	N/A	

BACKGROUND

The field of data science, including analytics and extraction of information from big data, is one of the fastest growing career areas in Connecticut and in the country. According to the Bureau of Labor Statistics, the number of master's-level Data Science jobs in Connecticut is expected to grow 11.01 percent in the next 10 years. In Connecticut alone, data made available through Burning Glass reveals that employers have posted 8,573 job postings over the last 12 months seeking individuals with a master's degree in data science. The occupations related to these job openings include Data Scientist, Data Mining Analyst, Biostatistician, Statistician, Researcher, Marketing Specialist, Business Intelligence Analyst, and Corporate Development Analyst. Salaries for these positions are well above the living wage for the state as positions for Data Scientists, Data Mining Analysts, Biostatisticians, and Statisticians with master's degrees in Data Science and 0 to 2 years of experience have offered an average annual salary of $98,015.

Despite the demand for specialists in this field, only 245 master's degrees in Data Science were conferred in 2020. Organizations in the state looking to hire master's-level data scientists with 0

to 2 years of experience include Humana, Cigna Corporation, the National Security Agency, Raytheon, The Hartford Financial Group, and Charter Communications, among others.

The current and projected demand for Data Science jobs in Connecticut warrants the existence of multiple Data Science programs to meet this need. Nevertheless, our program is also distinct from the current CSCU graduate programs that are offered. Southern Connecticut State University has a 12-credit graduate certificate in Data Science. In contrast, the proposed program for Eastern is a 30-credit Master of Science program, with broader and more in-depth coverage of topics such as machine learning and visualization. Central Connecticut State University currently has an online Master's in Data Science. Our program is distinct from Central's with respect to content. While Central's program emphasizes R programming and predictive analytics, our program emphasizes Python programming, machine learning, and communication and visualization. The Master's program culminates with a Practicum in which students complete a semester long data science project. In conjunction with the course instructor, a student may arrange to complete the Practicum project under the supervision of a faculty member, an industry partner, non-profit organization, or internal sponsor.

Expected revenue will exceed the costs of this program for each of the first three years. Eastern currently has sufficient faculty to run this program. There will be no need to hire additional full-time faculty until the program grows beyond the capacity of existing faculty.

The proposed program is a good fit with our undergraduate Data Science major. We anticipate that many of our undergraduates will enroll in this program after completion of the Data Science Bachelor requirements. In addition, because of the different disciplines involved in this major, we expect to attract students to the field of data science who might not have considered it an option because they were not attracted to say, computer science or mathematics. We expect to attract students from various fields who realize that they can increase their career opportunities by completing this program.

Data Science can be applied in fields as diverse as business, finance, healthcare, environmental science, medicine, political science, human culture, text analysis, climate change, and others, which fits well with Eastern's public liberal arts mission. As a liberal arts university, we will expect graduates of this program to have computer programming skills, to be able to apply appropriate statistical techniques, to think critically about what is needed to solve problems, to interpret results of analyses, and to effectively communicate results both orally and in writing

RECOMMENDATION

Following its review and deliberative process, it is the recommendation of the Academic Council that the Board of Regents approve this new program. The System's Provost and Senior Vice President for Academic and Student Affairs concurs with this recommendation.

06/03/2022 – BOR -Academic and Student Affairs Committee
06/23/2022 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
Connecticut State Colleges & Universities
*APPLICATION FOR **NEW PROGRAM APPROVAL***

SECTION 1: GENERAL INFORMATION

Institution: Eastern Connecticut State University	Date of Submission to CSCU Office of the Provost:
Most Recent NECHE Institutional Accreditation Action and Date: November 2021	
Program Characteristics Name of Program: **Applied Data Science** Degree: Title of Award *(e.g. Master of Arts)* **Master of Science** Degree Certificate: *(specify type and level)* **Graduate-Masters** Stand-Alone Certificate: *(specify type and level)* Anticipated Program Initiation Date: Fall 2022 Anticipated Date of First Graduation: May 2024 Modality of Program: On ground **X** Online Combined If "Combined", % of fully online courses? Locality of Program: X On Campus Off Campus Both	**Program Credit Distribution** # Credits in General Education: 0 # Credits in Program Core Courses: 21 # Credits of Electives in the Field: 9 # Credits of Other Electives: 0 # Cr Special Requirements *(include internship, etc.):* 3-6 Total # Cr in the Program *(sum of all #Cr above)*: 30 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 0
NOTE: All applications to establish a new program will be considered for both Licensure and Accreditation by the BOR	
CIP Code Number 27.0304 Title of CIP Code Computational and Applied Science	
If establishment of the new program is concurrent with discontinuation of related program(s), please list for each program: Program Discontinued: CIP: OHE#: BOR Accreditation Date: Phase Out Period Date of Program Termination	
Institution's Unit *(e.g. School of Business)* School of Arts & Sciences Location *(e.g. main campus)* Offering the Program: Main campus	
Other Program Accreditation: • If seeking specialized/professional/other accreditation, name of agency and intended year of review: N/A • If program prepares graduates eligibility to state/professional license, please identify: N/A *(As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)*	

Institutional Contact for this Proposal: William Salka	Title: Provost	Tel.: 860.465.5246 e-mail:salkaw@easternct.edu

SECTION 2: PROGRAM PLANNING ASSESSMENT

Alignment of Program with Institutional Mission, Role and Scope

(Provide concise statements)

The field of data science, including analytics and extraction of information from big data, is one of the fastest growing career areas in Connecticut and in the country. Data Science can be applied in fields as diverse as business, finance, healthcare, environmental science, medicine, political science, human culture, text analysis, climate change, and others, which fits well with Eastern's public liberal arts mission. As a liberal arts university, we will expect our graduates of this program to have computer programming skills, to be able to apply appropriate statistical techniques, to think critically about what is needed to solve problems, to interpret results of analyses, and to effectively communicate results both orally and in writing.

Addressing Identified Needs

- How does the program address CT workforce needs and/or the wellbeing of CT communities – and include a description/analysis of employment prospects for graduates of this proposed program *(Succinctly present as much factual evidence and evaluation of stated needs as possible)*

  Data Science is a rapidly growing field in Connecticut and, according to the Bureau of Labor Statistics, the number of master's-level Data Science jobs in Connecticut is expected to grow 11.01 percent in the next 10 years. In Connecticut alone, data made available through Burning Glass reveals that employers have posted 8,573 job postings over the last 12 months seeking individuals with a master's degree in data science. The occupations related to these job openings include Data Scientist, Data Mining Analyst, Biostatistician, Statistician, Researcher, Marketing Specialist, Business Intelligence Analyst, and Corporate Development Analyst. Salaries for these positions are well above the living wage for the state as positions for Data Scientists, Data Mining Analysts, Biostatisticians, and Statisticians with master's degrees in Data Science and 0 to 2 years of experience have offered an average annual salary of $98,015.

  Despite the demand for specialists in this field, only 245 master's degrees in Data Science were conferred in 2020. Organizations in the state looking to hire master's-level data scientists with 0 to 2 years of experience include Humana, Cigna Corporation, the National Security Agency, Raytheon, The Hartford Financial Group, and Charter Communications, among others.

- How does the program make use of the strengths of the institution (*e.g. curriculum, faculty, resources)* and of its distinctive character and/or location?

  Eastern currently has sufficient faculty to run this program and it is a good fit with our undergraduate Data Science major. We anticipate that many of our undergraduates will enroll in this program after they complete their Bachelors requirement.

- Equity (eliminating achievement disparities among different ethnic/racial, economic and gender groups) is one of the Board of Regents' Goals. In addition to current institutional efforts already underway, what distinct actions will the proposed program undertake to advance equitable student success?

  Because of the different disciplines involved in this major, we expect to attract students to the field of data science who might not have considered it an option because they were not attracted to say, computer science or mathematics. We expect to attract students from various fields who realize that they can increase their career opportunities by completing this program.

- Describe any transfer agreements with other CSCU institutions that will be instituted as a result of the approval of this program *(Please highlight details in the Quality Assessment portion of this application, as appropriate)*

None currently exist but we would be willing to work with the other CSUs to create partnerships.

- Indicate what similar programs exist in other CSCU institutions, and how unnecessary duplication is being avoided

The current and projected demand for Data Science jobs in Connecticut warrants the existence of multiple Data Science programs to meet this need. Nevertheless, our program is also distinct from the current CSCU graduate programs that are offered. Southern Connecticut State University has a 12-credit graduate certificate in Data Science. Because our program is a 30-credit Master's program, our program has broader and more in-depth coverage of topics such as machine learning and visualization. Central Connecticut State University currently has an online Master's in Data Science. Our program is distinct from Central's with respect to content. While Central's program emphasizes R programming and predictive analytics, our program emphasizes Python programming, machine learning, and communication and visualization.

Cost Effectiveness and Availability of Adequate Resources

(Complete the PRO FORMA Budget – Resources and Expenditure Projections on page 6 and provide a narrative below regarding the cost effectiveness and availability of adequate resources for the proposed program. Add any annotations for the budget form below, as well.)

Expected revenue will exceed the costs of this program for each of the first three years. There will be no need to hire additional full-time faculty until the program grows beyond the capacity of existing faculty.

Student Recruitment / Student Engagement

What are the sources for the program's projected enrollments. Describe the marketing, advisement and other student recruitment activities to be undertaken to ensure the projected enrollments are achieved.

There is an $8,000 budget for this program in each of the first two years, and $5,000 per year thereafter. Marketing will primarily be done through the Social Media Marketing firm that Eastern currently employs.

If applicable, what student engagement strategies will be employed to advance student retention and completion in program?

SECTION 3: PROGRAM QUALITY ASSESSMENT

Learning Outcomes - L.O. *(Please list up to seven of the most important student learning outcomes for the program and concisely describe assessment methodologies to be used in measuring the outcomes. If the program will seek external accreditation or qualifies graduates to opt for a professional/occupational license, please frame outcomes in attention to such requirements. With as much detail as possible, please map these learning outcomes to courses listed under the "Curriculum" section of this application)*

Applied Data Science Students will develop the skills to extract meaningful information from real-world data. Students will write code and use state-of-the-art tools to accomplish each of the following outcomes. Students in the Applied Data Science Master's program will:

1. Demonstrate an ability to acquire, assess, manage, and organize data
2. Clean, process, and prepare data for analysis
3. Apply suitable methods to analyze real-world data and interpret results
4. Critique and identify limitations of analyses
5. Create, interpret, and critique visualizations of data and results
6. Effectively communicate (in writing and orally) methods and results of analyses to technical and non-technical audiences
7. Demonstrate the ability to successfully complete the full cycle of a project based on complex questions and data

Program Administration *(Describe qualifications and assigned FTE load of administrator/faculty member responsible for the day-to-day operations of the proposed academic program. Identify individual for this role by name or provide time frame for prospective hiring)*

Dr. Garrett Dancik will be the Coordinator of the MS in Applied Data Science and will receive 4 FLCs per year

Faculty *(Please complete the faculty template provided below to include current full-time members of the faculty who will be teaching in this program and, as applicable, any anticipated new positions/hires during the first three years of the program and their qualifications)*
How many new full-time faculty members, if any, will need to be hired for this program?

None at this time. As the program grows, faculty lines will be redeployed to meet demand.

What percentage of the credits in the program will they teach?

0%

What percent of credits in the program will be taught by adjunct faculty?

20%

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program

A Masters in an appropriate field combined with significant work experience.

Special Resources *(Provide a brief description of resources that would be needed specifically for this program and how they will be used, e.g. laboratory equipment, specialized library collections, etc. Please include these resources in the Resources and Expenditures Projections spreadsheet)*
None

Curriculum

*(Please list courses for the proposed program, including the core/major area of specialization, prerequisites, electives, required general education courses (undergraduate programs), etc. Using numerals, map the Learning Outcomes listed in the previous section to relevant program courses in this table. Mark any new courses with an asterisk * and attach course descriptions. Mark any courses that are delivered fully online with a double asterisk ** Please modify this format as needed)*

Course Number and Name	L.O. # [1]	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Program Core Courses				**Other Related/Special Requirements***		
DSC 501: Introduction to Data Science*,**	1, 2, 3, 4, 5, 6	Completion of Introductory Statistics Course	3	DSC 509: Data Science Practicum*	7	3
DSC 502: Python for Data Science*,**	1, 6		3			
DSC 503: Applied Statistical Methods for Data Science*,**	1, 2, 3, 4, 5, 6		3			
DSC 504: Communicating with Data*,**	4, 6	(DSC 501 or DSC 502) and DSC 503	3			
DSC 505: Databases and Big data Systems*,**	1, 6	DSC 502	3			
DSC 506: Applied Machine Learning*,**	2, 3, 4, 5, 6	DSC 502 and DSC 503	3			
DSC 507: Data Visualization*,**	4, 5, 6	DSC 501, 502, 503, and pre or co-requisite DSC 504	3			
DSC 508: Special Topics in Data Science*,**		DSC 501 and DSC 502	3			
DSC 509: Data Science Practicum*,**		DSC 506 and DSC 507	3			
Core Course Prerequisites				**Elective Courses in the Field**		
Completion of Introductory Statistics Course				DSC 508: Special Topics in Data Science*,**	varies	3
Total Other Credits Required to Issue Credential *(e.g. GenEd/Liberal Arts Core/Liberal Ed Program)* 30 Credits						

Program Outline *(Please provide a summary of program requirements including total number of credits for the degree, special admission requirements, capstone or special project requirements, etc. Indicate any requirements and arrangements for clinical affiliations, internships, and practical or work experience.*

[1] From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application

The Master's in Applied Data Science program requires 30 credits. All students take a core of Data Science courses (see above) totaling 21 credits. Students complete electives and the Practicum for an additional 9 credits.

The Master's program culminates with a Practicum (DSC 509) where a student will complete a semester long data science project. In conjunction with the course instructor, a student may arrange to complete the Practicum project under the supervision of a faculty member, an industry partner, non-profit organization, or internal sponsor. The Data Science faculty have begun to build partnerships with industry.

Applicants seeking admission to the Master of Science in Applied Data Science must possess bachelor's degrees from approved/accredited institutions. The applicant's records must show they have successfully completed a college level statistics course. Programming experience is recommended but not required. Applicants must also submit the following:

- Official transcripts for all higher education institutions attended other than Eastern.
- Personal statement of applicant's professional goals.
- Two letters of recommendation from references who can attest to the applicant's ability to complete graduate work.

***Special Requirements** include co-curriculum activities – structured learning activities that complement the formal curriculum – such as internships, innovation activities and community involvement.

All students will be required to take DSC 509: Data Science Practicum to gain real world experience in their field

NOTE: The PRO FORMA Budget on the last page should provide reasonable assurance that the proposed program can be established and is sustainable. Some assumptions and/or formulaic methodology may be used and annotated in the "Cost Effectiveness …" narrative on page 2.

New Course Descriptions

DSC 501: Introduction to Data Science
This course introduces students to the interdisciplinary field of data science. The emergence of massive datasets from diverse areas such as telecommunications, large-scale retailing, sports, healthcare, climate science, and social media provide the primary impetus for the field. This course will emphasize practical techniques that include cleaning and transforming data, exploring and analyzing data, summarizing and visualizing data, statistical inference, creation of statistical models, and communication of results. In addition, ethical implications of the choices made at different stages in a data science project will be explored. This course also introduces students to the scripting languages R and Python which will be used throughout the course.
Prerequisites: A Bachelor's Degree and completion of an introductory statistics course

DSC 502: Python for Data Science
This course covers the fundamental Python programming concepts used in data science. Topics include variables, data types, control structures, functions, object-oriented programming, and programming libraries used for data manipulation and visualization. Students will learn how to read, write, and debug code following best software development practices.
Prerequisites: A Bachelor's Degree and completion of an introductory statistics course

DSC 503: Applied Statistical Methods for Data Science

This course covers basic statistical skills for advanced work in data science and analytics. It begins with a review of descriptive statistics and contingency tables, before moving on to one-and two-sample methods of point estimation, interval estimation and hypothesis testing. The remainder of the course focuses on predictive modeling methods, including simple and multiple linear regression, logistic regression, and time series.

Prerequisites: Prerequisites: A Bachelor's Degree and completion of an introductory statistics course

DSC 504: Communicating with Data

Communication is a critical yet often overlooked part of data science. It is not enough just to have technical know-how, data scientists need to be able to rationally justify their approach to a project, and then convince their audience (stakeholders) that their results should be utilized, and recommendations implemented. This course develops an understanding of theory and skills in constructing a relevant, ethical, and engaging message using data that tells a coherent, persuasive story to audiences of technical experts and non-experts.

Prerequisites: (DSC 501 or DSC 502) and DSC 503

DSC 505: Databases and Big Data Systems

This course covers concepts related to the design and implementation of traditional databases and distributed systems for the management of big data. Topics include theory and applications related to efficient database models and queries, relational and non-relational databases, parallel and distributed processing, stream processing, and cloud-based computing.

Prerequisites: DSC 502

DSC 506: Applied Machine Learning

This course covers standard supervised machine learning techniques including linear and logistic regression, support vector machines, and artificial neural networks; and unsupervised techniques for clustering and dimension reduction. Students will gain practical experience with using programming frameworks, software, and cloud platforms for developing and evaluating machine learning models for a variety of real-world applications.

Prerequisites: DSC 502 and DSC 503

DSC 507: Data Visualization

In a world of data superabundance, data visualization is one of the most powerful tools to explore, understand, and communicate patterns in data. This course will introduce students to data visualization design principles so that they can think critically about each design decision. Students will then apply these principles in the context of data analysis and visual storytelling using appropriate programming frameworks and software tools.

Prerequisites: DSC 501, DSC 502, DSC 503

Pre or Co-requisite: DSC 504

DSC 508 Special Topics in Data Science (Sample elective follows)

Note: This course may be taken with different topics up to 5 times for credit. Each special topic course will focus on an advanced topic in data science. The course will provide students with a broad background in the applications of data science, theory, and/or business applications. Special topics may include Business Analytics, Network Science, Web Programming, and Geographic Information Systems.

Prerequisites: DSC 501 and DSC 502

DSC 508: Special Topics in Data Science: Network Science

Network science is an interdisciplinary and growing field that utilizes graph theory (a subfield of mathematics), data mining and data science (subfields of computer science and mathematics/statistics) to characterize, visualize, and analyze complex networks. A network can be defined as a collection of interconnected objects. Networks are central to many complex systems across a variety of fields. Examples of networks include biological networks that are composed of interacting genes or proteins, and computer networks that are composed of interconnected computers which share data with one another. Additional types of networks include social networks, financial networks, and communication networks. In this course we will create and analyze complex networks. We will seek to answer questions like: How do we turn data into a network? How do we visualize networks? What makes an element of a network "important" and how do we determine this? How can a network be used to make predictions?

Prerequisites: DSC 501 and DSC 502

DSC 509: Data Science Practicum

The Data Science Practicum is a project-based course where students work closely with outside sponsors and faculty for one or more semesters on an extensive data science project. Students will identify an application or problem in the area of data science or will be assigned a project by a sponsor or faculty member. The Practicum provides a cap-stone experience that requires the correct application of data science principles for the processing, analysis, visualization, and interpretation of data; and/or the development of novel methods for a unique data science task. The experience culminates in a written report and final presentation to the project sponsors and data science faculty. This course may be repeated up to two times for a maximum of 6 credits.

Prerequisites: DSC 506 and DSC 507

Full-Time Faculty Teaching in this Program *(Note: If you anticipate hiring new faculty members for this program you may list "to be hired" under name and title. Provide required credentials, experience, and other responsibilities for each new position anticipated over the first three years of implementation of the program)*

Faculty Name and Title	Institution of Highest Degree	Area of Specialization/Pertinent Experience	Other Administrative or Teaching Responsibilities
Dr. Garrett Dancik, Professor, Department of Computer Science, Coordinator of MS in Data Science	Ph.D. Iowa State University	Data Science, Statistics, and Bioinformatics	Chair of the Department of Computer Science (as of Fall 2022) Coordinator of MS in Data Science Program
Dr. Marsha Davis, Professor, Department of Mathematical Sciences	Ph. D. University of Connecticut	Statistics, Data Science, and Mathematical Modeling	Chair of the Department of Mathematical Sciences, Coordinator of BA/BS in Data Science
Dr. Chantal Larose, Associate Professor, Department of Mathematical Sciences	Ph.D. University of Connecticut	Statistics, Data Science, and Predictive Analytics	
Dr. Megan Heenehan, Associate Professor, Department of Mathematical Sciences	Ph.D. Wesleyan University	Graph Theory which is the basis for Network Science	Assistant Chair of the Department of Mathematical Sciences
Dr. Mehdi Khorami, Professor, Department of Mathematical Sciences	Ph.D. Wesleyan University	Mathematics, Financial Math	
Dr. Anthony Aidoo, Professor, Department of Mathematical Sciences	Ph.D. University of Vermont	Epidemiological Modeling Medical Imaging ACh-AChE analysis	
Dr. Xing Liu, Professor, Department of Education	Ph.D. University of Connecticut	Categorical Data Analysis Multilevel Modeling; Longitudinal Data Analysis Educational Assessment	
Dr. Alex Citurs, Associate Professor, Department of Accounting and Business Information Systems	Ph.D. Case Western Reserve University	Knowledge Management Project Management of Information Systems Technology Adoption Student IS Experiential Learning	Business Information Systems Program Co-Chair
Dr. Peter Johnson, Professor,	Ph.D. Penn State University	Actuarial Science, Mathematics	

Department of Mathematical Sciences		Education Research	
Dr. Meredith Metcalf, Associate Professor, Department of Environmental Earth Science	Ph.D. University of Connecticut	Natural and anthropogenic contaminants in drinking water Groundwater flow in fractured rock aquifers Geographic Information Systems (GIS) and public health	
Dr. Kehan Gao, Professor, Department of Computer Science	Ph.D. Florida Atlantic University	Software engineering Software reliability and quality engineering Data mining and machine learning	
Dr. K. Niki Kunene, Associate Professor, Department of Accounting and Business Information Systems	Ph.D. Virginia Commonwealth University	Healthcare Informatics	

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

Connecticut State Colleges & Universities

*APPLICATION FOR **NEW PROGRAM APPROVAL***

PRO FORMA Budget - Resources and Expenditures Projections (whole dollars only)

PROJECTED Enrollment	First Year						Second Year						Third Year					
	Fall Semester		Spring Semester		Summer		Fall Semester		Spring Semester		Summer		Fall Semester		Spring Semester		Summer	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Internal Transfer (from other programs																		
New Students (first time matriculating)	2	8	1	1		1	2	8	1	2		2	4	10	1	4		3
Continuing Students progressing to credential			2	8	3	9	1	10	2	18	3	12	1	13	4	22	5	18
Headcount Enrollment	2	8	3	9	3	10	3	18	3	20	3	14	5	23	5	26	5	21
Total Estimated FTE per Year[1]	5.7 FTE						8.8 FTE						12.8 FTE					
PROJECTED Program Revenue	First Year						Second Year						Third Year					
	Fall Semester		Spring Semester		Summer		Fall Semester		Spring Semester		Summer		Fall Semester		Spring Semester		Summer	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Tuition[2]	$14,498	$33,744	$21,748	$37,962	$21,748	42,180	$21,748	$75,924	$21,748	$84,480	$21,748	$59,052	$36,248	$97,014	$36,248	$109,668	$36,248	$88,578
Tuition from Internal Transfer[2]																		
Program Specific Fees (lab fees, etc.)																		
Other Revenue (annotate in narrative)																		
Total Annual Program Revenue	$171,880						$284,700						$404,004					

PROJECTED Program Expenditures[3]	First Year	Second Year	Third Year
Administration (Chair or Coordinator)[4]	$9,056	$9,056	$9,056
Faculty (Full-time, total for program)[4]	$36,000	$51,000	$59,750
Faculty (Part-time, total for program)[4]	$7,200	$12,000	$14,400
Support Staff (lab or grad assist, tutor)	$0	$0	$0
Library Resources Program	$0	$0	$0
Equipment (List in narrative)	$0	$0	$0
Other[5]	$8,000	$8,000	$5,000
Estimated Indirect Costs[6]			
Total Expenditures per Year	$60,256	$80,056	$88,206

NOTE: Existing regulations require that: "an application for a new program shall include a complete and realistic plan for implementing and financing the proposed program during the first cycle of operation, based on projected enrollment levels; the nature and extent of instructional services required; the availability of existing resources to support the program; additional resource requirements; and projected sources of funding. If resources to operate a program are to be provided totally or in part through reallocation of existing resources, the institution shall identify the resources to be employed and explain how existing programs will be affected. Reallocation of resources to meet new and changing needs is encouraged, provided such reallocation does not reduce the quality of continuing programs below acceptable levels."

1 1 FTE = 12 credit hours for undergraduate programs; 1 FTE = 12 credit hours for graduate programs; both for Fall & Spring
Formula for conversion of part-time enrollments to Full-Time Equivalent (FTE): Divide part-time enrollment by 3, and round to the nearest tenth - for example 20 part-time enrollees equals 20 divided by 3 equals 6.67 or 6.7 FTE.

2 Revenues from all courses students will be taking.

3 Capital outlay costs, instructional spending for research and services, etc. can be excluded.

4 If full-time person is solely hired for this program, use rate time; otherwise, use a percentage. Indicate if new hires or existing faculty/staff. Record Salary and Fringe Benefits, accordingly.

5 e.g. student services. Course development would be direct payment or release time; marketing is cost of marketing that program separately.

6 Check with your Business Office – community colleges have one rate; the others each have their own. Indirect Cost might include such expenses as student services, operations and maintenance.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Approval of a New Program

June 23, 2022

RESOLVED: That the Board of Regents for Higher Education approve the licensure of a program in Paralegal (CIP Code: 22.0302, OHE# TBD) leading to an Associate of Science at Tunxis Community College; and grant its accreditation for a period of seven semesters beginning with its initiation, such initiation to be determined in compliance with BOR guidelines for new programs approved on or after April 3, 2020.

A True Copy:

_____

Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

ITEM

Establishment of a new program, Paralegal, leading to an Associate of Science at Tunxis Community College.

Name of Institution	Northwestern Connecticut Community College	
Name of Program	Paralegal	
CIP Code	22.0302	
OHE# (Leave blank for new programs)		
Degree Level	Associate of Science	
Number of Collegiate Credits	60-63	
Date of Action (Anticipated)	06/23/2022	
Nature of Request	X Licensure and Accreditation __ Program Change __ Phase-out Program __ Terminate Program	
If Name Change, New Name		
Delivery	Current (If not a new program) __ On Ground __ Hybrid __ Online	Future __ On Ground X Hybrid __ Online 10% fully online courses
Effective Term	Fall 2022	
If a Discontinuation, date of Termination	N/A	
If a Suspension, dates of Suspension	N/A	

BACKGROUND

The Mission of Tunxis Community College is to offer its students a quality, yet affordable education in an accessible and supportive environment, fostering skills necessary to succeed in an increasingly complex world. The Paralegal. A.S. degree fits squarely into the mission of the college and the CSCU system by providing a career-based degree program to students that will prepare them to work in the legal field. The cost to the student remains affordable. The return on investment for the student is worth the cost of tuition (if not a PACT student) as the entry level salary for paralegals is approximately $43,000.00 per year.

The CT Department of Labor has identified Paralegal as an “in demand” occupation. This is based on the expectation that the employment of paralegals will increase by 121 jobs over the next ten years, with an additional demand of 3,280 new workers in Paralegal due to separation demand. (The replacement of workers in this occupation and industry that retire or move into a different occupation).

Students completing the Associate Degree in Paralegal will be positioned to enter this growing field. Paralegals with an Associates degree make up 15.9% of the market for the paralegal field, while those with some college, and no degree, make up 13.4% of the field. While the entry level salary is

approximately $43,000.00 per year, the average annual salary in Connecticut is $62,800.00. The average annual wage for an experienced paralegal in Connecticut is $72.000.00. Hartford County, which encompasses a significant number of Tunxis students, employs the greatest number of paralegals in Connecticut. Our students reside in the County with the greatest demand for paralegals.

Consistent with the Board's policy, Tunxis will undertake specifically, to track enrollment and outcomes data by race, gender and ethnicity. In addition, in meeting the needs of the large Hispanic populations in New Britain, CT and Bristol, CT, Tunxis will develop its relationship with the Connecticut Bar Association Diversity and Inclusion Committee, as well as Hispanic Legal practitioners and paralegals from those cities, to ensure that our Hispanic students are connected to resources in their communities for professional development and growth. In addition, Tunxis will develop a relationship with the Connecticut Bar Association's Pathways program, which provides insight about the law and legal profession to high school students, in hopes of encouraging talented and diverse students to consider a legal career.

The proposed Paralegal, A.S. program adopts the fully aligned curriculum for CT State Community College. This aligned curriculum is based on the ABA approved Paralegal program at Manchester Community College. The goal is to begin implementation of this program in Fall 2022, a year ahead of the anticipated consolidation date. Tunxis currently offers a Certificate in Paralegal for students, as well as a noncredit Legal Secretary program. The Paralegal, A.S. will provide the opportunity for continued education and degree attainment for students enrolled in our existing programs and allow seamless transition to CT State in Fall 2023.

RECOMMENDATION

Following its review and deliberative process, it is the recommendation of the Academic Council that the Board of Regents approve this new program. The System's Provost and Senior Vice President for Academic and Student Affairs concurs with this recommendation.

06/03/2022 – BOR -Academic and Student Affairs Committee
06/23/2022 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
Connecticut State Colleges & Universities
*APPLICATION FOR **NEW PROGRAM APPROVAL***

SECTION 1: GENERAL INFORMATION

Institution: Tunxis Community College	Date of Submission to CSCU Office of the Provost: 3/25/22; revised 5/5/22
Most Recent NECHE Institutional Accreditation Action and Date: 3/4/22	
Program Characteristics Name of Program: Paralegal Degree: Title of Award *(e.g. Master of Arts)* **Associate Degree** Degree Certificate: *(specify type and level)* Stand-Alone Certificate: *(specify type and level)* Anticipated Program Initiation Date: Fall 2022 Anticipated Date of First Graduation: Spring 2024 Modality of Program: On ground Online x Combined If "Combined", % of fully online courses? 10% Locality of Program: x On Campus Off Campus Both	**Program Credit Distribution** # Credits in General Education: 21-24 # Credits in Program Core Courses: 39/40 # Credits of Electives in the Field: 12 # Credits of Other Electives: 0 # Cr Special Requirements *(include internship, etc.): 3* Total # Cr in the Program *(sum of all #Cr above)*: 60-63 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: **35**
NOTE: All applications to establish a new program will be considered for both Licensure and Accreditation by the BOR	
CIP Code Number 22.0302 Title of CIP Code Legal Assistant / Paralegal	
If establishment of the new program is concurrent with discontinuation of related program(s), please list for each program: Program Discontinued: CIP: OHE#: BOR Accreditation Date: Phase Out Period Date of Program Termination	
Institution's Unit *(e.g. School of Business)* Location *(e.g. main campus)* Offering the Program: Tunxis Community College	
Other Program Accreditation: • If seeking specialized/professional/other accreditation, name of agency and intended year of review: American Bar Association (post consolidation the program will be covered by Manchester CC's ABA approval; otherwise, the program must be in existence for 2 years prior to applying for ABA approval). • If program prepares graduates eligibility to state/professional license, please identify: *(As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)*	

Institutional Contact for this Proposal: Angela Fierro	Title: Program Coordinator, Paralegal	Tel.: 860-773-1634 e-mail: afierro@txcc.commnet.edu

SECTION 2: PROGRAM PLANNING ASSESSMENT

Alignment of Program with Institutional Mission, Role and Scope

(Provide concise statements)

This proposal requests that the aligned curriculum for Paralegal, which was approved unanimously on 12/3/21 by the APRC, be implemented at Tunxis Community College for AY 2022/2023, instead of waiting for AY 2023/2024. We are requesting that the full Associate degree, using the approved aligned curriculum, begin in the Fall semester, 2022.

The Mission of Tunxis Community College is to offer its students a quality, yet affordable education in an accessible and supportive environment, fostering skills necessary to succeed in an increasingly complex world. The full Associate Degree in Paralegal fits squarely into the mission of the college in that it is introducing this career-based degree program to our students, that will prepare them to work in the legal field. The cost to the student remains affordable. The return on investment for the student is worth the cost of tuition (if not a PACT student) as the entry level salary for paralegals is approximately $43,000.00 per year.

Addressing Identified Needs

- How does the program address CT workforce needs and/or the wellbeing of CT communities – and include a description/analysis of employment prospects for graduates of this proposed program (*Succinctly present as much factual evidence and evaluation of stated needs as possible)*

  Students completing the Associate Degree in Paralegal will be positioned to enter this growing field. Paralegals with an Associates degree make up 15.9% of the market for the paralegal field, while those with some college, and no degree, make up 13.4% of the field. While the entry level salary is approximately $43,000.00 per year, the average annual salary in Connecticut is $62,800.00. The average annual wage for an experienced paralegal in Connecticut is $72.000.00.

  The CT Department of Labor has identified Paralegal as an "in demand" occupation. This is based on the expectation that the employment of paralegals will increase by 121 jobs over the next ten years, with an additional demand of 3,280 new workers in Paralegal due to separation demand. (The replacement of workers in this occupation and industry that retire or move into a different occupation).

- How does the program make use of the strengths of the institution (*e.g. curriculum, faculty, resources)* and of its distinctive character and/or location?

  The current faculty at Tunxis Community College includes lawyers, teaching fulltime as well as in adjunct capacity. The Certificate in Paralegal has grown from 18 students in September 2021, to 27 students in May 2022. The Continuing Education and Workforce Development Department at Tunxis consistently enrolls students in its Legal Secretary program (not for credit) which acts a gateway for students into the credit program

  Hartford County, which encompasses a significant number of Tunxis students, employs the greatest number of paralegals in Connecticut. Our students reside in the County with the greatest demand for paralegals.

- Equity (eliminating achievement disparities among different ethnic/racial, economic and gender groups) is one of the Board of Regents' Goals. In addition to current institutional efforts already underway, what distinct actions will the proposed program undertake to advance equitable student success?

  Consistent with the Board's policy, Tunxis will undertake specifically, to track enrollment and outcomes data by race, gender and ethnicity. In addition, in meeting the needs of the large Hispanic populations in New Britain, CT and Bristol, CT, Tunxis will develop its relationship with the Connecticut Bar Association Diversity and Inclusion Committee, as well as Hispanic Legal practitioners and paralegals from those cities, to ensure that our Hispanic students are connected to resources in their communities for professional development and growth. In addition, Tunxis will develop a relationship with the Connecticut Bar Association's Pathways program, which provides insight about the law and legal profession to

high school students, in hopes of encouraging talented and diverse students to consider a legal career.

- Describe any transfer agreements with other CSCU institutions that will be instituted as a result of the approval of this program *(Please highlight details in the Quality Assessment portion of this application, as appropriate)*

  To our knowledge, the CSCU system does not offer a 4-year degree in paralegal studies. As such, there is no transfer agreement in place within the system. However, Manchester Community College does have articulation agreements with private colleges which offer the 4-year degree in Paralegal/Legal Studies.

- Indicate what similar programs exist in other CSCU institutions, and how unnecessary duplication is being avoided

  The program proposed is the fully aligned, approved curriculum for CT State Community Colleges. The aligned curriculum is based on the ABA approved Paralegal program at Manchester Community College. The proposal for the A.S. in paralegal is the aligned curriculum (which was approved by APRC on 12/3/21) This proposal is to implement the fully approved, aligned curriculum a year earlier than the anticipated consolidation date.

Cost Effectiveness and Availability of Adequate Resources

(Complete the PRO FORMA Budget – Resources and Expenditure Projections on page 6 and provide a narrative below regarding the cost effectiveness and availability of adequate resources for the proposed program. Add any annotations for the budget form below, as well.)

See Pro Forma budget on last page of application.

Student Recruitment / Student Engagement

What are the sources for the program's projected enrollments? Describe the marketing, advisement and other student recruitment activities to be undertaken to ensure the projected enrollments are achieved. Tunxis currently has the Certificate in Paralegal for students, as well as the noncredit Legal Secretary course. Tunxis continues to market the program through its social media websites. Tunxis is prepared to market the new program in a manner consistent with its advertising for other new programs. Tunxis will incorporate information about the Associate Degree in Paralegal into its already established recruitment efforts with area high schools.

If applicable, what student engagement strategies will be employed to advance student retention and completion in program? The faculty from Paralegal will develop a Student Club for Paralegal as well as establish an Honor Society for Paralegal students. The Paralegal faculty will provide the students with guest Paralegal speakers to advise/inform of typical duties in the law office. To the extent possible, the faculty from Paralegal will incorporate any real-world engagement (attending court hearings, depositions, etc.) in order to give the student the best possible vision of how the concepts from class play out in the legal community.

SECTION 3: PROGRAM QUALITY ASSESSMENT

Learning Outcomes - L.O. *(Please list up to seven of the most important student learning outcomes for the program and concisely describe assessment methodologies to be used in measuring the outcomes. If the program will seek external accreditation or qualifies graduates to opt for a professional/occupational license, please frame outcomes in attention to such requirements. With as much detail as possible, please map these learning outcomes to courses listed under the "Curriculum" section of this application)*

1. Recognize and describe the proper role of the paralegal in the delivery of legal services to the public and apply ethical rules that govern the conduct of the legal profession.
2. 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.
3. Describe the organization of the legal system, apply procedural law to litigation and administrative agency law, and demonstrate substantive knowledge of principles of law.
4. Draft and interpret legal documents, including pleadings, deeds, mortgages, probate documents, court forms, business documents, and contracts for review by the supervising attorney.
5. Perform file and case management tasks in accordance with office policy and court procedures, using problem solving, organizational, and computer skills.
6. Recognize opportunities for professional development through continuing education and affiliation with professional organizations.

Program Administration *(Describe qualifications and assigned FTE load of administrator/faculty member responsible for the day-to-day operations of the proposed academic program. Identify individual for this role by name or provide time frame for prospective hiring)*

Angela Fierro, Program Coordinator, will be responsible for the day-to-day operations of the Paralegal program. Ms. Fierro obtained her Juris Doctorate from Quinnipiac University School of Law in 2001. She engaged in the private practice of law with small and large firms, and she has also worked in the public sector for the Office of the Attorney General, under Richard Blumenthal. Ms. Fierro was an adjunct instructor at Tunxis Community College for approximately ten years before being hired fulltime. Ms. Fierro is currently in charge of the day-to-day operations for the Paralegal Certificate at Tunxis, which was implanted in the Fall of 2020. She created and oversees the Advisory Committee for Paralegal at Tunxis, and has ensured that the curriculum and resources are in line with current ABA guidelines for paralegal education.

Faculty *(Please complete the faculty template provided below to include current full-time members of the faculty who will be teaching in this program and, as applicable, any anticipated new positions/hires during the first three years of the program and their qualifications)*

How many new full-time faculty members, if any, will need to be hired for this program?

Zero full time hires are required for AY 2022/2023. It is not anticipated that there will be a need to hire another fulltime faculty person for AY 2023/2024, or 2024./2025. This could change based on a jump in enrollment after consolidation if Tunxis picks up students who had attended other institutions but feel attending Tunxis would be a better option. There is currently one full time faculty teaching Paralegal at Tunxis, along with two adjunct instructors, who meet ABA requirements for teaching in the program.

What percentage of the credits in the program will they teach?

60%

What percent of credits in the program will be taught by adjunct faculty?

40%

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program

Adjunct faculty must meet the requirements set forth by the American Bar Association for approved Paralegal Education. All adjuncts teaching Paralegal courses are practicing or retired Attorneys (or Paralegals) with teaching experience, who have worked directly with Paralegals in the field.

Special Resources *(Provide a brief description of resources that would be needed specifically for this program and how they will be used, e.g. laboratory equipment, specialized library collections, etc. Please include these resources in the Resources and Expenditures Projections spreadsheet)*

Semester length contracts with Lexis Nexis or other reputable legal research database, consistent with the requirements of the American Bar Association. Tunxis CC has been contracting semester to semester with Lexis and will continue with this option for AY 2022/2023. Tunxis Paralegal students have also been granted permission to use the UConn School of Law, Law Library, which is located within a reasonable distance for students. (West Hartford). This also meets the requirements of the American Bar Association for library resources.

Curriculum

*(Please list courses for the proposed program, including the core/major area of specialization, prerequisites, electives, required general education courses (undergraduate programs), etc. Using numerals, map the Learning Outcomes listed in the previous section to relevant program courses in this table. Mark any new courses with an asterisk * and attach course descriptions. Mark any courses that are delivered fully online with a double asterisk ** Please modify this format as needed)*

Course Number and Name	L.O. # [1]	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Program Core Courses				**Other Related/Special Requirements***		
POL*120 Introduction to Law	3	Eligibility for ENG*101 or permission of the program coordinator	3			
LGL*102 Legal Research and Writing	1, 6	Eligibility for ENG*101 AND ONE OF THE FOLLOWING: POL*120 or permission of the program coordinator	3			
LGL*104 Real Estate Practice	4	Eligibility for ENG*101 or permission of the program coordinator	3			
LGL*208 Litigation	2	Eligibility for ENG*101 AND ONE OF THE FOLLOWING: POL*120 or permission of the program coordinator	3			
LGL*209 Probate Practice and Estate Planning	4	Eligibility for ENG*101 or permission of the program coordinator	3			
LGL*211 Business Organizations	4	Eligibility for ENG*101 or permission of the program coordinator	3			

[1] From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application

LGL*220 Computer Applications in Law	2	Eligibility for ENG*101 or permission of the program coordinator	4 (this will become a 3-credit course upon consolidation)			
LGL*240 Legal Studies Capstone	5,6	LGL*102, LGL*208, LGL*220, and one of the following:	3			
BBG*231 Business Law I	2,3	C- or better in ENG*101	3			
LGL*Electives (12 credits needed from the following legal specialty electives) LGL*206 Bankruptcy Law LGL*210 Family Law LGL*212 Commercial Law LGL*216 Administrative Law LGL*XXX Juvenile Law LGL*270 Cooperative Education/Work Experience	1,2,4,5,6	Eligibility for ENG*101 or permission of the program coordinator 0r, for LGL*270 12completed credit hours in the paralegal program or permission of the program coordinator	3 (12 total for this category)			
			TOTAL PROGRAM CREDITS:40 (39 in Fall 2023)			
Core Course Prerequisites				**Elective Courses in the Field**		

Total Other Credits Required to Issue Credential *(e.g. GenEd/Liberal Arts Core/Liberal Ed Program)* *General Education Core Courses:*		
*ENG*101 Composition*	3	
*Math Math*101 or higher*	3	
Arts and Humanities- choose one course vetted for A & H	3-4	
Scientific Reasoning or Scientific Knowledge and Understanding -Choose one course vetted for SR or SK & U	3-4	
Social/Behavioral Science- choose one course from Social/Behavioral Science or Historical Knowledge Outcomes	3	
Oral Communication or Written Communication II- choose one course vetted for OC or Written Communication	3	

Continued Learning/Info Literacy- CSS 101	3	
TOTAL GEN ED CORE CREDITS	**21-24**	
PROGRAM TOTAL CREDITS	**60-63**	

Program Outline *(Please provide a summary of program requirements including total number of credits for the degree, special admission requirements, capstone or special project requirements, etc. Indicate any requirements and arrangements for clinical affiliations, internships, and practical or work experience.*

Course Descriptions:

LGL*102 Legal Research and Writing
3 credits
Provides an understanding of the basic tools of legal research through the use of legal resources, including print and electronic resources. Students will be instructed in the relative value of varied sources of law. Students will examine and work with primary and secondary authorities and law-finding tools. Research procedural methods are advanced through case examples and problem-solving techniques. Students will prepare business letters, case briefs, and legal documents requiring them to synthesize legal authorities and summarize research findings. Students will be taught proper legal citation.

LGL*104 Real Estate Practice
3 credits
Examines basic principles of real property law, with an emphasis on the role of paralegals in residential real estate transactions. Areas studied include acquisition of real property and fixtures, surveys and legal descriptions, co-ownership, easements and other encumbrances, marketable record title and title insurance, brokers, sales contracts, mortgage financing, and closing procedures. Students gain practical experience through document preparation, and familiarity with land records through assignments. Ethical issues related to this practice area are discussed.

LGL*206 Bankruptcy Law
3 credits
This course will provide students with a thorough review of the United States Bankruptcy Code. The course is tailored to explore the general functions of the Bankruptcy Court. The applicable rules and proceedings for various types of bankruptcy cases will be thoroughly discussed.

LGL*208 Litigation
3 credits
Provides the student with a basic understanding of the civil litigation process as preparation for employment as a paralegal. The course surveys and reviews the civil litigation process in state and federal courts, including the form and content of documents used in instituting or defending civil lawsuits. Students will be taught legal concepts and skills necessary to work as

a litigation paralegal. Emphasis is given to court and office procedures before, during, and after trial, including causes of action and remedies, lawyer and client relationships and ethics, discovery, pleadings, organization of evidence, juries and verdicts; structure of a civil trial; post-trial motions; judgments; appeals, settlements, releases, and dismissals; and arbitration and mediation.

LGL*209 Probate Practice & Estate Administration
3 credits
Provides a basic understanding of the fundamental principles of law and legal terminology relating to the control and disposition of property before and after death, the probate court system and the probate process. Students will be taught basic concepts concerning wills, trusts, probate administration, estate and gift taxation, and fiduciary accounting. Responsibilities, ethical considerations, and duties of the paralegal in the handling of an estate will be stressed. Students will gain practical experience through exposure to document preparation, file management, and preparation of forms for estate administration. Probate matters such as emancipation, adoption, guardianship and conservatorships will be reviewed.

LGL*210 Family Law
3 credits
Provides an introduction to and basic understanding of family law and practice for the paralegal. Students will be taught legal concepts regarding the scope and skills needed in a family law practice. Familiarity with legislation, legal terminology, and legal requirements in the area of family law will be stressed. Topics covered will include family law research, ethics, interaction with the client, premarital agreements, ceremonial and common law marriages, annulment, separation, dissolution of marriage, child custody, child support, tax consequences, legal rights of women and men, legal status of children, adoption, and surrogacy. Practical applications and drafting of documents will be included.

LGL*211 Business Organization
3 credits
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.

LGL*212 Commercial Law
3 credits
This course provides a framework for the legal and ethical considerations impacting many basic commercial transactions, and deals with the formation of contracts and the rights and responsibilities of contracting parties. Specific topics included are contract law, Article 2 of the Uniform Commercial Code, and bankruptcy law.

LGL*216 Administrative Law
3 credits

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, delegation of authority and separation of powers, the types and organization of administrative agencies, sources of administrative law, rulemaking, legislative oversight, agency actions, controls on agencies, appeals, adjudications, judicial review, and legal ethics. Specific areas of agency action are explored, such as environmental law, Social Security, civil rights, immigration law, and Workers' Compensation.

LGL*220 Computer Applications in Law
4 credits (for AY 2022/2023; will become 3 credits starting AY 2023/2024)
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.

LGL*240 Legal Studies Capstone Course
3 credits
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.

LGL*270 Cooperative Education Work Experience
3 credits
Provides students with the opportunity to apply classroom theory in an actual work setting. Students may be placed in a variety of work settings related to the program of study, including private law firms, corporate legal departments, government or other settings in which practical experience may be gained. In addition to site placement (150 hours for unpaid internships; 300 hours for paid placement), students attend seminars focusing on job-related interpersonal skills, such as values and preferences, time and stress management, communication skills, conflict management, corporate culture, new employee orientation, performance evaluations, business ethics, leadership, and career advancement. Job search strategies are discussed and practiced.

LGL*XXX Juvenile Law
3 credits
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 (hereinafter FWSN) 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.

***Special Requirements** include co-curriculum activities – structured learning activities that complement the formal curriculum – such as internships, innovation activities and community involvement.

NOTE: The PRO FORMA Budget on the last page should provide reasonable assurance that the proposed program can be established and is sustainable. Some assumptions and/or formulaic methodology may be used and annotated in the "Cost Effectiveness …" narrative on page 2.

Full-Time Faculty Teaching in this Program *(Note: If you anticipate hiring new faculty members for this program you may list "to be hired" under name and title. Provide required credentials, experience, and other responsibilities for each new position anticipated over the first three years of implementation of the program)*

Faculty Name and Title	Institution of Highest Degree	Area of Specialization/Pertinent Experience	Other Administrative or Teaching Responsibilities
Angela Fierro, J.D./LMSW	Quinnipiac University School of Law	Private Practice as well as Government Employment as an Attorney	Business Law

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
Connecticut State Colleges & Universities
*APPLICATION FOR **NEW PROGRAM APPROVAL***
PRO FORMA Budget - Resources and Expenditures Projections (whole dollars only)

PROJECTED Enrollment	First Year						Second Year						Third Year					
	Fall Semester		Spring Semester		Summer		Fall Semester		Spring Semester		Summer		Fall Semester		Spring Semester		Summer	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Internal Transfer (from other programs	4	2	2	1			4	3	2	2			5	7	3	9		
New Students (first time matriculating)	7	4	9	3			10	4	9	5			15	8	12	6		
Continuing Students progressing to credential			11	6			1	10	13	20			11	29	15	33		
Headcount Enrollment	11	6	22	10			15	17	24	27			31	44	30	48		
Total Estimated FTE per Year[1]																		
PROJECTED Program Revenue	First Year						Second Year						Third Year					
	Fall Semester		Spring Semester		Summer		Fall Semester		Spring Semester		Summer		Fall Semester		Spring Semester		Summer	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Tuition[2]	8637	4183	38218	2490			35607	16135	44136	16135			49083	21912	51543	19123		
Tuition from Internal Transfer[2]	11449	1793	3780	7470			11869	20757	3838	10757			9349	21912	5727	28685		
Program Specific Fees (lab fees, etc.)																		
Other Revenue (annotate in narrative)	2827	1542	5973	1028			3884	1799	6545	1799			8286	3855	8145	3855		
Total Annual Program Revenue						89390						163261						231475

PROJECTED Program Expenditures[3]	First Year	Second Year	Third Year
Administration (Chair or Coordinator)[4]	793	193	793
Faculty (Full-time, total for program)[4]	89262	82246	82246
Faculty (Part-time, total for program)[4]	44376	80684	86735
Support Staff (lab or grad assist, tutor)			
Library Resources Program	991	1120	1120
Equipment (List in narrative)			
Other[5]			
Estimated Indirect Costs[6]	2982	4034	4034
Total Expenditures per Year	138404	168877	174928

NOTE: Existing regulations require that: "an application for a new program shall include a complete and realistic plan for implementing and financing the proposed program during the first cycle of operation, based on projected enrollment levels; the nature and extent of instructional services required; the availability of existing resources to support the program; additional resource requirements; and projected sources of funding. If resources to operate a program are to be provided totally or in part through reallocation of existing resources, the institution shall identify the resources to be employed and explain how existing programs will be affected. Reallocation of resources to meet new and changing needs is encouraged, provided such reallocation does not reduce the quality of continuing programs below acceptable levels."

1 1 FTE = 12 credit hours for undergraduate programs; 1 FTE = 12 credit hours for graduate programs; both for Fall & Spring
Formula for conversion of part-time enrollments to Full-Time Equivalent (FTE): Divide part-time enrollment by 3, and round to the nearest tenth - for example 20 part-time enrollees equals 20 divided by 3 equals 6.67 or 6.7 FTE.

2 Revenues from all course's students will be taking.

3 Capital outlay costs, instructional spending for research and services, etc. can be excluded.

4 If full-time person is solely hired for this program, use rate time; otherwise, use a percentage. Indicate if new hires or existing faculty/staff. Record Salary and Fringe Benefits, accordingly.

5 e.g. student services. Course development would be direct payment or release time; marketing is cost of marketing that program separately.

6 Check with your Business Office – community colleges have one rate; the others each have their own. Indirect Cost might include such expenses as student services, operations and maintenance.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Promotions and Tenures

June 23, 2022

RESOLVED: That the Board of Regents for Higher Education approve the 2022 promotions and tenures recommended by the presidents of the Connecticut State Universities.

A True Copy:

_____

Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

ITEM

Approval of the 2022 promotions and tenures recommended by the presidents of the Connecticut State Universities

BACKGROUND

In accordance with the CSU-AAUP Collective Bargaining Agreement, the Board of Regents awards promotion and tenure to faculty at the four institutions of the Connecticut State University. The contract prescribes a thorough, multi-level review process at the institutions. Recommendations forwarded to the Board have been approved by the respective university president and provost. The Board of Regents acts upon the presidents' recommendations. The letters of recommendation are attached.

06/03/2022 – BOR Academic & Student Affairs Committee
06/23/2022 – Board of Regents

EASTERN CONNECTICUT STATE UNIVERSITY

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Office of the President

May 19, 2022

Terrence Cheng
President, Board of Regents for Higher Education
Connecticut State Colleges and Universities
61 Woodland Street
Hartford, CT 06105-2237

Dear President Cheng:

The following is an additional recommendation for Promotion for a candidate reviewed in Spring 2022.

COACH IV

Megan Droesch (Athletics, Women's Volleyball)

Please let me know if you have any questions.

Sincerely,

Elsa Nunez (May 23, 2022 12:32 EDT)

Dr. Elsa M. Núñez
President

Cc: William M. Salka, Provost and Vice President for Academic Affairs

EMN/agi

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An Equal Opportunity Institution

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Approval of Awardees for CSU-AAUP Faculty Research Grants

June 23, 2022

RESOLVED: That the Board of Regents for Higher Education approve the amended funding recommendations of the CSU-AAUP Faculty Research Grants' Selection Committee for the 2022-23 program year for Central, Eastern, and Western Connecticut State Universities.

A True Copy:

_____

Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

ITEM
CSU-AAUP Faculty Research Grants

BACKGROUND
Article 9 of the Collective Bargaining Agreement between the Board of Regents and the Connecticut State University American Association of University Professors (CSU-AAUP) mandates that funds, as set forth in Article 9.10 be allocated for research grants at each of the four CSU institutions, according to a formula based on their respective numbers of full-time faculty members.

RATIONALE
The CSU-AAUP Faculty Research Grants continues to be a very popular and a widely supported program by both faculty members and administrators. The program is the primary tool in promoting the advancement of research and creative works by CSU faculty members. Over the years, the grants have led to the publication of many books and journal articles; and have contributed to the advancement of instructional excellence across the CSU universities.

RESOURCES
A total of $1,014,953 has been allocated for the 2022-23 program year of the CSU-AAUP Faculty Research Grants Program. Additionally, a total of $191,552 in residual funds from previous years is available for distribution this year. A grand total of $1,206,505 is available for research projects to be recommended for funding during the 2022-23 program year.

Each proposal is reviewed and scored on a scale of 1 (poor) to 5 (excellent) by two faculty members from other CSU institutions. Selection Committee members at the awarding institutions employ those scores as the basis for their funding recommendations.

RECOMMENDATION
With this amendment, the Selection Committee has recommended that a total of 213 proposals receive grants totaling $915,501. The amended recommendations from Central, Eastern, and Western Connecticut State Universities are contained in the attached rosters.

06/03/2022 – BOR Academic and Student Affairs Committee
06/23/2022 – Board of Regents

CCSU 2022 Roster of Faculty Research Grants for BOR

Principal Investigator		Grant Information	
Name	**Department**	**Grant Title**	**Amount Funded**
Abbas, Syed	Biology	The affects of light deprivation on aggression in crayfish	$5,000.00
Albayram, Yusuf	Computer Science	Investigating the effectiveness of personalized content in the form of videos when promoting privacy-enhancing technologies	$5,000.00
Alicea-Velazquez, Nilda	Chemistry & Biochemistry	Regulation of the Assembly of SET1 Histone Methyltransferase Core Complexes	$5,000.00
Barrington, Candace	English	Medievalism and Gwendolyn Brooks' "The Anniad"	$2,500.00
Berman, Marcie	Psychological Sciences	Perceptions of refugees and health-related stigma in relation to climate change	$5,000.00
Bray, Alicia	Biology	Trapping for introduced wood-boring beetles in forest habitats along coastline in Connecticut	$5,000.00
Brewer, Elizabeth	English	Disability and the Teaching of Writing	$2,500.00
Chae, Myungjin Choi, Jiyong	Manufacturing and Construction Management (MCM)	Development of Underground Pipeline and Manhole Scanner Technology	$9,470.00
Chakraborty, Sourav	Chemistry & Biochemistry	Development and optimization of a method for direct determination of inorganic anions such as nitrate (NO3-) and nitrite (NO2-) from aqueous systems using hydrophilic interaction liquid chromatography (HILIC) using diode array (DAD) and corona charged aerosol detection (CAD)	$4,996.00
Chen, Jason	Accounting	Diverse Contents and Cross-Cultural Competency: A Group Investigation Approach	$5,000.00
Chen, Sixia	Computer Science	Efficient Biometric Authentication Using Fuzzy Extractors	$5,000.00
Choi, Jiyong Lee, Namhun Chae, Myunglin	Department of Manufacturing and Construction Management	Preliminary Study to Apply Circular Economy Principles to the Construction Industry:Evaluating a Material Use Efficiency for Healthcare Projects	$13,400.00
Cistulli, Mark Snyder, Jason	Marketing	Effectiveness of YouTube Advertising on Graduate School Enrollment Intention	$5,000.00
Cohen, Diana	Political Science	Women of the Hobby: Sport Card Collecting in the Digital Age	$5,000.00
Corbera Lopez, Silvia	Psychological Science	Social Cognitive and Affective Processing in Individuals in the Schizotypal Personality and Autism Spectrum Disorder Continuum and its Role in Social Functioning and Quality of Life	$5,000.00

Crundwell, Guy	Chemisry and Biochemistry	Silver perchlorate and its role in the degradation of (E)-1-(5-methylthiophen-2-yl)-N-(4-nitrophenyl) methanimine analogs -- The capture of two different metal-ligand complexes from one solution	$4,963.00
Dharavath, Haji Naik	Computer Electronics and Graphics Technology	Effect of Color Output Modification Approach (COMA) for the Gray Balance in Inkjet Printing: A Mismatch of Device Calibration, Destination and Source Profiles, and Halftone Screening	$5,000.00
Dowling, Robert	English	A Place in Time: The Life and Work of Sam Shepard	$5,000.00
Drew, Sally Thomas, Jeff	Special Education & Interventions	A Mixed Methods Examination of Efficacy of Self-regulated Strategy Development (SRSD) and the DEFEND Strategy to Improve Students' Argument Writing in Inclusive High School Science Classrooms	$9,950.00
Efremoff, Ted	Art	Sowing the Tempest: Seeds of Change in Climate Fact and Myth	$5,000.00
Frazee, Leah	Mathematical Sciences	Supporting Preservice Teachers' Understanding of Building Procedural Fluency from Conceptual Understanding Through Curricular Noticing	$5,000.00
Gallagher, Sean	Art	"What She Left, and What She Kept": Solo Art Exhibition	$3,939.00
Garbovskiy, Yuriy	Physics & Engineering Physics	Ions and Nanomaterials in Liquid Crystals	$5,000.00
Gichiru, Pauline Wangari	Educational Leadership, Policy, and Instructional Technology	Critical Democratic Citizenship in Ethnically Diverse Spaces: A Qualitative Study of Pre-Service Teachers' Political Attitudes and Voting habits in General Elections in Kenya	$5,000.00
Gilmore, Susan	English	"Language of the Unheard": Riot on the American Cultural Stage	$2,500.00
Givens, Eugena	Criminology and Criminal Justice	Adolescent Substance Use and its Impact on Juvenile Delinquency	$4,960.00
Goh, Tan Leng Leong, Chee Hoi	Physical Education and Human Performance	The Effects of Physical Education Program on Children's Social and Emotional Learning and Physical Activity	$10,000.00
Gotchev, Ivan	Mathematical Sciences	Cardinal Functions on Hausdorff Topological Spaces	$5,000.00
Hammad, Khaled	Engineering	Expansion Ratio and the Heat Transfer Characteristics of Suddenly Expanding Viscoplastic Flows	$5,000.00
Hapeman, Paul	Biology	Camera Surveys to Detect Long-Tailed Weasel (Mustela frenata) at Historical Sites in Florida	$5,000.00
Hartwig, Heidi	English	Tracing Catholic Conversion in Christopher St. John's Novels, Plays, and Translations	$5,000.00
Hoopengardner, Barry	Biomolecular Sciences	RNA editing in Seahorses	$4,850.00

Jackson, Mark	Biology	Serotonin Regulation of Resting membrane Potential in Crayfish Eyestalk	$5,000.00
Johnson, Steven	Engineering	An Experimental Investigation into the Effect of Oxygen/Oxide Reducing Treatments on the Processing of Light Metal Alloy Powders	$5,000.00
King, Thomas R.	Biomolecular Sciences	Determining the genetic basis of the spontaneous "lightning bolt tail" (Bolt) mutation in mice	$5,000.00
Koulidobrova, Elena "Helen"	English/Linguistics	Documenting dialectal variation in the time of health crisis: Anishinaabemowin in South East Manitoba	$5,000.00
Kurkovsky, Stan	Computer Science	An Examination of Competency-based Accreditation and Its Applications in Computing Education	$5,000.00
Lim, Hyoun-Sook	Management & Organization	Does age increase or decrease creativity? The moderating effect of perceived organizational support	$2,500.00
Marjani, Sadie	Biology	Analysis of epigenetic regulators in bovine cloned embryos with different developmental efficiencies	$2,498.00
Maurer, Sarah	Chemistry & Biochemistry	Reduction of Pyruvate by NAD+ in protocells to inform the formation of metabolisms for the origins of life	$5,000.00
Meng, Yunliang	Geography	Using Geographically Weighted Regression to Explore County Subdivision Level Predictors of Drug Overdose Death in Connecticut, U.S.	$3,000.00
Mione, Thomas	Biology	You say tomato, I say Jaltomata	$2,800.00
Mitrano John SSBE	Sociology	Heritage Tourism Program Design and Ethnic Identity: An Examination of Processes and Outcomes	$4,925.00
Naoumov Viatcheslav LMPCET	Engineering	Study of the combustion of Papaffine-Based Fuels using upgraded hybrid propellant rocket engine test facility and instrumentation system and advanced facility for solid propellant grains fabrication	$4,910.00
Pana, Elisabeta	Finance	Broker-Dealers and the COVID-19 Crisis	$4,500.00
Penniman, Clayton	Biology	Variability in Community Physiological Profiles of Epiphytic Heterotrophic Prokaryotes in the Biofilm Attached to the Thalli of the Intertidal, Canopy-forming, Brown Seaweed, Ascophyllum nodosum	$5,000.00
Pope, Cynthia	Geography	The Gendered Impacts of COVID-19 in Belize, Central America	$5,000.00
Potter, Christopher	Biology	Identification of downstream targets of Hoxc13 regulation in hair follicles.	$5,000.00
Protzko, John	Psychological Science	The Online Volunteer Subject	$4,800.00
Ryan, Antoinette	Educational Leadership, Policy, and Instructional Technology	Women as Catalysts for Third-Order Change Leadership:	$4,960.00

Saha, Krishna	Mathematical Sciences	Methods for the Analysis of Bivariate Correlated Binary Data in Multiple Comparative Clinical Trials	$5,000.00
Salama, Talat	Manufacturing and Construction Management	Concrete Mixture Design using Volcanic Ash for Bridge Construction	$5,000.00
Savatorova, Viktoria	Mathematical Sciences	Mathematical modeling of wave propagation in heterogeneous material with periodic structure and a hierarchy of spatial scales	$3,000.00
Sharma, Nimmi	Physics & Engineering Physics	Shedding Light on Air Pollution with Laser Radar	$5,000.00
Singh, GurbakhshashT	Mathematical Sciences	Conditions for dissimilar estimates of log-binomial and Poisson regression parameters	$5,000.00
Singhal, Rahul LeMaire, Peter	Physics and Engineering Physics	Effect of synthesis method on physical and thermal properties of ternary metal oxide for supercapacitor applications.	$10,000.00
Stewart, Alicia	Special Education and Interventions	Investigating the effects of the Intensification of a Comprehension Intervention Using Student Data on the outcomes of students with high levels of inattention	$4,300.00
Takemae, Natsuko	Special Education and Interventions	International Research on Universal Design for Learning: Systematically Embedding Natural Support for Equity and Inclusive Education	$5,000.00
Wei, Fu Shang (John)	Engineering	CCSU HELICOPTER FLIGHT SIMULATOR WITH VIRTUAL REALITY DESIGN	$5,000.00
Westcott, Barry	Chemistry & Biochemistry	Small molecule models of the Zn(II) site in zinc fingers	$4,920.00
Wizevich, Michael	Geological Sciences	Checking the Pulse of the Sevier Orogeny	$5,000.00
Zabihimayvan, Mahdieh	Computer Science	Deep Neural Classification of Darknet Traffic	$5,000.00
Zalewski, Leanne	Art	The New York Market for French Art in the Gilded Age, 1867-1893, Contextualizing Art Markets series (New York: Bloomsbury Visual Arts, expected publication 2022)	$577.00
Zalewski, Leanne	Art	Competing in a Man's Field: Anna Vaughn Hyatt's Joan of Arc	$947.00
Total			$317,665
Available funding			$398,146
Carry over to 2023-24			$80,481

ECSU 2022 Roster of Faculty Research Grants for BOR

Name	Grant Title	Amount Funded
Michelle Bacholle	Marcelino Truong and Alice Guy Blaché: Two International Presentations and an Edited Volume	$4,000
Thomas Balcerski	"The Greatest Party Ever Known: A History of Democrats from Jefferson to Biden"	4,000
JJ Cobb	Research and residency in support of Harvey Hourse play *The Couriers*	$5,000
Brian Day	Documentary Production – Stepping Into the Shade: Tobacco's Connection to Civil Rights - Joint proposal	$9,976
Daniel Donaghy	Against Erasure: Poems for Racial Equity and Social Justice (book of original poems)	$3,000
Mark Fabrizi	Historical Dictionary of Horror Literature	$3,696
Christine Garcia	Semillitas, Writing Seeds: A Gloria E Anzaldua Approach to Teaching Writing	$4,000
Barbara Liu	Self-Advocacy and the Early Rhetorical Development of an ME/CFS Social Health Movement: An Archival Research Project	$2,500
Raouf Mama	Burning Candles -- a novel in progress	$3,000
Maureen McDonnell	Exit Stage Left: An Ethnography of the "Mellon School: Final Session"	$4,000
Scott Moore	The Virginia Witch: Grace Sherwood in History and Legend	$5,000
Afarin Rahmanifar	"Female Identified:" Visual Methods of Storytelling	$5,000
Allison Speicher	Fictions of Age: A Literary History of Aging in Nineteenth-Century America	$1,920
Christopher Torockio	Murmurs: A Novel	$4,000
Anthony Aidoo	Grayscale Medical Image Enhancement With Morphological Closing Based on Top-Hat Operator.	$4,000
Amy Bataille	Examination of the effect of sex hormones and genetic variants on urate handling in human kidney cells.	$4,852
William Cunningham	Geological Investigations into the Crustal Evolution of Southeastern New England	$3,200
Matthew Graham	Assessing the impacts of warming climates on tarantulas from a cold desert using genomics	$4,992
Amy Groth	Utilizing C. elegans to study human development and disease	$4,000
Kedan He	Exploring the therapeutic applications of naturally extracted borneol as a drug molecule using computeraided drug discovery method	$2,772
James Hyatt	Ground/Drone-based 3D Photogrammetric model analysis of coastal retreat, Block Island, RI - joint proposal	$7,512
Josh Idjadi	After the die-off: understanding the limited recovery of an important herbivore on Jamaican coral reefs	$3,784
Syed Islam	Non-Destructive Analysis of Dyes in Paintings and Ancient Artifacts Using Gel Transfer Surface Enhanced Raman Spectroscopy (GT-SERS)	$5,000
Mehdi Khorami	Harmony in Dance through Mathematics	$2,000
Chantal Larose	Leveraging Data Science and Analytics to Improve NFL Kickoff Strategy and Boost ECSU's Visibility as a Data Science Hub	$1,500
Kurt Lucin	Investigating whether reduced beclin 1 impairs the phagocytosis of human Alzheimer's disease proteins	$3,000
Barbara Murdoch	Mollicutes symbionts in the scorpion telson.	$4,000

Vijay Veerappan	Phenotypic characterization and mRNA expression analysis of a novel deregulated anthocyanin pigmentation mutant in the model legume plant Medicago truncatula	$3,000
Xing Liu	Bayesian Multilevel Proportional Odds Models for Ordinal Response Variables in Educational Research	$2,940
Sarah Nightingale	The Relationship Between Mental Health, Academic Outcomes, and Reporting Sexual Assault to College Officials for LGBQ College Students	$3,960
Fatma Pakdil	A Comparative Multivariate Analysis on Monitoring Length of Stay, Readmissions, and Discharge cost at Hospitals Using Statistical Process Control and Lean Management Perspective -- joint proposal	$8,000
Kristy Salters-Pedneault	College Student Coping and Mental Health in the Wake of the Covid-19 Pandemic	$4,000
Khai Zhi Sim	Predicting Bank Failures Using Machine Learning and Alternative Data drug discovery method	$4,000
Total		$135,604
Funding Available		$197,708
Carry Over		$62,104

WCSU 2022 Roster of Faculty Research Grants for BOR

Name	Grant Title	Amount Funded
Allocco, Katherine	Medieval Cities: Carolingian Construcion at Campus Galli	$5,000
Arslan, Hasan	Presidential Policies, Legislative Actions and Anti-abortion Violence in the United States	$2,500
Bakhtiarova, Galina	Hispanic, Latinx, Chicanx: Heritage and Identity through Visual Arts, Music and Cultural Artifacts	$5,000
Bandhauer, Carina	The Modern Anti-Immigrant Movement	$5,000
Boyle, James	Wintertime Rooftop Saltwater Tank Experiment Campaign to Characterize Ice/Water Interactions	$2,500
Chuang, Ming-Ling	The Challenges of Rebuilding US Domestic Supply Chains	$5,000
Cordeira, Joshua	A new leptin-based therapy for overweight and obesity	$4,999
Eckstein, Jessica	Psychometrics and Population Utility of the Technology-Mediated Abuse (TMA) Scale: Testing Sample Reliability and Convergent, Face, and Expert-Validity of Victimization Measurement	$4,931
Gallucci, Nicholas	Validation of a Performance Anxiety Inventory	$5,000
Giamanco, Kristin	Modeling Perineuronal Nets: Using a Glioma Cell Line to Examine Molecular Assembly	$2,500
Hawkins, Stacey Alba	Poetry Translation	$5,000
Kraybill, Jess	Addressing Mental Health in College Students	$5,000
Malavisi, Anna	Global Development, the Climate Crisis, and Epistemic Challenge	$3,254
Marino, Kim	Coronavirus Behind Bars: The effect of the pandemic on Connecticut's Prisons	$5,000
Misra, Manoj	Anti-Coal Protest and Asymmetric Environmentalism	$5,000
Monette, Michelle	Towards an understanding of physiological tradeoffs between osmoreregulation and thermal tolerance in Atlantic killifish	$5,000
Nelson, Mary	Embedded questions with appropriate controls improve understanding of pre-class material	$5,000
Owoye, Oluwole	The Analysis of Public Governance Performance in African Countries in the 21st Centruy	$5,000
Pan, Zuohong	An Assessment of China’s Central Bank Intervention and Its Impact on the Renminbi Exchange Rate Fluctuations	$5,000

Pinou, Theodora	A preliminary investigation into the herbivorous foraging behavior of triploid grass carp at Candlewood Lake and its impact on overstocking at Squantz Pond	$4,979
Prieto, Judith	Mass Spectrometry as a tool for the study of infectious disease	$2,500
Reynolds, Hannah	*Aspergillus fumigatus* from common loon carcasses and nests	$5,000
Robertson, Forest	Construction of Libraries of 2-Substituted Tetrahydrothiophenes and 2-Substituted Thetanes, and Method Development to Access 1,3-Dihydrobenso[c]thiophenes	$2,500
Santibanez, Carlos	Exploring the expression of venom toxins of Black-clawed Scorpions from different ecosystems	$4,998
Sharma, Divya	Ethics, methods, and narratives surrounding media coverage of victims of COVID-19	$5,000
Stankas, Brian	Photochemistry in Action: Kinetics and Dynamics of Photoactive Molecules	$5,000
Stewart, Tricia	Teachers on Teaching during the COVID-19 Pandemic: Experiences from a Time of Collective Trauma	$10,000
Wong, Edwin	Diversity of Toxic Cyanobacteria in Connecticut Lakes	$5,000
Total Grant Awards		$130,661
Total Funds Available		$179,694
Funds to Carry Over		$49,033

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Connecticut Community College's Emeritus

June 23, 2022

RESOLVED: That the Board of Regents for Higher Education approve the 2022 emeritus recommendations from the presidents and chief academic officers of the Connecticut Community Colleges.

A True Copy:

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Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

ITEM

Approval of the 2022 emeritus recommendations from the presidents and chief academic officers of the Connecticut Community Colleges

BACKGROUND

In accordance with the CSU-4Cs Collective Bargaining Agreement, the Board of Regents awards emeritus status to faculty and staff at the 12 Connecticut Community Colleges. Recommendations forwarded to the Board have been approved by the respective community college president or chief executive officer. The Board of Regents acts upon the recommendations of the presidents and chief academic officers. The letters of recommendation are attached.

06/03/2022 – BOR Academic & Student Affairs Committee
06/23/2022 – Board of Regents

MIDDLESEX COMMUNITY COLLEGE
Your College • Your Future

Middlesex Community College
100 Training Hill Road
Middletown, CT 06457
1.800.818.5501 toll free
860.343.5800 phone
860.344.7488 fax

May 20, 2022

Mr. Terrence Cheng, President
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105
Sent via email tcheng@commnet.edu

Dear President Cheng,

It is my distinct honor and pleasure to recommend that the Board of Regents confer emeritus status to the following staff who will be retiring from State service at the end of the 2021-22 academic year. I offer these nominations under the process found in the Congress collective bargaining agreement (Article X, Section 6.O).

- Dr. Paul Carmichael, Director of Institutional Research Emeritus

Attached, please find a letter from my colleagues in support of this nomination.

Thank you for your consideration of this request.

Sincerely,

Kimberly A. Hogan
Interim Chief Executive Officer
khogan@mxcc.edu • 860-343-5702

Tunxis
Community
College

Education That Works For a Lifetime

May 26, 2022

Terrence Cheng
President
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105

President Cheng:

On behalf of Tunxis Community College and the North-West Region, Dr. James Lombella and I recommend that Vivian Craven be awarded the designation of Emeritus status.

Regards,

Darryl Reome

Darryl Reome, Ed.D.
Campus CEO

James P. Lombella

James Lombella, Ed.D.
Regional President
North-West Region

Tunxis Community College
271 Scott Swamp Road
Farmington, CT 06032
860.773.1300
tunxis.edu
A Connecticut Community College

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Refugee/Asylee Assistance

June 23, 2022

WHEREAS, the State of Connecticut has extended humanitarian aid to refugees, and

WHEREAS, the CSCU institutions have expressed an interest in providing support to students who are refugees enabling them to continue or start their higher education studies in Connecticut, and

WHEREAS, the CSCU system has the desire to partner with the state Department of Social Services and refugee resettlement agencies to leverage resources to facilitate access for refugees to our institutions, and

WHEREAS, CSCU will convene a working group to partner with the Department of Social Services and the state's refugee resettlement agencies to assist in facilitating enrollment of refugees in our institutions; therefore, be it

RESOLVED, that CSCU campus leaders, through a process designed by the working group described above, may provide an array of supports for students as detailed in the staff report at their discretion and within available resources and can request additional flexibility if needed from the CSCU President.

A True Copy:

_____

Alice M. Pritchard, Secretary of the
CT Board of Regents for Higher Education

CT State Colleges and Universities (CSCU)
Staff Report to Board of Regents on Refugee/Asylee Assistance

Background

In Connecticut, the Economic Security Unit of the Department of Social Services (DSS) is responsible for disbursing federal funds related to the resettlement of refugees in Connecticut. Refugees are assigned by the U.S. State Department to local affiliates of national voluntary resettlement agencies in Connecticut. DSS disburses federal refugee assistance program funds, administers refugee cash and medical assistance programs, and monitors resettlement activity for individuals who qualify as refugees under international law. A refugee can request to become a legal permanent resident after one year of residence in the United States and can apply for U.S. citizenship five years after their date of entry to the United States. In federal fiscal year 2021, there were 57 new refugee arrivals to Connecticut. Between October 1, 2021, and April 30, 2022, Connecticut has welcomed 64 refugees, 18 Special Immigrant Visa holders, and 702 humanitarian parolees through Operation Allies Welcome. That number is expected to grow with continued unrest across the globe.

DSS regional offices administer the Refugee Cash Assistance (RCA) and Refugee Medical Assistance (RMA) programs for refugees for up to 12 months from their date of entry to the United States. DSS also provides refugees with temporary family assistance/cash assistance, medical coverage, and food stamp assistance under those public assistance programs since refugees qualify as legal non-citizens.

Resettlement agencies assist refugees during their resettlement in the United States. The agencies locate housing, provide household furnishing and clothing, enroll refugees in employment services, register youth for school, apply for Social Security cards, and connect them with necessary social or language services. DSS partners with the resettlement agencies in Connecticut to provide these services. The agencies have offices in Bridgeport, Greenwich, Hartford, and New Haven; however, services are provided statewide.

In addition to the refugee population, asylees are individuals who on their own, travel to the United States and subsequently apply for/receive a grant of asylum. Asylees do not enter the United States as refugees. They may enter as students, tourists, businessmen, or even in undocumented status. Once in the United States, or at a land border or port of entry, they apply to the Department of Homeland Security (DHS) for asylum.

CSCU Response

Following a request by the Faculty Advisory Committee and in conversations with CSCU campus leaders, President Terrence Cheng worked with his senior team to identify ways in which educational supports could be provided to refugees who would like to continue or start their education at one of our 17 institutions. This resolution would formalize a relationship with the Connecticut Department of Social Services and the state's resettlement agencies to allow for the support of refugees from any country that are extended humanitarian aid by the State of Connecticut.

The CSCU system office will establish a process in collaboration with the resettlement agency for identifying student needs and accepting agency referrals to the colleges and universities. CSCU system office will convene a working group with points of contact for each institution to work with the agencies to better understand our educational programs and services, admissions criteria, federal, state, and institutional aid, etc. The point of contact will be the liaison for the refugee and the resettlement agency with their institution and the campus team will determine what resources are available to address academic, financial, and personal barriers to enrollment and success.

Services and resources available range from tuition and fee waivers to discounted housing to information about educational programs and career opportunities. CSCU resources may include in-state tuition, tuition and fee waivers, institutional aid, assistance in applying for other aid and scholarships, employment assistance, discounted housing arrangements, and assistance with transferring of credits. The campus leader can make a request of the CSCU President for items not identified in this resolution. If asylee students should come to the institution directly, the school can make a referral to the resettlement agency for services and can provide the same options for educational support.

06/03/2022 – BOR Academic and Student Affairs Committee
06/08/2022 – BOR Finance and Infrastructure Committee
06/23/2022 – Board of Regents

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Approval of Modification to the

CSCU Areas of Study for CT State Community College

June 23, 2022

WHEREAS, Board of Regents Policy 19-037 identifies six Areas of Study for CT State Community College designed to provide a meaningful but manageable organizational framework for all academic programs and curriculum for the merged community colleges, aid in student decision making and providing students with clear paths to graduation, and facilitate the implementation of Guided Pathways practices; and

WHEREAS, Policy 19-037 was adopted prior to the appointment of CT State Community College leadership and academic administration and, as such, delegated maintenance and oversight of the Areas of Study exclusively to the CSCU Provost and Senior Vice President; and

WHEREAS, Policy 19-037 did not include specific provisions for regular status updates on implementation of the policy to the Board of Regents; and

WHEREAS, Subsequent discussion and deliberation by CT State Community College leadership, academic administration, and discipline experts and refinements to the academic structure for CT State, make clear the need for revisions to the names of the Areas of Study; and

RESOLVED That the Board of Regents delegates to the CT State Community College President and CT State Community College Provost, and their designees, authority to maintain, refine, and revise the Areas of Study as needed to support the stated purposes of providing a meaningful but manageable organizational framework for all CT State academic programs and curriculum, aiding student decision making and providing students with clear paths to graduation, and facilitating the implementation of Guided Pathways practices; and directs the CT State Community College President and CT State Community College Provost, and their designees, to provide regular updates to the Board of Regents on the implementation and success of the Areas of Study.

ITEM
Modification to Board of Regents Policy 19-037 Direction to Develop Six Areas of Study for the CT Community Colleges.

ORIGINAL MOTION

RESOLVED: That the Board of Regents for Higher Education directs the CSCU System Office, through the leadership of the CSCU Provost and Senior Vice President for Academic and Student Affairs, to develop, implement, and maintain a set of metamajors, to be known as Areas of Study, consistent with Guided Pathways practices for the CSCU community college, to be established. The Areas of Study
will provide an organizational framework for all academic programs and provide students with clear paths to graduation.

The CSCU Areas of Study are established to support ongoing efforts to improve student success at the CSCU community colleges and in the CSCU system. The Areas of Study will cluster existing degree programs under larger thematic umbrellas into sets of related areas of study. This does not change the overall number of programs offered, but it does simplify the way in which program options are presented to students to afford a more informed decision-making process.

The six CSCU Areas of Study are as follows:

- Social and Behavioral Sciences, Education, and Public Service
- STEM (Science, Technology, Engineering, and Math)
- Manufacturing, Industry, and Technical Careers
- Health Careers
- Humanities and Creative Arts
- Business & Hospitality

Programs established for the singly accredited CT community college will exist within one of these six CSCU Areas of Study. Program establishment within a particular Area of Study will be part of the program approval process.

The CSCU System Office, through the leadership of the CSCU Provost and Senior Vice President for Academic and Student Affairs, will maintain this system of Areas of Study as well as ensure the consistency of their application and use.

RECOMMENDED AMMENDED MOTION

RESOLVED that the Board of Regents delegates to the CT State Community College President and CT State Community College Provost, and their designees, authority to maintain, refine, and revise the Areas of Study as needed to support the stated purposes of providing a meaningful but manageable organizational framework for all CT State academic programs and curriculum, aiding student decision making and providing students with clear paths to graduation, and facilitating the implementation of Guided Pathways practices; and directs the CT State Community College President and CT State Community College Provost, and their designees, to

provide regular updates to the Board of Regents on the implementation and success of the Areas of Study.

A True Copy:

_____

Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

STAFF REPORT
The initial Areas of Study were proposed prior to the completion of the organizational structure for CT State Community College, in particular the structure of Academic Affairs. While the original resolution stipulated six specific Areas of Study, the modification allows the flexibility for the Areas of Study to be named, populated with appropriate disciplines, and modified as needed. This will allow CT State to respond to workforce needs and transfer changes while keeping with best practices of Guided Pathways Meta Majors as noted in the original staff report (below).

Original Staff Report:

BACKGROUND
What are Meta-Majors?

Meta-majors are collections of academic degree programs that have related courses and career goals and share common foundational skills (Waugh, 2016). For example, a "health careers" meta-major might include a number of different specific degree programs, such as exercise science, occupational therapy assistant, radiography, respiratory care, surgical technology, nursing, etc. Meta-majors organize existing degree programs into smaller sets of related areas of study. Implementing meta-majors does not change the overall number of programs offered, but it does simplify the way in which program options are presented to students to afford a less anxiety-provoking and more informed decision-making process. For example, instead of trying to select a major from a list of over 100 possible options, students select a broad area of study from among five to eight options. While more options may intuitively seem better, research suggests that too many options results in decision paralysis and impairs effective decision-making (Kahneman, 2011; Schwartz, 2004). The overwhelming number of CT community college students who enroll in General Studies degree programs across the twelve colleges suggests that this may indeed be the case.

Why Meta-Majors?

The rationale for meta-majors is convincingly summarized by Waugh (2016):

> "We know that the completion statistics for low-income and underprepared students enrolled in certificate and degree programs at community colleges are dismal. A growing body of evidence reveals that a central factor in these low completion rates is the 'cafeteria' style approach to college, which provides entering students with a dizzying array of choices and little guidance on navigating those choices. Recent brain science research demonstrates that people feel anxiety and irritation when faced with too many choices and, as a result, are more likely to make poor choices or avoid the situation entirely. A poor decision on which classes to take can cost community college students a significant amount of time and potentially mean the difference between earning a credential or degree and stopping or dropping out... A key design principle of Guided Pathways is that academic programs of study be structured to provide students with guidance and clear routes to completion. Guided pathways aim to reduce student

meandering caused by an overwhelming array of course options, unclear program requirements and a lack of guidance. Meta-majors provide this structure from a student's entry to college all the way through completion."

Evidence suggests that entering a specific program of study within a year of enrollment is critical to successful completion (Jenkins & Cho, 2012). Meta-majors can thus be particularly beneficial for students who are undecided about their educational and career goals at the time of entry into college, which can be as high as 65% to 70% of all entering students (Albion & Fogarty, 2002). Meta-majors provide an easy-to-understand entry point to the diverse program offerings at our colleges and help students begin to narrow their interests early in their academic journey. Students enter an area of study and complete coursework in this interest area before deciding on a more specific major or program of study. Of course, students who enter the college already having decided on their degree program are still able to choose that major rather than first designating a meta-major.

The benefits of the meta-major framework extend beyond helping students select a course of study. General education and foundational skill courses can be aligned to the different needs within different meta-majors. For example, math requirements may vary by area of study from those requiring statistics (e.g., Behavioral Sciences) to those needing an algebra or calculus sequence (e.g., STEM). Default pathways within each area of study identify the math, and other general education requirements and recommendations, for students up-front. Because academic programs within an Area of Study share similar courses and foundational skills, meta-majors provide a means to ensure that students register for relevant courses within coherent degree programs. This, in turn, means that students can explore multiple transfer and career options within an area of study while maintaining momentum toward completion and increases the likelihood that students will earn a meaningful credential and/or transfer in a timely fashion.

Meta-majors create cohorts of students with related interests, foster early connections between students and faculty experts within an area of study, and allow co-curricular programming (i.e., experiences and activities outside the classroom that support and reinforce class content) matched to student interests. These are all highly effective ways of increasing student engagement. "The research findings are unequivocal. Student learning, persistence, and attainment in college are strongly associated with student engagement. The more actively engaged students are – with college faculty and staff, with other students, with the subject matter they are studying – the more likely they are to persist in their college studies and to achieve at higher levels." (Center for Community College Student Engagement, 2018)

How were the Areas of Study determined?

The Guided Pathways Choice Architecture team was established in Spring 2018 and charged with making recommendations concerning a number of academic components of implementing Guided Pathways reforms in the CT community colleges, including identifying possible meta-majors.

The team includes faculty, staff, and administrators from all twelve community colleges, Charter Oak State College, and the CSU's. Student representatives from SAC also participate in team

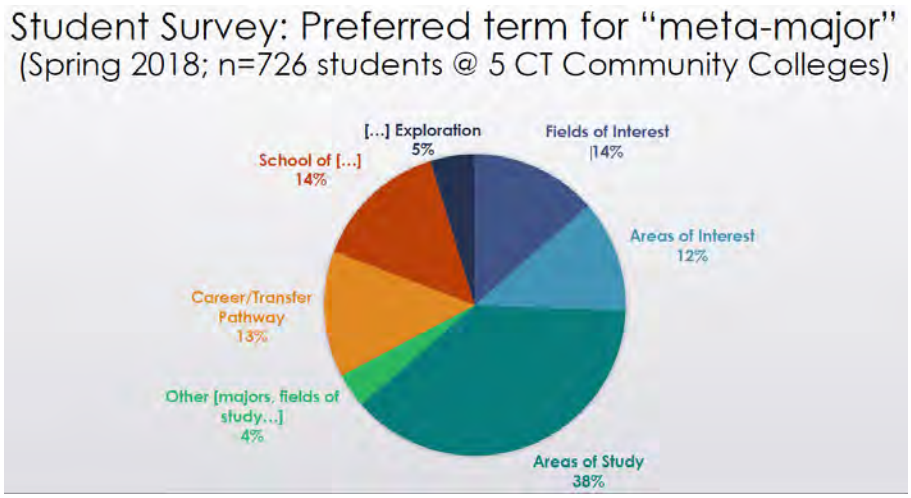
meetings. Team members represent a wide array of academic disciplines, career programs, governance committees, support services, and functional areas. Past and current team members, including Guided Pathways managers: Rebecca Adams (HCC), Shirley Adams (COSC), Gayle Barrett (MxCC), Kevin Bechard (MCC), Vicki Bozzuto (GCC), Sara (Brinckerhoff) Hanson (MxCC), Mike Buccilli (GCC), Jeff Buskey (ECSU), Jodi Calvert (TRCC), Michelle Coach (ACC), Tamika Davis (TxCC), Joe DeFeo (NVCC), Amy Feest (TxCC), David Ferreira (NCCC), Teresa Foley (ACC), Andre Freeman (CCC), Dan Fuller (GCC), Forrest Helvie (NCC), Debbie Herman (MCC), Mary Ellen Jukowski (TRCC), Amy Kacerik (QVCC), Bev King (NCCC), Laura McCarthy (NCCC), Steve McDowell (SO), Chris Paulin (MCC), Phyllis Perry (SO), Ron Picard (NVCC), Oscar Rivera (SO), Francine Rosselli-Navarra (MCC), Christine Ruggiero (MxCC), Sarah Selke (TRCC), Amanda Sweeney (GCC), Sally Terrell (TxCC), Nora Uricchio (MCC), Emily Verdosci (NVCC, student), Heather Vogt (QVCC, student), and Heidi Zenie (TRCC).

Based on a review of meta-majors implemented at Guided Pathways colleges across the country, the team brainstormed a list of possible meta-majors. Team members brought this list back to their campuses for feedback and the list was refined through discussion of this feedback. The team recommends the following six Areas of Study:

- Social and Behavioral Sciences, Education, and Public Service
- STEM (Science, Technology, Engineering, and Math)
- Manufacturing, Industry, and Technical Careers
- Health Careers
- Humanities and Creative Arts
- Business & Hospitality

From Meta-Majors to Areas of Study.

Feedback from students, faculty, and staff indicated that the term “meta-major” is not intuitively appealing or understandable. In the Spring of 2018, faculty and staff members from the Guided Pathways Choice Architecture team surveyed students to determine their preferred term for the meta-major construct. The survey included the following alternatives to the term meta-major: (1) areas of study, (2) areas of interest, (3) fields of interest, (4) transfer and career pathways, (5) school of [health, business, science, etc.], (6) [health, business, science, etc.] exploration, and (7) a write-in option. As evident in the figure below, “Areas of Study” emerged as the preferred option.



Mapping Degree Programs into Areas of Study.

The placement of specific academic programs within each Area of Study involves both theoretical judgments of "best fit" (e.g., an accounting program intuitively appears to fit best within a "Business" Area of Study whereas a music program appears best suited in the "Humanities and Creative Arts" Area of Study) as well as empirical validation that the proposed programs within an Area of Study have some overlap in course-work and career trajectories. Ideally, programs within a single Area of Study should have a similar first semester sequence of courses that includes at least one introductory level content course within that interest area as well as English and math courses aligned to the Area of Study. Mapping programs to Areas of Study is an iterative process that requires collaboration between program faculty and academic administrators. Facilitation and oversight of the process will initially be provided by Guided Pathways leadership and the Choice Architecture team. Following consolidation, changes to the Areas of Study or programs within an Area of Study will adhere to governance processes established through the consolidation process.

Areas of Study as part of Guided Pathways reforms

Consistent with the revised CSCU Students First initiative approved by the Board of Regents on June 18, 2018, implementing Areas of Study is just one in a series of Guided Pathways initiatives designed to improve student success and increase student retention and completion. Guided Pathways design principles recommend that students select an academic and career pathway as early as possible. The Areas of Study are just one way in which Guided Pathways reforms will aid students in this early decision making. A newly re-imagined onboarding process offers the students a streamlined approach to entering the community college system. This on-boarding process will support student career exploration and decision making though the use of interest inventories which, upon completion, will suggest meta-majors for further career exploration. In addition, the newly developed College and Career Success course has been intentionally designed to create a space where students can engage in meaningful career exploration and planning. With faculty guidance, the student will create a comprehensive academic plan and will

learn how to evaluate their plan and modify as needed. The College and Career Success course is a vehicle that helps students choose a path and provides the tools students need to stay on a path.

Equity Statement

"Students from educationally and economically disadvantaged backgrounds, who tend to be disproportionately represented at community colleges, are often poorly prepared to navigate the college experience, which exacerbates equity gaps" (Jenkins, Lahr, Fink, Ganga, 2018). Many of these students are the first in their families to attend college and have simply had no exposure to the full range of program, and future employment, options that a college degree can offer. This lack of social and cultural capital can negatively impact the very first decision these students must make: picking a program of study. Currently, in CT community colleges, students select a program of study when they apply to the college. Applications include a non-contextualized list of programs offered by the college from which students must choose a single, or sometimes primary and secondary, course of study. This practice lends itself to students selecting a program with little guidance, understanding of the future employment prospects of the various majors, or awareness of the fit between their selected program and their own skills and interests. Students who make this decision without access to all relevant information may find themselves having to start over when they realize their initially selected program is not a good fit for one reason or another.

"In the guided pathways model, colleges typically organize programs into broad career-focused fields, or meta-majors, which help current and prospective students and others understand the range of program offerings" (Jenkins, Lahr, Fink, Ganga, 2018). By both contextualizing and narrowing choice options, Areas of Study allow all students, even those with no prior college experience or knowledge, a simpler and easier to understand starting point. By organizing programs into Areas of Study, students can readily see the connections between related programs and the full scope of career and transfer opportunities.

Areas of Study are a good first step in helping to mitigate some of the factors contributing to equity gaps in attainment, but they are insufficient alone. "Equity provides students with the necessary resources to achieve their educational goals, regardless of when they begin their educational journeys or the obstacles they might encounter. Equity in education demands placing support systems in line to guarantee all our students have an opportunity to succeed and thrive." (Beckford & Ricardo, 2019). Deploying Areas of Study must be coupled with additional guided pathways informed strategies, such as clearly mapping pathways to careers and transfer, providing students with the time and space for exploring programs and choosing majors, and helping students develop college success and psychological resilience skills. Only when we have fully addressed the inequities in our current institutional structures, policies, and procedures can we begin to close the existing attainment gaps.

RECOMMENDATION

It is the recommendation of the System's Provost and Senior Vice President for Academic and Students Affairs that the Board of Regents give favorable consideration to the establishment of the proposed Areas of Study.

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CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

CT State Community College Aligned Degrees & Certificates

June 23, 2022

RESOLVED: That the Board of Regents for Higher Education approves the licensure and accreditation of the following degrees and certificates for Connecticut State Community College, developed from degrees and certificates ***previously approved by the Board for one or more of the 12 individually accredited colleges***. These degrees and certificates meet the specific requirements of the Board's General Education (BOR 20-082) and CSCC College and Career Success 101 (BOR 20-099) policies. All degrees also meet the Credit Normalization policy (BOR 14-111) or are within any credit exemptions previously approved by the Board, unless otherwise noted below.

The degrees and certificates include:

Program	Program Type	Minimum # of Credits
1. Architecture: Construction Technology	Certificate	28
2. Business Administration	A.S.	60
3. Business Administration: Entrepreneurship Concentration	A.S.	60
4. Business Administration: Finance Concentration	A.S.	60
5. Business Administration: Honors Concentration	A.S.	60
6. Business Administration: Management Concentration	A.S.	60
7. Business Administration: Marketing Concentration	A.S.	60
8. Business Administration	Certificate	18
9. Business Administration: Digital Marketing	Certificate	30
10. Business Administration: Entrepreneurship	Certificate	18
11. Business Administration: Finance	Certificate	27
12. Business Administration: Management	Certificate	18
13. Business Administration: Marketing	Certificate	18
14. Business Studies (CSCU Transfer Pathway)	A.A.	60
15. Communication: Digital Media Production	Certificate	18
16. Communication: Public Relations	Certificate	18

Program	Program Type	Minimum # of Credits
17. Communication: Visual Communication	Certificate	18
18. Computer Information Systems (CIS): Cloud Computing Option	A.S.	60
19. CIS: Data Analytics Option	A.S.	60
20. CIS: Generalist Option	A.S.	60
21. CIS: IT Support Option	A.S.	62
22. CIS: Networking Option	A.S.	61
23. CIS: Programming Option	A.S.	60
24. CIS: Cloud Computing	Certificate	18
25. CIS: Computer Networking	Certificate	19
26. CIS: Computer Programming	Certificate	18
27. CIS: IT Support	Certificate	26
28. Computer Networking	A.S.	60
29. Computer Networking Security	Certificate	19
30. Computer Networking Technology	Certificate	20
31. Computer Science Studies (CSCU Pathway Transfer Degree)	A.A.	61
32. Computer Science: Mobile Programming	A.A.S.	63
33. Computer Science: Software Development	A.S.	61
34. Computer Science: Software Engineering	A.A.S.	61
35. Computer Science: Web Development	A.A.S.	60
36. Computer Science: Relational Database Development	Certificate	12
37. Computer Science: Smartphone App Development	Certificate	14
38. Computer Science: Web Developer	Certificate	16
39. Construction Management	A.S.	61
40. Construction Management	Certificate	30
41. Cyber and Homeland Security	A.S.	60
42. Cyber and Homeland Security	Certificate	18
43. Cybersecurity	A.S.	61
44. Cybersecurity: Computer Science	A.S.	61
45. Cybersecurity: Networking	A.S.	60

Program	Program Type	Minimum # of Credits
46. Cybersecurity Essentials	Certificate	22
47. Cybersecurity Operations	Certificate	31
48. Digital Arts Technology (DAT)	A.S.	60
49. DAT: Animation & Motion Graphics	Certificate	18
50. DAT: Audio Production	Certificate	18
51. DAT: Digital Graphics for Print & Screen	Certificate	18
52. DAT: Technical Communication	Certificate	18
53. DAT: Trending Technology in Digital Media	Certificate	18
54. DAT: Video Production	Certificate	18
55. EMT to Paramedic Pathway	Certificate	19
56. Engineering Science (College of Technology)	A.S.	68*
57. Foundations in Digital Analytics	Certificate	12
58. French Studies (CSCU Transfer Pathway Degree)	A.A.	61
59. German Studies (CSCU Transfer Pathway)	A.A.	61
60. History Studies (CSCU Transfer Pathway Degree)	A.A.	61
61. Hospitality: Hotel Management	A.S.	61
62. Hospitality: Restaurant Management	A.S.	63
63. Hospitality: Meetings, Conventions, & Special Events Management	Certificate	21
64. Italian Studies (CSCU Transfer Pathway Degree)	A.A.	61
65. Management Information Systems	A.S.	60
66. Management Information Systems	Certificate	18
67. Mechanical Engineering Technology	A.S.	61
68. Nuclear Engineering Technology	A.S.	67
69. Physical Therapist Assistant	A.S.	67
70. Political Science Studies (CSCU Transfer Pathway Degree)	A.A.	61
71. Psychology Studies (CSCU Transfer Pathway Degree)	A.A.	61
72. Respiratory Care	A.S.	62
73. Respiratory Care: MCC Option	A.S.	66
74. Spanish Studies (CSCU Transfer Pathway Degree)	A.A.	61
75. Sport Management	A.S.	60

Program	Program Type	Minimum # of Credits
76. Technology Studies (parent degree, College of Technology)	A.S.	60-69*
77. Technology Studies: Advanced Manufacturing Machine Technology Option 1	A.S.	65
78. Technology Studies: Advanced Manufacturing Machine Technology Option 2	A.S.	68*
79. Technology Studies: Artificial Intelligence Option	A.S.	60
80. Technology Studies: Biomolecular Sciences	A.S.	63
81. Technology Studies: Computer Engineering Technology	A.S.	64*
82. Technology Studies: Data Science	A.S.	64
83. Technology Studies: Energy Management	A.S.	61
84. Technology Studies: Engineering Technology	A.S.	60
85. Technology Studies: Environmental Science	A.S.	62
86. Technology Studies: Industrial Technology	A.S.	63
87. Technology Studies: Manufacturing Engineering Technology	A.S.	63
88. Technology Studies: Mechatronics Automation Technician	A.S.	64
89. Technology Studies: Precision Manufacturing	A.S.	69*
90. Technology Studies: Robotics and Mechatronics Technician	A.S.	65
91. Technology Studies: Technology and Engineering Education	A.S.	63
92. Technology Studies: Welding and Fabrication Technologies	A.S.	68*
93. Technology Studies: Advanced Manufacturing Machine Technology Certificate 1	Certificate	33
94. Technology Studies: Advanced Manufacturing Machine Technology Certificate 2	Certificate	36
95. Technology Studies: Architectural CAD	Certificate	12
96. Technology Studies: CAD User	Certificate	6
97. Technology Studies: Data Science	Certificate	18
98. Technology Studies: Energy Management	Certificate	16
99. Technology Studies: Mechanical CAD	Certificate	18
100. Technology Studies: Mechatronics Automation Technician	Certificate	32
101. Technology Studies: Precision Manufacturing Certificate	Certificate	37
102. Technology Studies: Robotics and Mechatronics Technician	Certificate	33
103. Technology Studies: Welding and Fabrication Technologies	Certificate	36

Program	Program Type	Minimum # of Credits
104. Theater	A.A.	60
105. Theater: Musical Theater	A.A.	60
106. Theater: Design and Production	A.A.	60
107. Theater Studies (CSCU Transfer Pathway Degree)	A.A.	60

* The College of Technology Engineering Science and some of the Technology Studies AS degrees require an additional one to three credits due to the addition of the College and Career Success (CCS 101) course in the curriculum. Not all options within the Technology Studies degree will require the exemption and some options were previously granted exemptions to credit normalization. Where needed and as per BOR policy 14-111, we request an exemption to credit normalization for the credit totals listed above to include the College and Career Success course.

A True Copy:

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Alice Pritchard, Secretary of the
CT Board of Regents for Higher Education

ITEM

Implementation of the Revised Students First Plan (BOR 18-089) to align community college curricula statewide. The degrees and certificates to be approved meet the specific requirements of the Board's General Education (BOR 20-082) and CSCC College and Career Success 101 (BOR 20-099) policies. All degrees also meet the Credit Normalization policy (BOR 14-111) or are within any credit exemptions previously approved by the Board, unless otherwise noted in the resolution.

BACKGROUND & ALIGNMENT PROCESS

In April 2017, the Board of Regents approved the Students First plan to help address the system's fiscal challenges while maintaining high quality education, improving student outcomes, and reducing equity gaps in attainment. The plan includes a consolidation of administrative functions as well as an organizational merger of the community colleges. In June 2018, the Board of Regents approved the Revised Students First plan to merge the 12 individually accredited community colleges into a single institution, including "aligning college curricula statewide, while addressing local and regional distinctiveness, to support high quality educational programs and seamless transfer, including adoption of a statewide general education curriculum". In May 2020, the Board officially named this merged institution Connecticut State Community College.

Alignment of the community college programs and certificates involves synthesizing the existing 600+ programs and 400+ certificates, previously approved by the individually accredited institutions and the Board of Regents, into a single set of programs and certificates with common names, descriptions, learning outcomes, and courses, including a common general education core for degree programs. Similarly, all 4000+ courses previously approved by the individually accredited institutions need to be aligned to have common course names, numbers, descriptions, learning outcomes, pre-requisites/co-requisites, contact hours, and credit hours. This work began in Fall 2018 coordinated by the Students First Academic and Student Affairs Consolidation Committee (SF ASA CC). This work is currently facilitated by a CT State Community College curriculum alignment team, consisting of the interim Associate Vice President of the Academic Programs and Curriculum, the interim Associate Vice President of Higher Education Transitions, the interim Director of Regional and Specialized Accreditation, the interim Director of the College Catalog, and four community college faculty serving as alignment managers.

Curriculum alignment work began in fall 2018. Three curriculum alignment kickoff events were held for faculty (fall 2018, spring 2019, and fall 2019) to learn about the alignment process, ask questions, and meet with their discipline-specific colleagues throughout the system. Many of the faculty invited to the first of these events had previously been involved in curriculum work for the transfer articulation pathways. In fall 2019, the list of faculty members invited to participate was broadened by searching each community college's website, noting the contact individuals for each discipline, and confirming the updated lists with college Presidents, CEOs, and Academic Deans. Faculty on the list received an email inviting them to participate and to invite any interested colleagues to participate. In winter and early spring of 2020, at the urging of union leadership, many faculty withdrew their participation and work on alignment stalled for a few months. To encourage re-engagement of community college faculty throughout the system, the curriculum alignment leadership team sent an email in spring 2020 to all full- and part-time faculty inviting them to participate in their discipline-specific alignment work groups. Additional invitations were distributed via email to faculty in fall of 2020 and spring of 2021. Finally, a link was added to the curriculum alignment website to provide an easily accessible mechanism by which faculty could volunteer to engage in alignment work (https://www.ct.edu/curriculum). In the period from June 2020 to May 2022, over 300 faculty have been involved in curriculum alignment work.

As outlined in the revised Students First plan, the alignment of degree programs and certificates follows an endorsement process similar to that developed for the Transfer and Articulation Policy (TAP) transfer

pathways. This process includes a transitional curriculum committee, the Aligned Program Review Committee (APRC), reporting to the SF ASA CC. Similar to the TAP Framework Implementation Review Committee, the APRC was designed with representation from each community college, but also includes representatives from the Registrar's, Advising, Financial Aid, and Academic Deans' Councils. The endorsement process keeps college communities apprised of the aligned curriculum being recommended for CT State and provides college communities the opportunity to submit feedback that might strengthen a program before it goes to the Board for approval.

The graphic on the next page illustrates the full process for aligned programs and certificates and the tables follow show the specific timeline for steps two through five of this process for all aligned degrees and certificates.

RATIONALE

The 12 individually accredited community colleges currently offer programs and certificates with similar names, but outcomes and courses that may be quite disparate. Similarly, courses have common numbers yet different names, descriptions, pre-requisites, and learning outcomes. In order to more seamlessly serve our students statewide, these programs, certificates, and courses must be aligned to create a single set of offerings for CT State Community College.

CT State Curriculum Alignment: Process Flow for Degrees & Certificates

Stage 1: Faculty Preparation

- Program coordinators and full-time faculty align existing degree and certificate programs into single versions (for similar programs) or clearly differentiate disparate programs into multiple versions (for different programs)
- If all faculty within a discipline or program are not involved in the initial drafting of proposals, the proposals are distributed to all relevant faculty for up to a 30-day review and feedback period. All faculty are also invited to participate in revisions of the proposals.

Stage 2: Review by CT State Transitional Committees

- The APRC (75% faculty) reviews all program proposals; programs are forwarded to SF ASA CC or returned to faculty for further review and revision
- The SF ASA CC recommends programs move to campus endorsement or sends them back to the APRC for further review and revision

Stage 3: Campus Endorsement

- APRC representatives bring programs to their campus for endorsement and submit endorsement votes and feedback to APRC
- Feedback on any proposal may also be submitted online

Stage 4: Follow-up by CT State Transitional Committees & Academic Leadership

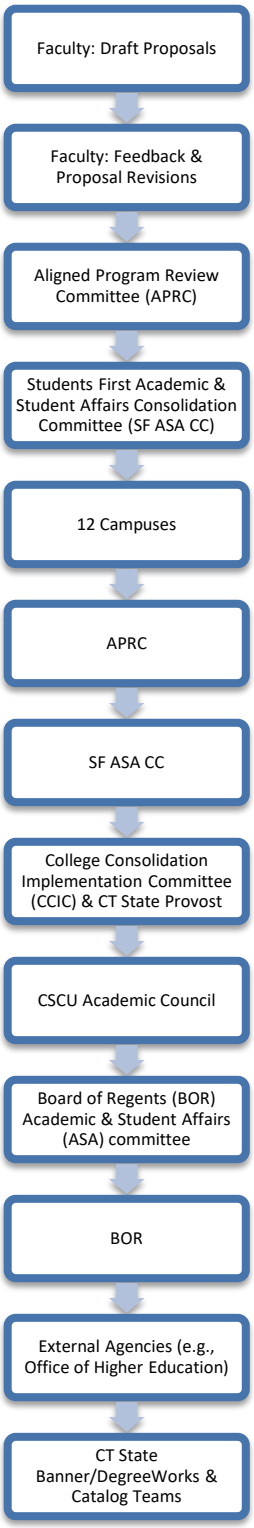
- The APRC, based on a thorough review of the endorsement feedback, recommends the SF ASA CC move the programs forward or sends programs back to faculty for further review and revision (if feedback revealed concerns regarding the content of the programs)
- SF ASA CC recommends programs move forward to the CCIC or back to APRC for further review and revision
- CCIC recommends programs move forward to the Provost or back to APRC for further review and revision

Stage 5: CSCU Notification and BOR Approval

- With approval of the CT State Provost, the APRC administrative chair notifies CSCU Academic Council of programs recommended for CT State and requests such programs be placed on the agenda for the next BOR Academic & Student Affairs committee.
- The ASA reviews and approves programs or sends them back to the APRC for further review and revisions
- At the recommendation of the ASA, the BOR approves programs to be offered at CT State or returns them for further review and revision

Stage 6: Implementation

- Relevant program information for approved programs is forwarded to external agencies (e.g., Office of Higher Education) as required by state and federal regulations as well as internal CT State Banner and Catalog teams to begin the Banner and Catalog builds



Curriculum Alignment BOR Schedule Summary (5/20/22):

- June 2021: 43 Degrees/Certificates Approved
- December 2021: 24 Degrees/Certificates Approved
- February 2022: 15 Degrees/Certificates Approved
- March 24, 2022: 39 Degrees/Certificates Approved
- May 19, 2022: 72 Degrees/Certificates Approved
- June 23, 2022: 107 Degrees/Certificates anticipated

*Values reflect each unique degree, option within a degree, and certificate.

Curriculum Alignment Step-by-Step Timeline

Approval Process Step	ROUND1 Completed	ROUND2 Completed	ROUND3 Completed	ROUND4 Completed
APRC Initial Review	November – December 2020 14 Degrees/Certificates	Dec 2020 – Feb 2021 10 Degrees/Certificates	March – April 2021 19 Degrees/Certificates	May 2021 28 Degrees/Certificates
SF ASA CC Approval to Send to Campuses for Endorsement	January 2021	March 2021	April 2021	May 2021
Endorsement Period	February – March 2021	March – April 2021	April – May 2021	August – October 2021
APRC Review of Endorsement Feedback & Program Revisions	April 2021 14 Degrees/Certificates	May 2021 10 Degrees/Certificates	May 2021 19 Degrees/Certificates	October 2021 24 Degrees/Certificates
SF ASA CC Approval	May 2021	May 2021	May 2021	November 2021
CCIC Approval	June 2021	June 2021	June 2021	November 2021
BOR-ASA Approval	June 2021	June 2021	June 2021	December 2021
BOR Approval	June 2021 14 Degrees/Certificates	June 2021 10 Degrees/Certificates	June 2021 19 Degrees/Certificates	December 2021 24 Degrees/Certificates

Approval Process Step	ROUND5 Completed	ROUND6 In progress	ROUND7 In progress	ROUND8 In Progress
APRC Initial Review	September – October 2021 12 Degrees/Certificates	October 2021 11 Degrees/Certificates	November 2021 49 Degrees/Certificates	November–December 2021 71 Degrees/Certificates
SF ASA CC Approval to Send to Campuses for Endorsement	October 2021	November 2021	November 2021	December 2021
Endorsement Period	Oct – Nov 2021	Nov – Dec 2021	Nov 2021 – Jan 2022	Dec 2021 – Feb 2022
APRC Review of Endorsement Feedback & Program Revisions	December 2021 15 Degrees/Certificates	January 2022 13 Degrees/Certificates	February 2022 26 Degrees/Certificates	March 2022 32 Degrees/Certificates
SF ASA CC Approval	December 2021	February 2022	February 2022	March 2022
CCIC Approval	January 2021	March 2022	March 2022	March 2022
BOR-ASA Approval	February 2022	March 2022	March 2022	April 2022
BOR Approval	February 2022 15 Degrees/Certificates	March 2022 13 Degrees/Certificates	March 2022 26 Degrees/Certificates	~~April~~ May 2022 32 Degrees/Certificates

Approval Process Step	ROUND9 In progress	ROUND10 In progress	ROUND11 In progress
APRC Initial Review	January 2022 7 Degrees/Certificates	February 2022 12 Degrees/Certificates	February – March 2022 63 Degrees/Certificates
SF ASA CC Approval to Send to Campuses for Endorsement	February 2022	February 2022	March 2022
Endorsement Period	February – March 2022	February – April 2022	March – April 2022
APRC Review of Endorsement Feedback & Program Revisions	April 2022 7 Degrees/Certificates	April 2022 33 Degrees/Certificates	April 2022 107 Degrees & Certificates
SF ASA CC Approval	April 2022	April 2022	May 2022
CCIC Approval	April 2022	April 2022	May 2022
BOR-ASA Approval	May 2022	May 2022	June 2022
BOR Approval	May 2022 7 Degrees/Certificates	May 2022 33 Degrees/Certificates	June 2022 107 Degrees & Certificates

CT State Aligned Degrees & Certificates
June 23, 2022

1) Architecture: Construction Technology Certificate
2) Business Administration, A.S.
3) Business Administration: Entrepreneurship Concentration, A.S.
4) Business Administration: Finance Concentration, A.S.
5) Business Administration: Honors Concentration, A.S.
6) Business Administration: Management Concentration, A.S.
7) Business Administration: Marketing Concentration, A.S.
8) Business Administration: Business Administration Certificate
9) Business Administration: Digital Marketing Certificate
10) Business Administration: Entrepreneurship Certificate
11) Business Administration: Finance Certificate
12) Business Administration: Management Certificate
13) Business Administration: Marketing Certificate
14) Business Studies, A.A. (CSCU Transfer Pathway Degree)
15) Communication: Digital Media Production Certificate
16) Communication: Public Relations Certificate
17) Communication: Visual Communication Certificate
18) Computer Information Systems: Cloud Computing Option, A.S.
19) Computer Information Systems: Data Analytics Option, A.S.
20) Computer Information Systems: Generalist Option, A.S.
21) Computer Information Systems: IT Support Option, A.S.
22) Computer Information Systems: Networking Option, A.S.
23) Computer Information Systems: Programming Option, A.S.
24) Computer Information Systems: Cloud Computing Certificate
25) Computer Information Systems: Computer Networking Certificate
26) Computer Information Systems: Computer Programming Certificate
27) Computer Information Systems: IT Support Certificate
28) Computer Networking, A.S.
29) Computer Networking Security Certificate
30) Computer Networking Technology Certificate
31) Computer Science: Mobile Programming, A.A.S.
32) Computer Science: Software Development, A.S.
33) Computer Science: Software Engineering, A.A.S.
34) Computer Science: Web Development, A.A.S.
35) Computer Science: Relational Database Development Certificate
36) Computer Science: Smartphone App Development Certificate
37) Computer Science: Web Developer Certificate
38) Computer Science Studies, A.A. (CSCU Pathway Transfer Degree)
39) Construction Management, A.S.
40) Construction Management Certificate
41) Cyber and Homeland Security, A.S.
42) Cyber and Homeland Security Certificate
43) Cybersecurity, A.S.
44) Cybersecurity: Computer Science Concentration, A.S.
45) Cybersecurity: Networking Concentration, A.S.
46) Cybersecurity Essentials Certificate
47) Cybersecurity Operations Certificate
48) Digital Arts Technology, A.S.
49) Digital Arts Technology: Animation & Motion Graphics Certificate
50) Digital Arts Technology: Audio Production Certificate
51) Digital Arts Technology: Digital Graphics for Print & Screen Certificate
52) Digital Arts Technology: Technical Communication Certificate
53) Digital Arts Technology: Trending Technology in Digital Media Certificate

54) Digital Arts Technology: Video Production Certificate
55) EMT to Paramedic Pathway Certificate
56) Engineering Science, A.S. (College of Technology)
57) Foundations in Digital Analytics Certificate
58) French Studies, A.A. (CSCU Transfer Pathway Degree)
59) German Studies, A.A. (CSCU Transfer Pathway)
60) History Studies, A.A. (CSCU Transfer Pathway Degree)
61) Hospitality: Hotel Management, A.S.
62) Hospitality: Restaurant Management, A.S.
63) Hospitality: Meetings, Conventions, & Special Events Management Certificate
64) Italian Studies, A.A. (CSCU Transfer Pathway Degree)
65) Management Information Systems, A.S.
66) Management Information Systems Certificate
67) Mechanical Engineering Technology, A.S.
68) Nuclear Engineering Technology, A.S.
69) Physical Therapist Assistant, A.S.
70) Political Science Studies, A.A. (CSCU Transfer Pathway Degree)
71) Psychology Studies, A.A. (CSCU Transfer Pathway Degree)
72) Respiratory Care, A.S.
73) Respiratory Care: MCC Option, A.S.
74) Spanish Studies, A.A. (CSCU Transfer Pathway Degree)
75) Sport Management, A.S.
76) Technology Studies (parent degree), A.S. (College of Technology)
77) Technology Studies: Advanced Manufacturing Machine Technology Option 1, A.S. (College of Technology)
78) Technology Studies: Advanced Manufacturing Machine Technology Option 2, A.S. (College of Technology)
79) Technology Studies: Artificial Intelligence Option, A.S. (College of Technology)
80) Technology Studies: Biomolecular Sciences Option, A.S. (College of Technology)
81) Technology Studies: Computer Engineering Technology Option, A.S. (College of Technology)
82) Technology Studies: Data Science Option, A.S. (College of Technology)
83) Technology Studies: Energy Management Option, A.S. (College of Technology)
84) Technology Studies: Engineering Technology Option, A.S. (College of Technology)
85) Technology Studies: Environmental Science Option, A.S. (College of Technology)
86) Technology Studies: Industrial Technology Option, A.S. (College of Technology)
87) Technology Studies: Manufacturing Engineering Technology Option, A.S. (College of Technology)
88) Technology Studies: Mechatronics Automation Technician Option, A.S. (College of Technology)
89) Technology Studies: Precision Manufacturing Option, A.S. (College of Technology)
90) Technology Studies: Robotics and Mechatronics Technician Option, A.S. (College of Technology)
91) Technology Studies: Technology and Engineering Education Option, A.S. (College of Technology)
92) Technology Studies: Welding and Fabrication Technologies Option, A.S. (College of Technology)
93) Technology Studies: Advanced Manufacturing Machine Technology Certificate 1 (College of Technology)
94) Technology Studies: Advanced Manufacturing Machine Technology Certificate 2 (College of Technology)
95) Technology Studies: Architectural CAD Certificate (College of Technology)
96) Technology Studies: CAD User Certificate (College of Technology)
97) Technology Studies: Data Science Certificate (College of Technology)
98) Technology Studies: Energy Management Certificate (College of Technology)
99) Technology Studies: Mechanical CAD Certificate (College of Technology)
100) Technology Studies: Mechatronics Automation Technician Certificate (College of Technology)
101) Technology Studies: Precision Manufacturing Certificate (College of Technology)
102) Technology Studies: Robotics and Mechatronics Technician Certificate (College of Technology)
103) Technology Studies: Welding and Fabrication Technologies Certificate (College of Technology)
104) Theater, A.A.
105) Theater: Musical Theater Option, A.A.
106) Theater: Design and Production Option, A.A.
107) Theater Studies, A.A. (CSCU Transfer Pathway Degree)

Credit Certificate Program Name: Construction Technology

Certificate Description:

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.

Certificate Learning Outcomes:

1. 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.
2. Demonstrate knowledge of building systems including materials, assemblies, mechanical systems, and life safety features.
3. Practice execution of industry forms and documents, code and regulation research, and preparation of typical industry submittals.
4. Demonstrate and apply construction management skills including site logistics, critical path, procurement, scheduling, and equipment & labor.
5. Perform and communicate effectively as a contributing individual or team member and understand the importance of workplace safety and ethics, and effective teamwork.
6. 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.

Certificate Descriptors:

Certificate is eligible under the GI Bill for Veterans.
Occupational Resource Network

Certificate Program Requirements (28 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ARCH*1002	Architecture of the World	**3[2]**	-
ARCH*1005	Architectural Fundamentals I	**4[2]**	-
ARCH*1008	Construction Materials & Methods	**3[2]**	-
ARCH*1011	Building Codes & Ordinances	**3[2]**	-
ARCH*1120	Fundamentals of Construction Management	**3[1]**	n/a / ARCH-1008
ARCH*2015	Construction Documents	**3[2]**	ARCH-1005
ARCH*2229	Construction Estimating	**3[1]**	MATH-137 or higher
ARCH*2030	CAD 3D Architectural Parametric	**3[2]**	n/a / ARCH-1005
ARCH*2040	Environmental Systems	**3[2]**	ARCH-1008
	Certificate Program Total Credits	**28**	

[1] New course approval.
[2] Course embedded in and approved with Architecture A.S. Program at APRC.

2-Semester Course Sequence

SEMESTER I		
ARCH-1002	Architecture of the World	3
ARCH-1005	Architectural Fundamentals I	4
ARCH-1120	Fundamentals of Construction Mgmt.	3
ARCH-2015	Construction Documents	3
ARCH-2030	CAD 3D Architectural Parametric	3
	TOTAL	**16**
SEMESTER II		
ARCH-1008	Construction Materials & Methods	3
ARCH-1011	Building Codes & Ordinances	3
ARCH-2229	Construction Estimating	3
ARCH-2040	Environmental Systems	3
	TOTAL	**12**
	GRAND TOTAL	**28**

Program: Business Administration A.S Degree with Options

Degree Type: Associates of Science Degree

Program Description:

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.

Degree concentration areas are oriented towards career options for graduates and business electives may not transfer

- Business Administration
- Marketing
- Entrepreneurship
- Finance
- Management
- Honors

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:

1. Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
2. Define and evaluate principles, techniques and major functions of management and business organizations.
3. Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
4. Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
5. Develop and interpret financial statements using accounting and finance principles to make evidence-based decisions.
6. Apply quantitative and technical skills to analyze problems, formulate and develop solutions using appropriate technology, and effectively communicate results to stakeholders.

Options Areas Student Learning Outcomes:

- **Business Administration**

1. Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society

2. Define and evaluate principles, techniques and major functions of management and business organizations.
3. Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
4. Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
5. Develop and interpret financial statements using accounting and finance principles to make evidence-based decisions.
6. Apply quantitative and technical skills to analyze problems, formulate and develop solutions using appropriate technology, and effectively communicate results to stakeholders.

- **Marketing**

1. Critically analyze and discuss topics including marketing ethics, the marketing mix and global/domestic marketing strategies.
2. 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.
3. Demonstrate the ability to collect, process, and analyze consumer and market data to make informed decisions.
4. Demonstrate the ability to create and implement traditional and digital marketing communication strategies.
5. Apply the knowledge, concepts, tools necessary to overcome challenges, and issues of marketing in a changing technological landscape.

- **Entrepreneurship**

1. 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.
2. 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.
3. 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.
4. Apply concepts in core business disciplines and critical thinking skills to make sound financial decisions.
5. Demonstrate an understanding of the interrelationships between accounting and business courses.
6. Recognize the vital role small business plays in the global economy. Develop and apply decision-making skills to strategic business planning.

- **Finance**

1. Demonstrate an understanding of basic theory and practice of business administration and finance.
2. Demonstrate the ability to read, understand, and prepare standard types of business communications.
3. Demonstrate analytical, problem-solving, and decision-making skills applicable to business administration and finance.
4. Demonstrate proficiency in the use and interpretation of data and information as applied to the various applications in business administration and finance.

- **Management**

1. Demonstrate an understanding of basic theory and practice of business administration and management.
2. Demonstrate the ability to read, understand, and prepare standard types of business communications.

3. Demonstrate analytical, problem-solving, and decision-making skills applicable to business administration and management.
4. Demonstrate proficiency in the use and interpretation of data and information as applied to the various applications in business administration and management.

- **Honors**

1. Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
2. Define and evaluate principles, techniques and major functions of management and business organizations.
3. Understand economic concepts and policies as they relate to both local and global markets.
4. Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
5. Develop and interpret financial statements using accounting and finance principles to make evidence-based decisions.
6. Apply quantitative solutions to business problem solving.

Options Descriptors:

Business Administration

This option prepares graduates with 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 you to enter a variety of positions in business or continue on to a bachelor's degree program.

Marketing

This 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.

Entrepreneurship

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.

Finance

This option 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.

Management

This 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.

Honors

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.

General Education Core Courses (21-22 credits)			
Competency		**Course Name**	**# of Credits**
1	Written Communication I	ENG 101: English Composition	3
2	Math	MAT 137 or higher	3
3	Arts and Humanities	BBG 240 Business Ethics/PHL 115 **(Pending GE Approval)**	3
4	Scientific Knowledge OR Scientific Reasoning	Any course vetted for SK or SR	3-4
5	Social / Behavioral Science	ECN 101 Principles of Macroeconomics or ECN 102 Principles of Microeconomics.	3
6	Oral Communication	BBG 210 Business Communications	3
7	College and Career Success Course	CCS 101: College and Career Success (Business cohort)	3
		General Education Core Credits	**21-22 Credits**

Business Administration Program Courses			
Program Requirements			
Business Administration Program Core Courses (18 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
ACC 113	Principles of Financial Accounting	3	MAT 095 or satisfactory placement on Basic Skills Assessment
ACC 117	Principles of Managerial Accounting	3	ACC113 with C- or better
BMG 202or BMG 210	Principles of Management or Organizational Behavior	3	Completion of ENG 101 with a grade of C- or better
BMK 201	Principles of Marketing	3	Completion of ENG 101 with a grade of C- or better
BBG 231 or BBG 234	Business Law I or Legal Environment of Business	3	Completion of ENG 101 with a grade of C- or better
BFN 110 or BFN 111 or BFN 201	Personal Finance or Financial Literacy Principles of Finance* footnote to go to UCONN you must take Applied Calc for business or Calc I or	3	BFN 110: None BFN 111: None BFN 201: ACC113, ECN101, ECN102, MAT167 (concurrent)
Business Administration Concentration Courses (15 Credits)			
Varies	See concentration lists	3	Varies
Varies	See concentration lists	3	Varies
Varies	See concentration lists	3	Varies
Varies	See concentration lists	3	Varies
Varies	See concentration list	3	Varies
Business Administration Open Electives (6 Credits)			
	Open Elective (Student should consider taking ACC 125 Accounting Computer Applications or CST201 MIS or BBG115 Business Software Applications)	3	
	Open Elective	3	
	Total Program Requirements	**39**	
Common course numbering and common pre-requisites to be used for all courses.			

Business Administration Concentration			
Program Differentiated Option #1 Name: Business Administration Concentration			
Required Courses (15 credits) Select 15 credits from the following classes listed below.			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
	Any course in BBG, BMG, BMK, BES, BFN, ECN, MAT (see list below of approved courses)	15	
	Total Program Requirement Credits with Differentiated Option #1	**39**	
	General Education Core Credits	**21-22**	
	Program Total Credits for Differentiated Option #1	**60-61**	

Marketing Concentration			
Program Differentiated Option #2 Name: Marketing Concentration			
Required Courses (15 credits) Select 5 of the following classes listed below.			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
BMK 106	Principles of Selling	3	none
BMK 123	Principles of Customer Service	3	none
BMK 221	Sales Management	3	Completion of BMK201 with a grade of C- or better
BMK 216	Digital Marketing (changed name from Internet Marketing)	3	Completion of ENG 101 with a grade of C- or better
BMK 235	Public Relations	3	Completion of BMK201 with a grade of C- or better
BMK 208	Social Media Marketing	3	Completion of ENG 101 with a grade of C- or better
BMK 241	Principles of Advertising	3	Completion of ENG 101 with a grade of C- or better
BMK 295	Marketing Internship/ Marketing Practicum	3	24 credits & BMK201 Permission
BMK 207	Consumer Behavior	3	Completion of BMK201 with a grade of C- or better
Business Elective	Any course ACC/BBG/BMG/BES/BFN/BMK, ECN, MAT	3	
BMK 214	International Marketing	3	Completion of BMK 201 with a grade of C- or better
	Total Program Requirement Credits with Differentiated Option #2	**39**	
	General Education Core Credits	**21-22**	
	Program Total Credits for Differentiated Option #2	**60-61**	

Entrepreneurship Concentration

Program Differentiated Option #3 Name: Entrepreneurship

Required Courses (15 credits)

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
ACC 125	Accounting Comp Applications	3	ACC*113
BES 218	Entrepreneurship	3	Completion of ENG 101 with a grade of C- or better
BES 219	Small Business Management & Growth	3	Completion of ENG 101 with a grade of C- or better
BBG 215	Global Business	3	Completion of ENG 101 with a grade of C- or better
Business Elective	Any course in BBG, BMG, BMK, BFN, BES, ECN, MAT	3	
	Total Program Requirement Credits with Differentiated Option #3	**39**	
	General Education Core Credits	**21-22**	
	Program Total Credits for Differentiated Option #3	**60-61**	

Finance Concentration

Program Differentiated Option #4 Name: Finance Concentration

Required Courses (15 credits)

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
BFN 125	Principles of Banking	3	ENG101
BFN 203	Investment Principles	3	BFN*201 WITH A GRADE OF "C" OR HIGHER OR PERMISSION OF INSTRUCTOR
BFN 211	Money and Banking	3	BFN*201 or ECN*101, either course with a Grade of "C" or higher
BFN 235	International Finance	3	BFN*201
Business Elective	Any course in ACC, BBG, BMG, BMK, BES, BFN, ECN, MAT	3	
	Total Program Requirement Credits with Differentiated Option #4	**39**	
	General Education Core Credits	**21-22**	
	Program Total Credits for Differentiated Option #4	**60-61**	

Management Option

Program Differentiated Option #5 Name: Management Concentration

Required Courses (15 credits).

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
BBG 215	Global Business	3	Completion of ENG 101 with a grade of C- or better
BMG 220	Human Resource Management	3	Completion of ENG 101 with a grade of C- or better
BMG 202 or BMG 210	Principles of Management or Organizational Behavior	3	Completion of ENG 101 with a grade of C- or better
BES 218	Entrepreneurship	3	Completion of ENG 101 with a grade of C- or better
Business Elective	ACC, BBG, BMG, BMK, BES, BFN, ECN, MAT	3	
	Total Program Requirement Credits with Differentiated Option #5	**39**	
	General Education Core Credits	**21-22**	
	Program Total Credits for Differentiated Option #5	**60-61**	

Honors Option

Program Differentiated Option #6 Name: Honors Option			
Required Courses (15 credits).			
Course Number	**Course Name** **Note BFN 201 must be taken in 4th semester	**# of Credits**	**Pre-req./Co-req. Course #**
MAT 167	Principles of Statistics	3	
MAT 158	Finite Math for Business	3	
MAT 230 or BBG 240	Applied Calculus for Business Majors (Must be taken in 4th semester) or BBG 240 Business Ethics	3	
ECN 101 or ECN 102	Principles of Microeconomics or Principles of Macroeconomics	3	
Business elective	Business Elective Recommended BBG 299 or BBG 292 Any Course BBG/BMK/BMG/BES/BFN	3	ENG 101 w C- or better
	Total Program Requirement Credits with Differentiated Option #6	**39**	
	General Education Core Credits	**21-22**	
	Program Total Credits for Differentiated Option #5	**60-61**	

List of Business Elective Courses as of March 2022

Business Electives may not transfer. Concentration focuses on career options.

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
BES 218	Entrepreneurship	3	Completion of ENG 101 with a grade of C- or better
BES 219	Small Business Management & Growth	3	Completion of ENG 101 with a grade of C- or better
BES 239	Business Plan	3	PRE/CO ACC113 & BMK201, BES218
BES 295	Launch a Business	3	BES218 or Permission of instructor
BFN 110	Personal Finance	3	none
BFN 111	Financial Literacy	3	none
BFN 125	Principles of Banking	3	none
BFN 201	Principles of Finance	3	Completion of ACC113, ECN101, ECN102 and MAT167 (MAT167 can be conc)
BFN 203	Investment Principles	3	BFN*201 with a grade of "C" or higher or permission of instructor
BFN 211	Money & Banking	3	BFN*201 or ECN*101, either course with a Grade of "C" or higher
BFN 235	International Finance	3	BFN*201
BBG 101	Intro to Business	3	none
BBG 115	Business Software Applications	3	Eligible for MAT137 and ENG101
BBG 210	Business Communications	3	None
BBG 260/HIS 221	History of American Business	3	None
BBG 215	Global Business	3	Completion of ENG 101 with a grade of C- or better
BBG 231	Business Law I	3	Completion of ENG 101 with a grade of C- or better
BBG 232	Business Law II	3	BBG231
BBG 234	Legal Environment of Business	3	Completion of ENG 101 with a grade of C- or better
BBG 240	Business Ethics	3	Completion of ENG 101 with a grade of C- or better
BBG 295	Business Special Topics	3	24 credits & Permission
BBG 290	Business Capstone	3	Completion of 15 business credits and Permission
BBG 299	Business Coop/Internship	3	24 credits & Permission GPA over

			2.5
BBG 292	Business Practicum	3	Permission & 12 business core or program option credits with a grade of C - or better AND have completed at least 40 credits towards their Associate degree.
BMG 202	Principles of Management	3	Completion of ENG 101 with a grade of C- or better
BMG 204	Managerial Communications	3	Completion of ENG 101 with a grade of C- or better
BMG 210	Organizational Behavior	3	Completion of ENG 101 with a grade of C- or better
BMG 220	Human Resource Management	3	Completion of ENG 101 with a grade of C- or better
BMG 226	Negotiation	3	BMG202
BMK 106	Principles of Selling	3	none
BMK 123	Principles of Customer Service	3	none
BMK 201	Principles of Marketing	3	Completion of ENG 101 with a grade of C- or better
BMK 207	Consumer Behavior	3	Completion of BMK 201 with a grade of C- or better
BMK 208	Social Media Marketing	3	Completion of ENG 101 with a grade of C- or better
BMK 214	International Marketing	3	Completion of BMK 201 with a grade of C- or better
BMK 216	Digital Marketing	3	Completion of ENG 101 with a grade of C- or better
BMK 221	Sales Management	3	Completion of BMK 201 with a grade of C- or better
BMK 235	Public Relations	3	Completion of ENG 101 with a grade of C- or better
BMK 241	Principles of Advertising	3	Completion of ENG 101 with a grade of C- or better
BMK 295	Marketing Special Topics	3	24 credits & Permission
MAT 137	Intermediate Algebra	3	TBD
MAT 158	Functions Graphs & Matrices	3	TBD
MAT 167	Principles of Statistics	3	TBD
MAT	Precalculus	3	TBD
MAT 251 or MAT 230	Calculus I or Applied Calculus for Business	3	TBD

ECN 102	Microeconomics	3	Eligibility for ENG 101
ECN 101	Macroeconomics	3	Eligibility for ENG 101

Credit Certificate Program Name: Business Administration Certificate

Certificate Description:
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.

Certificate Learning Outcomes:
1. Describe and appraise the economic, political, regulatory, legal, technological, ethical and social contexts of organizations in a global society
2. Define and evaluate principles, techniques and major functions of management and business organizations.
3. Understand the U.S. legal system and be able to apply the principles to the legal environment in which organizations conduct business.
4. Understand, apply and evaluate marketing fundamentals to make tactical decisions to execute business strategy.
5. Develop and interpret financial statements using accounting and finance principles to make evidence-based decisions.
6. Apply quantitative and technical skills to analyze problems, formulate and develop a solutions using appropriate technology, and effectively communicate results to stakeholders.

Certificate Descriptors: n/a

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ENG 101	English Composition	**3**	
BMK 201	Principles of Marketing	**3**	Completion of ENG 101 with a grade of C- or better
ACC 113	Principles of Financial Accounting	**3**	
BMG 202 or BMG 210	Principles of Management or Organizational Behavior	**3**	Completion of ENG 101 with a grade of C- or better
BBG 231 or BBG 234	Business Law I or Legal Environment of Business	**3**	Completion of ENG 101 with a grade of C- or better
Business Elective	Choose any ACC, BBG, BMG, BES, BMK, BFN, ECN	**3**	
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Digital Marketing

Certificate Description:
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.

Certificate Learning Outcomes:

1. Understand and apply segmentation, targeting, positioning, branding, and the marketing mix in pursuit of long-term marketing objectives.
2. Develop and apply integrated marketing strategies for all channels.
3. Analyze principles, techniques and major functions of management and business organizations.
4. 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.
5. 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.
6. 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.
7. Understand and implement best practices in marketing to a database of current and potential customers via email.
8. Create compelling content including titles, bylines and copy and utilize knowledge of social media tactics to design an effective social media campaigns.
9. Use new media including social media, blogs, web sites and online portfolios for course presentations and job preparation.
10. Effectively use a variety of industry standard tools and processes for producing contemporary forms of digital media across multiple delivery platforms and delivery systems.

Certificate Descriptors:

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ENG101	English Composition	**3**	
NMP*1110	Introduction to Digital Graphics	**3**	
NMP*2210	Web Production Fundamentals	**3**	NMP*1110
BMG202 BMG 210	Principles of Management or Organizational Behavior	**3**	Completion of ENG 101 with a grade of C- or better
BMK201	Principles of Marketing	**3**	Completion of ENG 101 with a grade of C- or better
BMK216	Digital Marketing	**3**	Completion of ENG 101 with a grade of C- or better
BMK208	Social Media Marketing	**3**	Completion of ENG 101 with a grade of C- or better
	Any course in ACC/BBG/BES/BMG/DGA/COM/ENG/ECN	**3**	
	Any course in ACC/BBG/BES/BMG/DGA/COM/ENG	**3**	
ELECTIVE	100 level course or higher (should be Business Special Topics/Business Coop/Internship)	**3**	varies
	Certificate Program Total Credits	**30**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Entrepreneurship Certificate

Certificate Description:
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 in 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.

Certificate Learning Outcomes:

1. 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.
2. 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.
3. 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.
4. Apply concepts in core business disciplines and critical thinking skills to make sound financial decisions.
5. Demonstrate an understanding of the interrelationships between accounting and business courses.
6. Recognize the vital role small business plays in the global economy. Develop and apply decision-making skills to strategic business planning.

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ACC 113	Principles of Financial Accounting	**3**	MAT 095 or satisfactory placement on Basic Skills Assessment
BMK 201	Principles of Marketing	**3**	Completion of ENG 101 with a grade of C- or better
BES 218	Entrepreneurship	**3**	
ACC 125	Accounting Comp Applications	**3**	ACC 113
BES 219	Small Business Management & Growth	**3**	Completion of ENG 101 with a grade of C- or better
BBG 231 or BBG234	Business Law I or Legal Environment of Business or Business Elective (Any BBG, BES, BFN, BMG, BMK course)	**3**	Completion of ENG 101 with a grade of C- or better
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Finance Certificate

Certificate Description:

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:

1. Demonstrate an understanding of basic theory and practice of business administration and finance.
2. Demonstrate the ability to read, understand, and prepare standard types of business communications.
3. Demonstrate analytical, problem-solving, and decision-making skills applicable to business administration and finance.
4. Demonstrate proficiency in the use and interpretation of data and information as applied to the various applications in business administration and finance.

Certificate Descriptors:

Certificate Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ENG 101	English Composition	**3**	
BFN 125	Intro to Banking	**3**	
BFN 201	Principles of Finance	**3**	ACC 113, ECN 101, ECN 102, MAT 167 (concurrent)
BFN 203	Investment Principles	**3**	BFN*201 with a Grade of "C" or higher
BFN 235	International Finance	**3**	BFN 201
ACC 113	Principles of Financial Accounting	**3**	MAT 095 or satisfactory placement on Basic Skills Assessment
ECN 101	Principles of Macroeconomics	**3**	
ECN102	Principles of Microeconomics	**3**	
MAT 167	Principles of Statistics	**3**	
	Certificate Program Total Credits	**27**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

If students do not qualify for MAT167 Principles of Statistics, they may need to take MAT137 Intermediate Algebra

Credit Certificate Program Name: Management Certificate

Certificate Description:

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.

Certificate Learning Outcomes:

1. Demonstrate an understanding of basic theory and practice of business administration and management.
2. Demonstrate the ability to read, understand, and prepare standard types of business communications.
3. Demonstrate analytical, problem-solving, and decision-making skills applicable to business administration and management.
4. Demonstrate proficiency in the use and interpretation of data and information as applied to the various applications in business administration and management.

Certificate Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ENG 101	English Composition	**3**	
BBG 215	Global Business	**3**	Completion of ENG 101 with a grade of C- or better
BMG 220	Human Resource Management	**3**	Completion of ENG 101 with a grade of C- or better
BMG 210 or BMG 202	Organizational Behavior OR Principles of Management	**3**	Completion of ENG 101 with a grade of C- or better
BES 218	Entrepreneurship	**3**	Completion of ENG 101 with a grade of C- or better
Business Elective	Choose any ACC, BBG, BMG, BES, BMK, BFN	**3**	Completion of ENG 101 with a grade of C- or better
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Marketing Certificate

Certificate Description:

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.

Certificate Learning Outcomes:

1. Critically analyze and discuss topics including marketing ethics, the marketing mix and global/domestic marketing strategies.
2. 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.
3. Demonstrate the ability to collect, process, and analyze consumer and market data to make informed decisions.
4. Demonstrate the ability to create and implement traditional and digital marketing communication strategies.
5. Apply the knowledge, concepts, tools necessary to overcome challenges, and issues of marketing in a changing technological landscape.

Certificate Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ENG 101	English Composition	**3**	
BMK 201	Principles of Marketing	**3**	Completion of ENG 101 with a grade of C- or better
BMK	Choose any two BMK courses	**6**	
Business Electives	Choose any two courses ACC, BBG, BES, BMG, BFN, BMK, DGA or GRA	**6**	
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Program Name: CSCU Pathway Transfer: Business Studies

Degree Type: Associate of Art

Program Description:
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.

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.

Curriculum
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.

Program Learning Outcomes:

Upon successful completion of all courses in the program, students will be able to:

1. demonstrate both accounting and finance concepts as applied to the sound fiscal management of a business enterprise
2. demonstrate various micro- and macroeconomic principles and their influence on the organizational decision-making process
3. demonstrate marketing's role in the development of a successful business strategy
4. demonstrate the impact of leadership, employee behavior and organizational culture in attaining organizational goals and objectives
5. demonstrate both the ethical and legal implications of managerial decisions and the effect of those decisions on organizational stakeholders
6. demonstrate the integration of knowledge and apply learned skills for real-world business decision making
7. demonstrate group dynamics and the benefits of a team-based approach in business

Program Descriptors:

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition (*Written Communication I*)	**3**
2	MAT*167 [1,3]	Principles of Statistics (*Quantitative Reasoning*)	**3**
3	Arts and Humanities	Any course vetted for *Arts and Humanities* outcomes	**3-4**
4	Scientific Reasoning	Any course vetted for *Scientific Reasoning* outcomes	**3-4**
5	ECN*101	Macroeconomics (*Social/Behavior Science*)	**3**
6	Written Communication II	Any course vetted for *Written Communication II* outcomes	**3**
7	Scientific Knowledge and Understanding	Any course vetted for *Scientific Knowledge and Understanding* outcomes	**3-4**
8	Historical Knowledge	Any HIS course vetted for *Historical Knowledge* outcomes	**3**
9	Oral Communication	Any course vetted for *Oral Communication II* outcomes	**3**
10	CCS*101	College and Career Success (*Continued Learning and Info Literacy)*	**3**
		General Education Core Credits	**30-33**

Program Requirements (30-34 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
ECN 102	Microeconomics	**3**	Eligibilty for ENG 101
ACC 113	Principles of Accounting 2,3	**3**	MAT 095 or satisfactory placement on Basic Skills Assessment
ACC 117	Principles of Managerial Accounting 2,3	**3**	ACC113 with C- or better
MAT 158 or MAT 254 or MAT 230	Applied Business Mathematics [1,3],(meets MAT requirements at CCSU, ECSU, WCSU but not SCSU) Calculus I [1, 3] (meets MAT requirement at CCSU, ECSU, SCSU, and WCSU) or Calculus for Business and Social Science [1,3] (meets MAT requirement at CCSU, ECSU, SCSU, and WCSU)	**3-4**	MAT 158 – TBD MAT 254 - C or higher in MAT* 186 Precalculus or placement using multiple measures MAT 230 - TBD
BMK 201	Principles of Marketing 2,3	**3**	Completion of ENG 101 with a grade of C- or better
BMG 202 or BMG 210	Principles of Management 2,3 or Organizational Behavior 2	**3**	Completion of ENG 101 with a grade of C- or better
BFN 201	Principles of Finance 2, 3	**3**	ACC113, ECN101, ECN102, MAT167 (concurrent)
BBG 231 or BBG 234	Business Law I 2, 3 or Legal Environment of Business 2,3	**3**	Completion of ENG 101 with a grade of C- or better
BBG 210 or BMG 204	Business Communication 1, 3 or Managerial Communication 1, 3	**3**	Completion of ENG 101 with a grade of C- or better
	Unrestricted elective	**3**	
	Program Requirement Credits	**30-31**	
	General Education Core Credits	**30-33**	
	Program Total Credits	**60-64**	

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

Program Name: Computer Information Systems with Differentiated Options

Degree Type: A.S.

Program Description:
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.

There are a total of six concentration options:

- Programming
- Networking
- IT Support
- Data Analytics
- Cloud Computing
- Generalist

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.

Program Learning Outcomes:

1. Develop the ability to analyze and design solutions through knowledge and comprehension of information systems concepts and skills.
2. Develop strategic and critical thinking skills through development of the ability to identify, gather, measure, summarize, verify, analyze, design, develop and test programs.
3. Develop the ability to identify and solve unstructured problems in unfamiliar settings and exercise judgment based on facts.
4. 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.
5. 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.
6. 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.
7. Develop the skills to communicate using network technologies, access information via the internet, and understand information integrity and security issues.
8. Understand and respect the employer-employee relationship and appreciate the need to produce high quality work.
9. Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

Option Descriptors:

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:

1. Demonstrate the use of objects in application programs.
2. Define and implement efficient programming solutions using various programming languages
3. Write, compile, and execute programs
4. Create applications using object-oriented features.
5. Use inheritance and interfaces to create robust, reusable, programming code.
6. Demonstrate a basic understanding of relational database concepts.
7. Preparedness to obtain employment, advance one's career, or move on to more advanced study in MIS, CIS, or related fields.

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:

1. Provide the student with the personal computer skills necessary to effectively function in today's workplace.
2. Offer a "hands-on" learning experience in the personal computer networking software most commonly used in business and industry.
3. Provide the opportunity for a more advanced technical understanding of personal computer local area networks, their design, installation and management.
4. Upgrade the personal computer knowledge and skills of individuals currently employed.

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:

1. To design and use problem solving techniques
2. Use oral and written communication to communicate with clients in a business environment
3. Implement customer service skills in the context of the IT department
4. Apply proper troubleshooting skills within a networking environment
5. Utilize technical skills in implementing software and hardware installations

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:

1. Describe key aspects of data in an organizational setting
2. Implement foundational concepts of data computation, data structures, and analysis
3. Utilize various technologies to organize, analyze, explore, and visualize data
4. Execute data organization, exploration, and develop proficiency in a programming language (e.g. R)

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:

1. Describe the concepts, characteristics, delivery models and benefits of cloud computing
2. Describe the key security and compliance challenges of cloud computing
3. Demonstrate understanding of key technical and organizational challenges with a focus on business integration
4. Analyze business requirements for implementation to map the distinctive characteristics of public, private and hybrid cloud models

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:

1. Describe current and emerging technologies.
2. 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.
3. Demonstrate desirable attitudes and work habits- creative thinking, the ability to solve problems, cooperation, good judgment, responsibility, and self-reliance.
4. Demonstrate sufficient understanding of information technology for entry-level employment and advancement in the field.

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition	**3**
2		***Math*** Math 100 or higher	**3-4**
3		***Arts and Humanities*** Any course vetted for Arts and Humanities	**3-4**
4		***Scientific Reasoning or Scientific Knowledge and Understanding*** Any course vetted for Scientific Reasoning or Knowledge & Understanding	**3-4**
5		***Social / Behavioral Science or Historical Knowledge*** Any course vetted for Social/Behavioral or Historical Knowledge	**3**
6		***Oral Communication or Written Communication II*** Any course vetted for Oral Comm or Written Comm II	**3**
7	CCS*101	***Continued Learning/Information Literacy*** College and Career Success	**3**
		General Education Core Credits	**21-24**

Program Core (24 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
CSC*101	Introduction to Computers	**3**	None
CSC*231 or CSCXXXX	Database Design I or Introduction to Database Design	**3**	None or any programming course
CST*120	Introduction to Operating Systems	**3**	None
CST*201	Introduction to Management Information Systems	**3**	Eligibility for ENG*101
CSC*295 or DTS299/CSC299	Coop Ed/Work Experience or Capstone Research	**3**	Permission of instructor
CSC XXXX	Project Management	**3**	None
CSC, CST, CSA, DTS	Directed technical elective	**3**	Varies
Open	Open Elective	**3**	Varies
		24	
Programming Option (15 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
CSC XXXX CSC XXXX CSC 205	Java I or Python Fundamentals or Visual Basic	**3**	Java I -Eligibility for College Algebra Python- None VB - None
CSC XXXX	Java II or other programming elective (including Java I for example if Python was taken, C++, C#)	**3-4**	Varies
CSC*116 CSC XXXX	Intro to Programming with JavaScript or Client-Side Web Development	**3**	CSC 116 – None Client Side Web – 100 level programming
CSC XXXX	Programming Elective – any language	**3**	
CSC, CST	Directed Elective or DTS 201	**3**	
		15-16	

Networking Option (16-17 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
CST XXXX	Networking I	**3**	None
CST XXXX	Windows Server Administration	**4**	Networking I or permission of instructor
CST*228 or CST XXXX	Voice over IP Networking or Computer Hardware	**3-4**	CST 228: Networking I or permission of instructor Computer Hardware: None
CST XXXX	Network Security	**3**	Networking I or permission of instructor
CSC, CST	Directed Elective	**3**	
		16-17	

IT Support Option (17 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
CST XXXX	Computer Hardware	**4**	None
CST XXXX	Network Security	**3**	Networking I or permission of instructor
CST XXXX	Networking I	**3**	None
CST XXXX	Windows Server Administration	**4**	Networking I or permission of instructor
CST*XXXX	Fundamentals of Cloud Computing	**3**	CSC 101
		17	

Data Analytics Option (15 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
DTS*215	Data Ethics and Security	**3**	Eligibility for ENG*101
CSA*135	Spreadsheet Applications	**3**	
DTS*201	Programming for Data Science	**3**	MAT*167 with C or better (can be taken concurrently)
CSC, CSA, CST, DTS	Directed Elective	**3**	
CSC, CST, DTS	Directed Elective	**3**	
		15	
Cloud Computing Option (15 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
CST*XXXX	Fundamentals of Cloud Computing	**3**	CSC 101
CST*XXXX	Networking I	**3**	None
CST*XXXX	Virtualization and Cloud Computing	**3**	Networking I or permission
CST*XXXX	Designing and Deploying Cloud Applications	**3**	CSTXXXX Fundamentals of Cloud Computing
CSC, CST, DTS	Directed Elective	**3**	
		15	
Generalist Option (15 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
CSC, CST	Programming Course (any language)	**3**	Varies
CST XXXX	Networking I	**3**	None
CSC*250	Systems Analysis and Design	**3**	Any programming language
CSC, CST, DTS	Directed Elective	**3**	
CSC, CST, CSA, DTS	Directed Elective	**3**	
		15	
	Total Program Requirement Credits	**39-41**	
	General Education Core Credits	**21-24**	
	Program Total Credits	**60-65**	

Credit Certificate Program Name: Cloud Computing, CIS

Certificate Description:

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.

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:

1. Describe the concepts, characteristics, delivery models and benefits of cloud computing
2. Describe the key security and compliance challenges of cloud computing
3. Demonstrate understanding of key technical and organizational challenges with a focus on business integration
4. Analyze business requirements for implementation to map the distinctive characteristics of public, private and hybrid cloud models

Certificate Program Requirements (18 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSTXXXX	Fundamentals of Cloud Computing	**3**	CSC101
CSTXXXX	Networking I	**3**	None
CSTXXXX	Designing and Deploying Cloud Applications	**3**	CSTXXXX Fundamentals of Cloud Computing
	Pick 9 credits of directed electives from the list below:	**9**	
CSC	Any programming course	**3**	
CSC or CSCXXXX or CSC231	Any programming course or Intro to Database Design or Database Design I	**3**	Varies
CSCXXXX or CSC250	Project Management or Systems Analysis and Design	**3**	None or any programming language
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Computer Information Systems: Computer Networking

Certificate Description:

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

Certificate Learning Outcomes:

1. Provide the student with the personal computer skills necessary to effectively function in today's workplace.
2. Offer a "hands-on" learning experience in the personal computer networking software most commonly used in business and industry.
3. Provide the opportunity for a more advanced technical understanding of personal computer local area networks, their design, installation and management.
4. Provide entry-level opportunities to individuals seeking positions requiring computer networking skills.
5. Upgrade the skills of individuals currently employed.

Certificate Descriptors:

This degree will begin to prepare students for common certification exams such as:

- CCNA (CISCO Certified Network Associate) exam.
- CompTIA Network+
- CompTIA Security+

Certificate Program Requirements (~~18~~ 19-20 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CST120	Introduction to Operating Systems	**3**	None
CST XXXX	Networking I	**3**	None
CSCXXXX	Network Security	**3**	Networking I or permission of instructor
CSTXXXX	Window Server Administration	**4**	Networking I or permission of instructor
	Pick 6 credits directed electives from list below:	**6**	
CST XXXX CST XXXX	Voice over IP Networking or Computer Hardware	3-4	VoIP pre-req: Networking I or permission of instructor Hardware pre-req: None
CSTXXXX	Networking II	**3**	Networking I
CSTXXX	Networking III	**3**	Networking II
CSC*295	Coop Ed/Work Experience	3	
	Certificate Program Total Credits	**19-20**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Computer Programming, CIS

Certificate Description:

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.

Certificate Learning Outcomes:

1. Demonstrate the use of objects in application programs.
2. Define and implement efficient object-oriented solutions using C++, JAVA, and Visual Basic, Python, or others
3. Write, compile, and execute programs using a programming language.
4. Create applications using object-oriented features.
5. Use inheritance and interfaces to create robust, reusable, programming code.
6. Demonstrate a basic understanding of relational database concepts.
7. Preparedness to advance one's career, or move on to more advanced study in MIS, CIS, or related fields.

Certificate Descriptors:

Certificate Program Requirements (18 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC101 or CST201	Intro to Computers or Intro to MIS	**3**	
CSCXXXX or CSC205 or CSCXXXX	Java I, Visual Basic, or Python Fundamentals	**3**	Eligibility for College Algebra Or none or none
CSCXXXX	Intro to Database Design	**3**	100 level programming course
	Pick 9 credits of directed electives from the list below:	**9**	
CSC205	Visual Basic	**3**	
CSCXXXX	Python Fundamentals	**3**	
CSCXXXX	Java I	**3**	Eligibility for College Algebra
CSCXXXX	Java II	**3**	Java I
CSCXXXX	Client-Side Web Development	**3**	100 level programming course
CSCXXXX	C++	**4**	Any programming course or permission by instructor
CSC228	Mobile Device Programming	**3**	CSC205 or programming experience
CSCXXXX or CSC250	Project Management or Systems Analysis and Design	**3**	Any programming language
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: IT Support (Formerly Help Desk Technician)

Certificate Description:

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.

The IT Support Certificate program is ~~27~~ **26** credits, and all courses required by this certificate may be applied to the Computer Information Systems Associate degree program.

Learning Outcomes:

1. To design and use problem solving techniques
2. Use oral and written communication to communicate with clients in a business environment
3. Implement customer service skills in the context of the IT department
4. Apply proper troubleshooting skills within a networking environment
5. Utilize technical skills in implementing software and hardware installations

Certificate Descriptors:

This degree will begin to prepare students for common industry certification exams such as:

- CCNA (CISCO Certified Network Associate) exam.
- CompTIA Network+
- CompTIA Security+

Certificate Program Requirements (26 credits)			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CSC295 or CSC299	Coop Ed/Work Experience or Capstone Research	3	Permission of Instructor
CSTXXXX	Networking I	3	None
CSTXXXX	Computer Hardware	4	None
CSTXXXX	Network Security	3	Networking I or permission of instructor
CST120	Introduction to Operating Systems	3	None
CSTXXXX	Windows Server Administration	4	Networking I or permission of instructor
CSC101	Introduction to Computers	3	None
CSTXXXX	Fundamentals of Cloud Computing	3	CSC101
	Certificate Program Total Credits	**26**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it must include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Digital Media Production

Certificate Description:
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. Additional job placement recommendations, networking opportunities, transferable experiences, extra-curricular media clubs, and internship connections are also integral to all Media courses at MCC.

Certificate Learning Outcomes:

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

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
COM 101	Introduction to Mass Communication	**3**	ENG 101 (eligibility)
COM 131	Audio Production	**3**	None
COM 141	Television Production	**3**	None
COM 166	Video Filmmaking	**3**	None
COM 173	Public Speaking	**3**	ENG 101 (eligibility)
COM 211	Screenwriting	**3**	ENG 101 (eligibility)
		#	
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Public Relations

Certificate Description:
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.

Certificate Learning Outcomes:

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

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
ENG 101	Composition	**3**	
COM 113	Social Media in Contemporary Society	**3**	ENG 101 (eligibility)
COM 121	Journalism I	**3**	ENG 101
BMK 201	Principles of Marketing	**3**	ENG 101 w/C- or better
COM 173	Public Speaking	**3**	ENG 101 (eligibility)
COM 201	Introduction to Public Relations	**3**	ENG 101 (or permission of instructor)
		#	
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Visual Communication

Certificate Description:
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.

Certificate Learning Outcomes:

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

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
ENG 101	Composition	**3**	
ART	Fine Arts Elective (photography recommended)	**3**	Variable
COM 105	Visual Communication	**3**	None
COM 113/ COM 120	Social Media in Contemporary Society - OR - Social Media Strategy	**3**	ENG 101 (eligibility or permission)
COM 141	TV Production	**3**	None
COM xxx/DGA	COM – OR – DGA Elective	**3**	Variable
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Program Name: Mobile Programming

Degree Type: Applied Associate of Science, AAS

Program Description:
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.

Program Learning Outcomes:

Upon successful completion of this degree, graduates will be able to:

1. Demonstrate an understanding of connections between various platforms and programming languages;
2. Work with and study the underlying technologies that support the internet;
3. Demonstrate the ability to use an IDE (integrated development environment);
4. Demonstrate the use of OOP (object oriented programming) techniques in program design and development;
5. Demonstrate writing, compiling and executing code in Object Oriented programming languages;
6. Test programs and troubleshoot simple problems;
7. Understand relational database design methodology and be able to use database software to build, modify, and query relational databases; and
8. Produce logical software solutions to problems.

Program Descriptors:
This program is currently only offered to PTECH and Early College Studies students.
This program will operate at the Norwalk Campus.

General Education Core Courses		
Course Number	**Course Name**	**# of Credits**
ENG* 101	English Composition	3
MAT 186 or Higher	Pre-Calculus	4
Arts and Humanities	Any course vetted for Arts and Humanities	3-4
BIO 121	Scientific Reasoning/Scientific Knowledge + Understanding General Biology I	4
HIS 201 or 202	Historical Knowledge US History to 1877 or US History From Reconstruction	3
COM 173	Oral Communication Public Speaking	3
CCS*101	Continued Learning/Information Literacy CCS 101 College and Career Success	3
	General Education Core Credits:	**23-24**

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC 108	Introduction to Programming	**4**	Eligibility for MAT 172
CSC 226	Object Oriented Programming	**4**	CSC 108
CSC 233	Database Development I	**4**	Eligibility for ENG 101
CSC 234	Database Development II	**4**	CSC 233
CSC 262	Programming Mobile Devices I	**3**	CSC 108
CSC 263	Programming Mobile Devices II	**3**	CSC 108
CST 153	Web Development and Design I	**4**	Eligibility for ENG 101
CST 252	Web Development and Design II	**4**	CST 153
CST 255	XML for the WWW	**4**	CSC 108 or CST 252
	Directed Electives (Any CSC or CST or MAT 200-level or higher)	**6-8**	
	Program Requirement Credits	**40-42**	
	General Education Core Credits	**23-24**	
	Program Total Credits	**63-66#**	

Credit Certificate Program Name: Relational Database Development

Certificate Description:
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.

Certificate Learning Outcomes:
Upon successful completion of this certificate, the student will:

1. Understand the art of data modeling, database design, and database implementation.
2. Identify the components of a database.
3. Utilize the normalization process and implement designs.
4. Understand the role of the data and database administrators.
5. Use Structured Query Language using elements of a popular and widely used relational database package like MS SQL.
6. Identify and use appropriate programming constructs to fulfill application logic needs
7. Manipulate database tables using SQL programming
8. Build error trapping facilities within SQL programs
9. Create SQL program units including: procedures, functions, triggers
10. Use supplied packages in SQL program units
11. Load data into tables from external files using the SQL utilities
12. Identify uses of dynamic SQL and object technology
13. Establish an in-depth understanding of Database Administration using the DBMS Interfaces.
14. Apply the Relational Database Model to understand the Logical and Physical aspects of the DBMS architecture.
15. Understand the functions of the Oracle Database Server and Oracle Database Client.
16. Create, maintain and manipulate an Oracle Database.
17. Understand and apply the Data Dictionary.
18. Understand and apply database statistics in relation to performance and integrity of the database.
19. Create and understand the application of user roles, privileges, and the security of the database.
20. Discuss and understand the concepts of Backup and Recovery Procedures.

Certificate Descriptors:

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC 233	Database Development I	**4**	Eligibility for ENG 101
CSC 234	Database Development II	**4**	CSC 233
CSC 235	Database Development III	**4**	CSC 233
		#	
	Certificate Program Total Credits	**#12**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Smartphone Application Development

Certificate Description:
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.

Certificate Learning Outcomes:

1. Plan, design, code, test, and debug solutions to programming problems using a variety of programming languages;
2. Gain understanding of fundamental object-oriented programming concepts, including encapsulation, inheritance and polymorphism;
3. Demonstrate an understanding of object-oriented programming principles through exams and lab exercises;
4. Compare and contrast mobile platforms, their tools, and the development process;
5. Install software development kits for each mobile platform;
6. Demonstrate understanding of the development cycle for mobile devices including building, testing, and deployment;
7. Create apps for Apple iOS and Google Android mobile devices;
8. Create cross-platform web applications for mobile devices; and
9. Test projects in proprietary emulators for each platform.

Certificate Descriptors:

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC 108	Introduction to Programming	**4**	Eligibility for MAT 172
CSC 226	Object Oriented Programming	**4**	CSC 108
CSC 262	Programming Mobile Devices I	**3**	CSC 108
CSC 263	Programming Mobile Devices II	**3**	CSC 108
	Certificate Program Total Credits	**14#**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

CT State Community College Singular Program Template

Program Name: Software Development (formerly Computer Science)

Degree Type: Associate of Science, AS

Program Description:
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:

a. provide students with skills needed to gain entry level or higher employment;
b. 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;
c. provide students with course work and experience that improves on existing skills or develops new ones; and
d. 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.

Program Learning Outcomes:

Upon successful completion of this degree graduates will be able to:

1. Demonstrate an understanding of connections between various platforms and programming languages;
2. Work with and study the underlying technologies that support the internet;
3. Demonstrate the ability to use an IDE (integrated development environment);
4. Demonstrate the use of OOP (object-oriented programming) techniques in program design and development;
5. Demonstrate writing, compiling and executing code in Object Oriented programming languages;
6. Test programs and troubleshoot simple problems;
7. Understand relational database design methodology and be able to use database software to build, modify, and query relational databases; and
8. Produce logical software solutions to problems.

Program Descriptors:

General Education Core Courses		
Course Number	**Course Name**	**# of Credits**
ENG* 101	English Composition	3
MAT 172 or Higher	College Algebra	3
Arts and Humanities	Any course vetted for Arts and Humanities	3-4
Scientific Reasoning/Scientific Knowledge + Understanding	Any course vetted for Scientific Reasoning/Scientific Knowledge + Understanding	3-4
Social /Behavioral Science or Historical Knowledge	Any course vetted for Social Science/Behavioral Science or Historical Knowledge	3
COM 173	Oral Communication Public Speaking	3
CCS*101	Continued Learning/Information Literacy CCS 101 College and Career Success	3
	General Education Core Credits:	**21-23**

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC 108	Introduction to Programming	**4**	Eligibility for College Algebra
CSC 233	Database Development I	**4**	Eligibility for ENG 101
CSC 234	Database Development II	**4**	CSC 233
CST 255	XML for the World Wide Web	**4**	CSC 108 or CST 252
	2 Semester Programming Sequence (Java, Mobile, Web)*	**6-8**	
	Technical/Directed Elective	**9-12**	
	Unrestricted Elective	**9**	
	*Java Sequence: CSC 226, CSC 241		
	*Mobile Sequence: CSC 262, CSC 263		
	*Web Sequence: CST 153, CST 252		
	Program Requirement Credits	**40-45**	
	General Education Core Credits	**21-23**	
	Program Total Credits	**61-68**	

Program Name: Software Engineering

Degree Type: Applied Associate of Science, AAS

Program Description:
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.

Program Learning Outcomes:

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

1. Demonstrate an understanding of connections between various platforms and programming languages;
2. Work with and study the underlying technologies that support the internet;
3. Demonstrate the ability to use an IDE (integrated development environment);
4. Demonstrate the use of OOP (object-oriented programming) techniques in program design and development;
5. Demonstrate writing, compiling and executing code in Object Oriented programming languages;
6. Test programs and troubleshoot simple problems;
7. Understand relational database design methodology and be able to use database software to build, modify, and query relational databases; and
8. Produce logical software solutions to problems.

Program Descriptors:
This program is currently only offered to PTECH and Early College Studies students.
This program will operate at the Norwalk Campus.

General Education Core Courses		
Course Number	**Course Name**	**# of Credits**
ENG* 101	English Composition	3
MAT 254	Calculus	4
Arts and Humanities	Any course vetted for Arts and Humanities	3-4
BIO 121	Scientific Reasoning/Scientific Knowledge + Understanding General Biology	4
HIS 201 or 202	Historical Knowledge US History to 1877 or US History From Reconstruction	3
COM 173	Oral Communication Public Speaking	3
CCS*101	Continued Learning/Information Literacy CCS 101 College and Career Success	3
	General Education Core Credits:	**23-24**

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC 108	Introduction to Programming	4	Eligibility for MAT 172
CSC 111	Introduction to Bioinformatics	4	CSC 108, MAT 172 or 201
CSC 226	Object Oriented Programming	4	CSC 108
CSC 233	Database Development I	4	Eligibility for ENG 101
CSC 265	Software Engineering Methods	4	CSC 226 or 262 or CST 252
CST 120	Introduction to Operating Systems	3	None
CST 153	Web Development and Design I	4	Eligibility for ENG 101
CST 252	Web Development and Design II	4	CST 153
CST 255	XML for the WWW	4	CSC 108 or CST 252
	Directed Elective (Any CSC or CST or MAT 200-level or higher)	**3-4**	
	Program Requirement Credits	**38-39**	
	General Education Core Credits	**23-24**	
	Program Total Credits	**61-63**	

Credit Certificate Program Name: Web Developer

Certificate Description:
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.

Certificate Learning Outcomes:
Upon successful completion of all program requirements, graduates will possess the following skills and knowledge:

1. Ability to build a commercial or generic web site from the design phase through implementation;
2. Ability to develop web pages using low level code as well as web page development software packages; and
3. Ability to support web pages with server-side java programming and other dynamic products.

Certificate Descriptors:

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CST 153	Web Development and Design I	**4**	Eligibility for ENG 101
CST 252	Web Development and Design II	**4**	CST 153
CSC 226	Object Oriented Programming	**4**	CSC 108
CSC 257	Web Development with PHP	**4**	CSC 226
		#	
	Certificate Program Total Credits	**#16**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Program Name: Web Development

Degree Type: Applied Associate of Science (AAS)

Program Description:
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.

Program Learning Outcomes:
Upon successful completion of all major requirements, graduates will be able to:

1. Create web sites and programs that function in heterogeneous environments;
2. Use an integrated development environment (IDE) to create web sites and other programs;
3. Use OOP (object-oriented programming) techniques to design and develop software;
4. Create effective User Interfaces and User Experiences;
5. Write and execute code in Object Oriented programming languages;
6. Test web pages and web sites and troubleshoot any problems;
7. Design and implement relational database entities;
8. Use database software to build, modify, and query relational databases;
9. Produce websites using modern techniques.

Program Descriptors:

General Education Core Courses		
Course Number	**Course Name**	**# of Credits**
ENG* 101	English Composition	3
MAT 172 or Higher	College Algebra	3
Arts and Humanities	Any course vetted for Arts and Humanities	3-4
Scientific Reasoning/Scientific Knowledge + Understanding	Any course vetted for Scientific Reasoning/Scientific Knowledge + Understanding	3-4
Social /Behavioral Science or Historical Knowledge	Any course vetted for Social Science/Behavioral Science or Historical Knowledge	3
COM 173	Oral Communication Public Speaking	3
CCS*101	Continued Learning/Information Literacy College and Career Success	3
	General Education Core Credits:	**21-23**

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC 108	Introduction to Programming	**4**	Eligibility for MAT 172
CST 153	Web Development and Design I	**4**	Eligibility for ENG 101
CSC 233	Database Development I	**4**	Eligibility for ENG 101
CST 252	Web Development and Design II	**4**	CST 153
CSC 262	Programming Mobile Devices I	**3**	CSC 108
CSC 263	Programming Mobile Devices II	**3**	CSC 108
CSC 226	Object Oriented Programming	**4**	CSC 108
CSC 257	Web Development With PHP	**4**	CSC 226
ART 121	Two Dimensional Design	**3**	None
GRA 151	Graphic Design I	**3**	None
GRA 231	Digital Imaging II	**3**	GRA 151 OR Permission of the Instructor
	Program Requirement Credits	**39**	
	General Education Core Credits	**21-23**	
	Program Total Credits	**60-62**	

Program Name: Computer Networking

Degree Type: Associate of Science

Program Description:

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.

Program 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.

Program Descriptors:

This degree will begin to prepare students for common security certification exams such as:

- CompTIA Network+
- CompTIA Linux+
- CompTIA Security+
- CompTIA A+
- CCNA Exam

General Education Core Courses (21 - 24 Credits)			
Course Number		**Course Name**	**Credits**
1	ENG 101	English Composition	3
2	MATH MAT 167 recommended	Math - any MAT course vetted for Math outcomes Recommended - MAT 167 Statistics	3 - 4
3	Arts and Humanities	Any course vetted for Arts and Humanities	3 - 4
4	Scientific Reasoning/Scientific Knowledge + Understanding PHY 110 recommended	Scientific Reasoning/Scientific Knowledge + Understanding Recommended - PHY 110 Introductory Physics	3 - 4
5	Social/Behavioral Science or Historical Knowledge	Any course vetted for Social/Behavioral Science or Historical Knowledge	3
6	Oral Communication or Written Communication II	Any course vetted for Oral Communication or Written Communication II	3
7	CL/IL CCS 101	Continued Learning/Information Literacy CCS 101 College and Career Success	3
		General Education Core Credits:	**21 - 24**

Program Requirements (39 - 40 credits)			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CSC XXXX	Python Fundamentals	3	None
CST XXXX	Computer Hardware	4	None
CST XXXX	Networking I	3	None
CST XXXX	Networking II	3	Networking I or permission of instructor
CST XXXX	Networking III	3	Networking II or permission of instructor
CST XXXX	Voice Over IP Networking	3	Networking I or permission of instructor
CST XXXX	Protocol Analysis	3	Networking I or permission of instructor
CST XXXX	Virtualization & Cloud Computing	3	Networking I or permission of instructor
CST XXXX	Linux System Administration	4	None
CST XXXX	Windows Server Administration	4	Networking I or permission of instructor
CST XXXX	Network Security	3	Networking I or permission of instructor
	Any EGR, CSC, CST, CSA course	3 - 4	
	Program Requirement Credits	**39 - 40**	
	General Education Core Credits	**21 - 24**	
	Program Total Credits	**60 - 64**	

Credit Certificate Program Name: Computer Networking Security

Certificate Description:

The Computer Networking Security Certificate is designed to take a student with little or no information technology experience and prepares them for entry-level work in network and Linux systems administration, with an additional focus on how network and systems administration relates to cybersecurity. It covers the fundamentals of computer network theory, administration of a networked client-server computer operating system, 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.

Certificate 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 operating systems.
- Install and configure network services in Linux operating systems.
- Design, build and test a Python program.
- Evaluate computer forensic methods.

Certificate Descriptors:

This degree will begin to prepare students for common security certification exams such as:

- CompTIA Network+
- CompTIA Linux+
- CompTIA Security+
- CCNA

Certificate Program Requirements (19 credits)			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CST XXXX	Networking I	3	None
CST XXXX	Networking II	3	Networking I or permission of instructor
CST XXXX	Linux System Administration	4	None
CSC XXXX	Python Fundamentals	3	None
CST XXXX	Network Security	3	Networking I or permission of instructor
CST XXXX	Computer Forensics and Network Intrusions	3	Network Security
	Certificate Program Total Credits	**19**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it must include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Computer Networking Technology

Certificate Description:

The Computer Networking Technology 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.

Certificate 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.

Certificate Descriptors:

This degree will begin to prepare students for common security certification exams such as:

CompTIA Network+
CompTIA Linux+
CCNA

Certificate Program Requirements (20 credits)			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CST XXXX	Networking I	3	None
CST XXXX	Networking II	3	Networking I or permission of instructor
CST XXXX	Networking III	3	Networking II or permission of instructor
CST XXXX	Voice Over IP Networking	3	Networking I or permission of instructor
CST XXXX	Linux System Administration	4	None
CST XXXX	Windows Server Administration	4	Networking I or permission of instructor
	Certificate Program Total Credits	**20**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it must include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Program Name: CSCU Pathway Transfer Degree: Computer Science Studies

Degree Type: A.A.

Program Description: Computer Science Transfer Degree

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.

Program Learning Outcomes:

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

1. Demonstrate the ability to understand a problem and develop logically structured solutions through the use of a modern programming language such as Java.
2. Apply the use of data modeling and relational database design for the design and implementation of a database application.
3. Understand the fundamental operating principles of a computer on an architectural level.
4. Acquire an understanding of modern abstract mathematics as it relates to computer science
5. 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.

Program Descriptors:

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

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

Framework30 General Education Core Courses (33 - 34 credits)			
Course Number or Category		**Course Name**	**Credits**
1	ENG*101	English Composition	3
2	MAT*186	Pre-Calculus or higher	4
3		Any course vetted for Arts and Humanities	3 - 4
4	PHY*221 CHE*121 BIO*121	Calculus Physics I OR General Chemistry I OR General Biology I	4
5		Any course vetted for Social / Behavioral Science	3
6		Any course vetted for Written Communication II	3
7	PHY*222 CHE*122 BIO*122	Calculus Physics II OR General Chemistry II OR General Biology II	4
8		Any course vetted for Historical Knowledge	3
9		Any course vetted Oral Communication	3
10	CCS 101	CLIL - Continued Learning Information Literacy College and Career Success	3
		General Education Core Credits	**33 - 34**

Program Requirements (28 credits)			
Course Number	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
MAT*254	Calculus I (requires C or better for transfer to a CSU)	4	
MAT*256	Calculus II (requires C- or better for transfer to a CSU)	4	
MAT*287	Discrete Math (requires C or better for transfer to a CSU)	4	
CSC*xxxx	Java I (requires C or better for transfer to a CSU)	3	Eligibility for College Algebra
CSC*xxxx	Java II (requires C or better for transfer to a CSU)	3	Java I
CSC*xxxx	Introduction to Database Design (requires C or better for transfer to a CSU)	3	Any 100 level programming course or higher
CSC*xxxx	Client-Side Web Development (requires C or better for transfer to a CSU)	3	Any 100 level programming course or higher
CSC*xxxx	Digital Design (requires C- or better for transfer to a CSU)	4	MAT 172 College Algebra
	Program Requirement Credits	**28**	
	General Education Core Credits	**33 - 34**	
	Program Total Credits	**61 - 62**	

Program Name: Construction Management

Degree Type: Associate in Science

Program Description:

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.

Program Learning Outcomes:

In addition to acquiring the general education competencies, upon completion of the program, the graduate will be able to:

1. Interpret and effectively utilize construction and construction-related documents including reference materials, contracts, and specifications.
2. Prepare quantity take-offs using manual mathematical models/techniques and takeoff software.
3. Estimate construction costs for bidding and assess the appropriateness of various construction methods, materials, and equipment in specific situations.
4. Identify construction equipment and tools and their use in Building Systems and Heavy/Highway Systems.
5. Display the knowledge and skills required in the planning and management of a construction project including use of project software.
6. Identify and resolve problems related to aspects of construction management.
7. Identify Safety and Health Hazards and develop construction Safety Plans.
8. Create a Construction Management Proposal and identify the roles and responsibilities of the Project Team Stakeholders.

Program Descriptors:

1. This is a low to no-cost program for students. Courses in the major use no textbooks. The students utilize the following:
    a. Construction industry specific project Drawings and Specifications
    b. Open-Source cloud-based software – offered to Higher Education at no cost to the college or students
2. Students earn "ProCore Certificates", Industry Certifications achievable within the Construction Management Program, *embedded within the software at no cost for the credential.*
3. All courses transfer into the B.S. – Construction Management Program at CCSU

General Education Core Courses (22credits)			
Course Number		**Course Name**	**# of Credits**
1	ENG 101	English Composition	**3**
2	MAT 137	Intermediate Algebra OR Higher level	**3**
3	COM 105	Visual Communications	**3**
4	Scientific Reasoning	CHE 111 Concepts in Chemistry OR PHY 121 General Physics	**4**
5	Social Science or Historical Knowledge	Any course vetted for Historical Knowledge or Social and Behavioral Science outcomes	**3**
6	Oral Communication or Written Communication II	Any course vetted for Oral Communication or Written Communication II outcomes	
7	CCS 101	College and Career Sucess	**3**
		General Education Core Credits	**22**

Program Requirements (39 credits)			
Course Number	**Course Name**	**# Of Credits**	**Pre-req/Co-req Course #**
ACC 113	Principles of Financial Accounting	**3**	TBD
CSA 105	Introduction to Software Applications	**3**	TBD
CTC 140	Construction Graphics/Quantity Take-Off	**3**	None
CTC 180	Construction Project Administration	**3**	None
CTC 220	Construction Project Management	**3**	CTC 222 CTC 224
CTC 222	Construction Building Systems	**3**	ENG 101
CTC 224	Heavy/Highway Systems	**3**	ENG 101
CTC 229	Construction Building Estimating	**3**	CTC 222 CTC 140
CTC 234	Heavy/Highway Estimating	**3**	CTC 224 CTC 140
CTC 255	Construction Planning	**3**	CTC 229 CTC 234
CTC 275	Construction Business Principles	**3**	CTC 220 ACC 115
CTC 225	Construction Safety	**3**	CTC 222 CTC 224
ECN 102	Principles of Microeconomics	**3**	TBD
	Program Requirement Credits	**39**	
	General Education Core Credits	**22**	
	Program Total Credits	**61**	

Credit Certificate Program Name: Construction Management

Certificate Description:

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.

Certificate Learning Outcomes:

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

1. Interpret and effectively utilize construction and construction-related documents including reference materials, contracts, and specifications.
2. Prepare quantity take-offs using manual mathematical models/techniques and takeoff software.
3. Estimate construction costs for bidding and assess the appropriateness of various construction methods, materials and equipment in specific situations.
4. Identify construction equipment and tools and their use in Building Systems and Heavy/Highway Systems.

Certificate Descriptors:

1. No to low cost for students. No textbooks for CM courses– utilize construction industry specific project Drawings and Specifications
2. Students earn "ProCore Certificates", Industry Certifications achievable within the Construction Management Program, *embedded within the software at no cost for the credential.*
3. Prepares student for the Construction Management in Training, (CMiT) Level 1 Nationally recognized Certification Exam with the Construction Management Association of America (CMAA)
4. ALL classes transfer into the AS – Construction Management Program at Capital
5. ALL classes transfer into the BS – Construction Management Program at CCSU
6. WIOA eligible
7. 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)

Certificate Program Requirements (30 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ACC 113	Principles of Financial Accounting	**3**	TBD
CTC 140	Construction Graphics/Quantity Take-Off	**3**	None
CTC 180	Construction Project Administration	**3**	None
CTC 222	Construction Building Systems	**3**	ENG 101
CTC 224	Heavy/Highway Systems	**3**	ENG 101
CTC 229	Construction Building Estimating	**3**	CTC 222
CTC 234	Heavy/Highway Estimating	**3**	CTC 224
CSA 105	Introduction to Software Applications	**3**	TBD
ENG 101	English Composition	**3**	TBD
MAT 137	Intermediate Algebra OR HIGHER	**3**	TBD
	Certificate Program Total Credits	**30**	

Program Name: Cyber and Homeland Security

Degree Type: Associate of Science

Program Description:
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.

Program Learning Outcomes:

1. Explain the landscape, key terms, challenges, and concepts related to the many layers of cybersecurity.
2. Explain fundamental architectures of networks (networks build on each other) and demonstrate an understanding of network security.
3. Demonstrate an understanding of the legal and ethical issues and concepts associated with cybersecurity responsibilities.
4. Effectively communicate technical information and approaches for incident analysis and response verbally, in writing, and in presentations.
5. 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.
6. Apply counter measures that would secure network systems against threats.
7. 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.

Program Descriptors:
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 Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition	**3**
2		***Math*** Math 100 or higher	**3-4**
3		***Arts and Humanities*** Any course vetted for Arts and Humanities	**3-4**
4		***Scientific Reasoning or Scientific Knowledge and Understanding*** Any course vetted for Scientific Reasoning or Knowledge & Understanding	**3-4**
5		***Social / Behavioral Science or Historical Knowledge*** Any course vetted for Social/Behavioral or Historical Knowledge	**3**
6		***Oral Communication or Written Communication II*** Any course vetted for Oral Comm or Written Comm II	**3**
7	CCS*101	***Continued Learning/Information Literacy*** College and Career Success	**3**
		General Education Core Credits	**21-24**

Total Program Requirements			
Program Required Courses			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC101 or CST201	Introduction to Computer or Intro to MIS	**3**	CSC101 None CST201 Eligibility for ENG 101
CJS101	Introduction to Criminal Justice	**3**	Eligibility for ENG 101
CSCXXXX	Networking I	**3**	None
CSCXXXX	Network Security	**3**	Networking I or permission
CJS224 or CJS235 or CJS234	Computer Crimes or Information Warfare and Security or Computer Security and Data Protection	**3**	CJS224 & CJS235: Pre-req: CJS101 & ENG101 CJS234-None
CSCXXXX	Project Management	**3**	None
CST120	Introduction to Operating Systems	**3**	None
		21	
Program Designated Electives (15-18 credits)			
Students may choose from a list of specified courses. Common course numbering and common pre-requisites to be used for all courses. Some courses may only be offered at specific campus locations. Provide list of electives with campus specific location, if applicable.			

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Pick from list for total of 15-18 credits:	**15**	
CSTXXXX	Ethical Hacking and Pen Testing I	**3**	Network Security
CSTXXXX	Ethical Hacking and Pen Testing II	**3**	Ethical Hacking and Pen Testing I
CSTXXXX	Virtualization and Cloud Computing	**3**	Networking I or permission
CSTXXXX	Computer Forensics & Network Intrusions	**3**	Network Security
CSTXXXX	Networking II	**3**	Networking I or permission
CSTXXXX	Networking III	**3**	Networking II or permission
CSTXXXX	Voice Over IP Networking	**3**	Networking I or permission
CSTXXXX	Linux System Administration	**4**	None
CSC or CST	Any Programming course	**3 or 4**	
CSCXXXX or CSC231	Introduction to Database Design or CSC*231 Database Design I	**3**	Any programming course or None
CSC250	System Analysis and Design	**3**	Any programming course
CSC248	Practices in Security Management	**3**	None
CJS211	Criminal Law I	**3**	ENG101 and CJS101
CJS235	Information Warfare and Security	**3**	ENG101 and CJS101 and CJS234
CJS222	Computer Investigation Techniques	**3**	ENG101 and CJS101
CJS224	Computer Crimes	**3**	ENG101 and CJS101
CJS234	Computer Security and Data Protection	**3**	None
	Total Program Requirement Credits	**36-38**	
	General Education Core Credits	**21-24**	
	Program Total Credits	**60-62**	

Credit Certificate Program Name: Cyber and Homeland Security Certificate

Certificate Description:

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.

Certificate Learning Outcomes:

1. Explain the landscape, key terms, challenges, and concepts related to the many layers of Homeland and cybersecurity.
2. Explain fundamental architectures of networks and demonstrate an understanding of network security.
3. Demonstrate an understanding of the legal and ethical issues and concepts associated with cybersecurity responsibilities.
4. Apply counter measures that would secure network systems against threats.
5. Identify and discuss career opportunities and the necessary skills that will increase the likelihood of success in the field of cyber and homeland security.
6. Preparedness to advance one's career, or move on to more advanced study in the same or related fields such as MIS or CIS.

Certificate Descriptors:

Certificate Program Requirements (18 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC101 or CST201	Introduction to Computer or Intro to MIS	**3**	CSC101 None CST201 Eligibility for ENG 101
CJS 101	Introduction to Criminal Justice	**3**	Eligibility for ENG 101
CSCXXXX	Networking I	**3**	None
CSCXXXX	Network Security	**3**	Networking I or permission
CJS224 or CJS235 or CJS234	Computer Crimes or Information Warfare and Security or Computer Security and Data Protection	**3**	CJS224 & CJS235: Pre-reg: CJS101 & ENG101 CJS234-None
	Directed Elective, 3 credits from the following list:	**3**	
CJS224	Computer Crimes		Pre-reg: CJS101 & ENG101
CJS 235	Information Warfare and Security		Pre-reg: CJS101 & ENG101
CJS234	Computer Security and Data Protection		None
CSC248	Practices in Security Management		None
CSCXXXX	Project Management		None
CST120	Intro to Operating Systems		None
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

CT State Community College Common Program Differentiated Options Template

Program Name: Cybersecurity (3 options)

Degree Type: Associate of Science

Program Description:

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 3 options:

- **Cybersecurity Concentration**
- **Networking Concentration**
- **Computer Science Concentration**

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.

Program 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 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.

Program Descriptors:

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)

General Education Core Courses (21 - 24 Credits)			
Course Number		**Course Name**	**Credits**
1	ENG 101	English Composition	3
2	MATH MAT 167 recommended	Math - any MAT course vetted for Math outcomes Recommended - MAT 167 Statistics	3 - 4
3	Arts and Humanities	Any course vetted for Arts and Humanities	3 - 4
4	Scientific Reasoning/Scientific Knowledge + Understanding PHY 110 recommended	Scientific Reasoning/Scientific Knowledge + Understanding Recommended - PHY 110 Introductory Physics	3 - 4
5	Social/Behavioral Science or Historical Knowledge	Any course vetted for Social/Behavioral Science or Historical Knowledge	3
6	Oral Communication or Written Communication II	Any course vetted for Oral Communication or Written Communication II	3
7	CL/IL CCS 101	Continued Learning/Information Literacy CCS 101 College and Career Success	3
		General Education Core Credits:	**21 - 24**

Program Required Courses (28 credits)			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CSC XXXX	Python Fundamentals	3	None
CST XXXX	Networking I	3	None
CST XXXX	Networking II	3	Networking I or permission of instructor
CST XXXX	Linux System Administration	4	None
CST XXXX	Virtualization and Cloud Computing	3	Networking I or permission of instructor
CST XXXX	Network Security	3	Networking I or permission of instructor
CST XXXX	Information Assurance and Risk Management	3	Network Security
CST XXXX	Computer Forensics and Network Intrusions	3	Network Security
CST XXXX	Ethical Hacking & Pen Testing I	3	Network Security
	Program Requirement Credits	**28**	

Program Differentiated Option #1: Cybersecurity Concentration			
Required Courses (12 credits)			
Common course numbering and common pre-requisites to be used for all courses.			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CST XXXX	Introduction to Management Information Systems	3	Eligibility for ENG 101
CST XXXX	Ethical Hacking & Pen Testing II	3	Ethical Hacking & Pen Testing I
CST XXXX	Cyber Crimes	3	Network Security
CST XXXX	Cryptography Fundamentals	3	Network Security
	Total Option Credits	**12**	
	Total Program Requirement Credits	**28**	
	General Education Core Credits	**21 - 24**	
	Program Total Credits for Differentiated Option #1	**61 - 64**	

Program Differentiated Option #2: Networking Concentration			
Required Courses (11 credits)			
Common course numbering and common pre-requisites to be used for all courses.			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CST XXXX	Computer Hardware	4	None
CST XXXX	Networking III	3	Networking II or permission of instructor
CST XXXX	Windows Server Administration	4	Networking I or permission of instructor
	Total Option Credits	**11**	
	Total Program Requirement Credits	**28**	
	General Education Core Credits	**21 - 24**	
	Program Total Credits for Differentiated Option #2	**60 - 63**	

Program Differentiated Option #3: Computer Science Concentration			
Required Courses (12 - 13 credits)			
Common course numbering and common pre-requisites to be used for all courses.			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CSC XXXX	Java I	3	None
CSC XXXX	Java II	3	Java I
CSC XXXX	Digital Design	3	College Algebra
??? XXXX	Any EGR, CSC, CST course	3 - 4	
	Total Option Credits	**12 - 13**	
	Total Program Requirement Credits	**28**	
	General Education Core Credits	**21 - 24**	
	Program Total Credits for Differentiated Option #3	**61 - 65**	

Credit Certificate Program Name: Cybersecurity Essentials

Certificate Description:

The Cybersecurity Essentials 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).

Certificate 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.

Certificate Descriptors:

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)

Certificate Program Requirements (22)			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CSC XXXX	Python Fundamentals	3	None
CST XXXX	Networking I	3	None
CST XXXX	Networking II	3	Networking I or permission of instructor
CST XXXX	Linux System Administration	4	None
CST XXXX	Network Security	3	Networking I or permission of instructor
CST XXXX	Computer Forensics and Network Intrusions	3	Network Security
CST XXXX	Ethical Hacking & Pen Testing I	3	Network Security
	Certificate Program Total Credits	**22**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Cybersecurity Operations

Certificate Description:

The Cybersecurity Operations Certificate is designed to take a student with little or no information technology experience and prepare them for entry-level work in Cybersecurity. It builds on the Cybersecurity Essentials Certificate with an additional focus on cloud computing, risk management and advanced penetration testing. 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).

Certificate 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.
- Develop risk mitigation strategies, security policies, and procedures.
- Implement virtualization technologies.

Certificate Descriptors:

This certificate 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)

Certificate Program Requirements (31)			
Course #	**Course Name**	**Credits**	**Pre-req/Co-req Course #**
CSC XXXX	Python Fundamentals	3	None
CST XXXX	Networking I	3	None
CST XXXX	Networking II	3	Networking I or permission of instructor
CST XXXX	Linux System Administration	4	None
CST XXXX	Network Security	3	Networking I or permission of instructor
CST XXXX	Computer Forensics and Network Intrusions	3	Network Security
CST XXXX	Ethical Hacking & Pen Testing I	3	Network Security
CST XXXX	Ethical Hacking & Pen Testing II	3	Network Security
CST XXXX	Information Assurance & Risk Management	3	Network Security
CST XXXX	Virtualization & Cloud Computing	3	Networking I or permission of instructor
	Certificate Program Total Credits	**31**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: ANIMATION & MOTION GRAPHICS

Certificate Description:
Students who complete the Animation and 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.

Certificate Learning Outcomes:

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

Certificate Descriptors: : Courses in this program require access to the Naugatuck Valley DAT 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 Hy-Flex courses.

DAT courses are available offered at the Naugatuck Valley Campus

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ART*121 ART*111	TWO DIMENSIONAL DESIGN or DRAWING I	**3**	None
DAT*110	DIGITAL VIDEO PRODUCTION I	**3**	DAT*101 or permission of instructor
DAT*205	2D ANIMATION FOR DIGITAL ARTS	**3**	DAT*101 (B+ or better) or permission of instructor
DAT*212	FUNDAMENTALS OF 3D GRAPHICS	**3**	DAT*101 (B+ or better) or permission of instructor
DAT*226	MOTION AND SPECIAL EFFECTS	**3**	DAT*110
DAT*234	3D ANIMATION	**3**	DAT*212
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: AUDIO PRODUCTION

Certificate Description:
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.

Certificate Learning Outcomes:

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

Certificate Descriptors: Courses in this program require access to the Nagatuck Valley DAT 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 Hy-Flex courses.

DAT courses are available offered at the Naugatuck Valley Campus

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
MUS*101	MUSIC HISTORY & APPRECIATION I	**3**	Pre-req: Eligibility for ENG 101
MUS*111 MUS*115	FUNDAMENTALS OF MUSIC or MUSIC THEORY I (with MUS*163 EAR TRAINING I)	**3**	Pre-req: MUS*111 - None MUS*115 – MUS*111 recommended
DAT*218	ELECTRONIC AUDIO PRODUCTION I	**3**	Pre req: DAT*H101 or permission of instructor
DAT*219 THR*223	ELECTRONIC AUDIO PRODUCTION II or PLAYS IN PRODUCTION II	**3**	Pre-req: DAT*H218
DAT*220	ACOUSTICS AND SOUND DESIGN	**3**	Pre-req: DAT*H101 or permission of instructor
DAT*237	STUDIO AND ON-SITE RECORDING	**3**	Pre-req: DAT*H218
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Program Name: DIGITAL ARTS TECHNOLOGY

Degree Type: ASSOCIATE OF SCIENCE DEGREE

Program Description:
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

Program Learning Outcomes:

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

Program Descriptors:
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 6 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 the Naugatuck Valley DAT 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 HyFlex courses.

*HyFlex or BlendFlex is offered in the traditional classroom setting; it allows for virtual attendance since it is being broadcast (and recorded).

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	ENGLISH COMPOSITION	**3**
2	Math 100 or higher	Math 100 or higher (college level)	**3-4**
3		ARTS AND HUMANITIES	**3-4**
4		SCIENTIFIC REASONING – AST, BIO, CHE, EAS, ENV, EVS, GLG, MET, OCE, PHY, SCI course vetted for Scientific Reasoning or SCIENTIFIC KNOWLEDGE AND UNDERSTANDING – AST, BIO, CHE, EAS, ENV, EVS, GLG, MET, OCE, PHY, SCI course vetted for Scientific Knowledge and Understanding	**3-4**
5		SOCIAL / BEHAVIORAL SCIENCE – ANT, ECN, GEO, POL, PSY, SOC, WMS course vetted for Social and Behavioral Science or HISTORICAL KNOWLEDGE – HIS course vetted for Historical Knowledge	**3**
6		ORAL COMMUNICATION – COM courses vetted for Oral Communication or WRITTEN COMMUNICATION II – ENG course vetted for Written Communication II	**3**
7	CCS*101	COLLEGE CAREER AND SUCCESS	**3**
		General Education Core Credits	**21-24**

Additional General Education Core Courses; as required by the approved DAT program (9-10 credits)			
Course Number		**Course Name**	**# of Credits**
8	whichever wasn't taken previously	WRITTEN COMMUNICATION II or ORAL COMMUNICATION	**3**
9	whichever wasn't taken previously (one lab science recommended)	SCIENTIFIC KNOWLEDGE AND UNDERSTANDING or SCIENTIFIC REASONING	**3-4**
10	whichever wasn't taken previously	HISTORICAL KNOWLEDGE or SOCIAL / BEHAVIORAL SCIENCE	**3**
		General Education Core Credits	**9-10**

Total Program Requirements (30 credits)			
Program Required Courses (21 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
DAT*101	INTRODUCTION TO DIGITAL ARTS	**3**	CSA* 105 or permission
DAT*104	FOUNDATIONS OF WEB DEVELOPMENT	**3**	DAT*101
DAT*108	DIGITAL GRAPHICS	**3**	DAT*101
DAT*110	VIDEO FOUNDATIONS	**3**	DAT*101
DAT*200+	DAT*215 MULTI-PLATFORM WEB DEVELOPMENT or DAT*220 ACOUSTICS AND SOUND DESIGN or DAT*224 DIGITAL VIDEO PRODUCTION II or DAT*226 MOTION AND SPECIAL EFFECTS or DAT*230 VIDEO EDITING & ENHANCEMENT or DAT*234 3D ANIMATION or DAT*236 VECTOR IMAGING or DAT*237 PRINCIPLES OF SOUND RECORDING or DAT*240 PROGRAMMING FOR THE ARTS	**3**	DAT*104 DAT*101 DAT*110 DAT*110 DAT*108 DAT*212 DAT*108 DAT*218 or 220 DAT*104
DAT*290	DIGITAL ARTS PROJECT	**3**	DAT*215, 220, 224, 226, 230, 234, 236, 237, or 240
ART*121 or DAT*102 or DAT*150	TWO-DIMENSIONAL DESIGN or INTRODUCTION TO PHOTOGRAPHY or GRAPHIC DESIGN FOR DAT (OR EQUIVALENT COURSE)	**3**	
		21	
Program Designated Electives			
Students may choose from a list of specified courses. Common course numbering and common pre-requisites to be used for all courses. Some courses may only be offered at specific campus locations. Provide list of electives with campus specific location, if applicable.			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
	Designated ELECTIVE CREDITS (See list****)	**3**	
	Designated ELECTIVE CREDITS (See list****)	**3**	
	Designated ELECTIVE CREDITS (See list****)	**3**	
		9	
	Total Program Requirement Credits	**30**	
	General Education Core Credits	**30-34**	
	Program Total Credits	**60-64**	

Designated ELECTIVE CREDITS IN THE FIELD	CSC*101 Introduction to Computers
**** Sample List -	CSC*113 Programming I
based on advisory board recommendations)	CSC*229 Programming II
	CSC*231 Database Design I
DAT*102 Introduction to Photography	
DAT*106 Digital Layout	COM*101 Introduction to Mass Communications
DAT*116 Interactive Media Design	COM*113 Social Media
DAT*150 Graphics Design for DAT	COM*154 Film Study and Appreciation
DAT*205 2D Animation for Digital Arts	COM*157 Film History
DAT*212 Fundamentals of 3D Graphics	COM*172 Interpersonal Communication
DAT*215 Multi-platform Web Development	COM*202 Intercultural Communication
DAT*218 Electronic Audio Technology I	COM*226 Journalism I
DAT*219 Electronic Audio Technology II	
DAT*220 Acoustics and Sound Design	GRA*151 Graphic Design I
DAT*224 Video Editing & Enhancements	
DAT*226 Motion and Special Effects	DAN*175 Kinesiology for Dancers
DAT*230 Image Compositing	
DAT*234 3D Animation	ENG*202 Technical Writing
DAT*236 Vector Imaging	ENG*221 American Literature I
DAT*237 Studio and On-site Recording	ENG*222 American Literature II
DAT*240 Programming for the Arts	ENG*231 British Literature I
	ENG*232 British Literature II
ART*101 Art History I	
ART*102 Art History II	MUS*101 Music History & Appreciation I
ART*111 Drawing I	MUS*102 Music History & Appreciation II
ART*121 Two-Dimensional Design	MUS*107 Today's Music
ART*122 Three-Dimensional Design	MUS*108 Today’s Music, Gospel, Ragtime, Blues, Jazz
ART*167 Printmaking I	MUS*111 Fundamentals of Music
	MUS*115 Music Theory I
BBG*101 Introduction to Business	(with MUS*163 Ear Training I)
BMK*201 Principles of Marketing	THR*101 Introduction to Theater
BMK*216 Digital Marketing	THR*120 Stagecraft
	THR*190 Theater Practicum I
CSA*105 Introduction to Software Application	THR*225 Directing
CSA*135 Spreadsheet Applications	THR*223 Plays in Production II
	THR*290 Theater Practicum II

NOTE: All DAT courses are currently only offered at Naugatuck Valley Community College in HyFlex modality.

Credit Certificate Program Name: DIGITAL GRAPHICS for PRINT & SCREEN

Certificate Description:
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.

Certificate Learning Outcomes:

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

Certificate Descriptors: Courses in this program require access to the Naugatuck Valley DAT 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 Hy-Flex courses.

DAT courses are available offered at the Naugatuck Valley Campus

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
DAT*104	FOUNDATIONS OF WEB DEVELOPMENT	**3**	DAT*101 or permission of instructor
DAT*106	DIGITAL LAYOUT	**3**	DAT*101 or permission of instructor
DAT*108	DIGITALGRAPHICS	**3**	DAT*101 or permission of instructor
DAT*150	GRAPHIC DESIGN FOR DAT OR EQUIVALENT COURSE	**3**	None
DAT*215	MULTI-PLATFORM WEB DEVELOPMENT	**3**	DAT*104
DAT*230 DAT*236	IMAGE COMPOSITING or VECTOR IMAGING	**3**	DAT*108
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: **Technical Communication**

Certificate Description:
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 Communiction or the Digital Arts Technology degree program and for transfer to BA/ BS programs at other colleges.

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

1. Demonstrate increased competencies in writing and speaking skills.
2. Effectively articulate technical procedures to co-workers, management, and customers.
3. Utilize current computer software, audio, and video tools in preparing technical presentations.
4. 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.
5. Assess and articulate how various channels of mass media communication influence message content.

Certificate Descriptors: 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 the Naugatuck DAT 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 Hy-Flex courses.

DAT courses are available offered at the Naugatuck Valley Campus

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
COM*101	Introduction to Mass Communication	**3**	ENG*101 eligibility or permission of instructor
CSC*101 or CSA*105	Introduction to Computers or Introduction to Software Applications	**3**	TBD None
DAT*101	Introduction to Digital Arts	**3**	CSA*105 or permission of instructor
DAT*106	Digital Layout	**3**	DAT*101
DAT*150	Graphic Design for DAT or Equivalent Course	**3**	None
ENG*202	Technical Writing	**3**	TBD
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: TRENDING TECHNOLOGY IN DIGITAL MEDIA

Certificate Description:
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.

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

Certificate Descriptors: Courses in this program require access to the Naugatuck Valley DAT 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 Hy-Flex courses.

DAT courses are available offered at the Naugatuck Valley Campus .

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
BMK*201 BMK*216	PRINCIPLES OF MARKETING or DIGITAL MARKETING	**3**	Completion of ENG*101 with a grade of C- or better
COM*101	INTRODUCTION TO MASS COMMUNICATION	**3**	ENG*101 eligibility or permission of instructor
DAT*104	FOUNDATIONS OF WEB DEVELOPMENT	**3**	DAT*101 or permission of instructor
DAT*106	DIGITAL LAYOUT	**3**	DAT*101 or permission of instructor
DAT*116 DAT*240	INTERACTIVE MEDIA DESIGN or PROGRAMMING FOR THE ARTS	**3**	DAT*104
DAT*215	MULTI-PLATFORM WEB DEVELOPMENT	**3**	DAT*104
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: VIDEO PRODUCTION

Certificate Description:
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.

Certificate Learning Outcomes:

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

Certificate Descriptors: Courses in this program require access to the Naugatuck Valley DAT 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 Hy-Flex courses.

DAT courses are available offered at the Naugatuck Valley Campus

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
COM*154	FILM STUDY AND APPRECIATION	**3**	Eligibility for ENG*101
DAT*102	INTRODUCTION TO PHOTOGRAPHY OR EQUIVALENT COURSE	**3**	None
DAT*110	VIDEO FOUNDATIONS	**3**	DAT*101 or permission of instructor
DAT*220 DAT*237	ACOUSTICS AND SOUND DESIGN or STUDIO AND ON-SITE RECORDING	**3**	DAT*101 or permission DAT*218 or permission
DAT*224	VIDEO EDITING & ENHANCEMENT	**3**	DAT*110
DAT*226	MOTION AND SPECIAL EFFECTS	**3**	DAT*110
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: EMT to Paramedic Pathway (Formerly: Emergency Medical Technician)

Certificate Description:

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.

Certificate 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

Certificate Descriptors:

- The EMT to Paramedic Pathway Certificate prepares students and fulfils educational requirements for the Paramedic Associate Degree Program.
- Clinical time with an ambulance service, and/or in an emergency room is a required component of this program. The minimum of 10 hours of clinical time is included in EMT*100. Students may need to comply with health requirements and/or background checks required by clinical sites.
- Successful completion of EMT 100 includes healthcare provider level cardiopulmonary resuscitation (CPR) certification and qualifies students for the National Registry Emergency Medical Technician (NREMT) Certification Examination. Certification examination costs are in addition to college tuition and fees.

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
EMT*100	Emergency Medical Technician	**6**	Permission of Instructor
MED*125	Medical Terminology for Clinical and Administrative Professions	**3**	Eligible for ENG 101
ENG*101	Composition	**3**	Placement as determined by placement process
MAT*137 or higher	Intermediate Algebra or higher	**3**	MAT 095 with a grade of C or higher or placement using multiple measures
CHE*111 or CHE*121	Concepts of Chemistry or General Chemistry I	**4**	CHE*111 and CHE*121 Pre-req: MAT 137 or higher with C-or better, OR Higher placement than MAT 137 AND Eligibility for ENG 101:
	Certificate Program Total Credits	**19**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Program Name: Engineering Science

Degree Type: A.S.

Program Description:
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 of all credits and junior status in a B.S. degree at COT partner universities.

Program Learning Outcomes:
1. Apply engineering, mathematical, scientific, and technological principles, and concepts to identify and formulate solutions to engineering problems.
2. Apply critical thinking and problem-solving skills to solve engineering problems.
3. Demonstrate the ability to function on teams.
4. 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			
Course Number		**Course Name**	**# of Credits**
1	ENG 101	English Composition	3
2	MAT 254	Calculus I	4
3	PHL 111	Arts and Humanities Ethics	3
4	CHE 121	Scientific Knowledge and Scientific Reasoning General Chemistry I w/ lab	4
5	Historical Knowledge	History elective HIS course vetted for Historical Knowledge outcomes	3
6	ENG 102 ENG 110 OR ENG 202	Written Communication II ENG 102 Literature & Composition or, ENG 110 Intro to Literature or ENG 202 Technical Writing and Presentations (ENG 202 recommended)	3
7	IL/CL CCS 101	Info Lit/Cont. Learning College and Career Success	3
		General Education Core Credits	**23**

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
ANT, PSY or SOC	Behavioral Science Elective (Anthropology Recommended-meets international/non-western requirement at transfer colleges)	3	Varies depending on courses selected
ECN, GEO, POL	Social Science Elective (Economics Recommended)	3	Varies depending on courses selected
PHY 221	Calculus-Based Physics I	4	As determined by PHYSICS
PHY 222	Calculus-Based Physics II	4	Pre-req: PHY 221
MAT 256	Calculus II	4	C or higher in MAT* 254
MAT 268	Calculus III –Multivariable	4	C or higher in MAT* 256 Calculus II
MAT 285	Differential Equations	4	C or higher in MAT* 256 Calculus II
EGR 111	Introduction to Engineering	3	Pre-req: C or better in MAT* 137, or higher AND placement into ENG* 101 Co-req: MAT 186 (or C or better if taken prior)
EGR 211	Engineering Statics	3	Pre-req. C or better in MAT 256, or Co-req: MAT 256
CSC 108 CSC XXXX CSC XXXX CSC XXXX CSC XXXX EGR 115 EGR 201 EGR 230 EGR 250	Any introduction to programming course: Intro to Programming Python Fundamentals Programming with C++ Java I Java II Programming for Engineers MATLAB for Engineers C++ for Engineering Computational Methods for Engineering	3	Pre-reqs: CSC 108 - Eligibility for MAT 172 or Higher CSC XXXX Python: None CSC XXXX C++: Any programming course or permission of instructor. CSC XXXX Java I: Eligible for College Algebra or higher CSC XXXX Java II: Java I EGR115: C or better in MAT*137 EGR230: "C" or better in MAT* 137, or higher AND placement into ENG* 101 EGR 250: EGR*111, AND MAT*254 *OR* TAKEN CONCURRENTLY
EGR 215	Thermodynamics	4	Pre-req: CHE* 121, MAT* 254, AND PHY* 221. MAT 254 may be taken concurrently.

	Specialization Electives: ***BioMedical/BioMechanics***: BIO 121 Gen Bio I and CHE 122 Gen Chem II ***Mechanical/Robotics/Aerospace / Manufacturing/AE&M:*** EGR 212 Dynamics and EGR 221 Electrical Circuits ***Electrical:*** EGR 221 Electrical Circuits and EET 252 Digital Electronics ***Civil:*** CAD 110 Intro to CAD and BIO 121 Gen Bio I ***Chemical:*** CHE 122 Gen Chem II and CHE 211 Organic Chem ***Environmental:*** BIO 122 Gen Bio II and CHE 122 Gen Chem II	6-8	Pre-reqs: EGR 212: C or better in EGR 211 EGR 221: C: or better in PHY 222 or may be taken concurrently Co-req: EGR 221: MAT* 286 or MAT*285 AND PHY 222 if not taken previously
	Program Requirement Credits	**45-47**	
	Total Program Credits	**#68-70**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy.

Credit Certificate Program Name: **Foundations in Digital Analytics**

Program Description:
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.

Certificate Learning Outcomes:

1. Explain the importance of the uses of data, data ethics, and data security.
2. Implement foundational concepts of data manipulation, data analysis, data visualization, and communication.
3. Utilize various technologies and programming languages to organize, analyze, explore, and visualize data.
4. Apply statistical techniques to data to make sense of data and solve problems.
5. Demonstrate the ability to apply all data-related concepts through case studies and projects.

Certificate Descriptors: What else is important to know about this certificate? Is it eligible for Workforce Innovation and Opportunity Act (WIOA) or other specialized funding that affects program length or structure? Does it prepare students for a specialized exam or industry certification? Are there pre-requisite courses or professional experiences? Please include this type of information here.

The Foundations in Digital Analytics certificate will provide students access to industry-informed and aligned digital and analytical skills necessary to succeed in a wide array of career opportunities. Students who complete the certificate will learn key knowledge, skills, and abilities (KSA's) covering four domains: data analytics, data validations, data visualization, and data ethics & security represented by four badges. The KSA's covered by the certificate are based on a national framework endorsed by Fortune 500 firms across the country. In Connecticut, employers state – and research validates – that there are not enough students graduating from higher education institutions with relevant tech skills to meet industry need. These KSA's were validated, interrogated, and tailored by major Connecticut employers to help meet regional needs and increase the availability of students with relevant tech skills to join the workforce. The subsequent credential development was led by Stanley Black & Decker, Pitney Bowes, and Accenture with additional firms expected to adopt the credential. Employers have identified two main use cases for this certificate. First, employers seeking to diversify their talent recruitment and reduce "over-credentialing" for positions will use the certificate with embedded credential badges to help better identify candidates from community colleges who may be competitive for entry-level positions at their firms. Learners who elect and-or complete the certificate will be eligible for industry experience opportunities, such as participation in mentorship programs or capstone projects, to provide the student real-world industry experience. This will ultimately increase their competitiveness for in-demand jobs with employers. Second, employers will use the individual credentials/badges or entire certificate to enhance the resiliency of their own workforce. Employers state they intend to use the individual credentials/badges or entire certificate to help quickly reskill or upskill workers from a wide range of occupations, such as frontline advanced manufacturing or logistics roles, to help them remain competitive in their career path or pursue new career opportunities within their business or broader industry. Lastly, through partnerships with community workforce entities (ex. Capital Workforce Partners), the certificate can be deployed as an accelerated model to

provide rapid reskilling to dislocated workers. Through these employers' ties, the individual credentials/badges or entire certificate will not only provide them measurable skills gains; it will provide them with aligned opportunities to compete for in-demand work.

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
MAT*167	Principles of Statistics	**3**	MAT*137 with a C or better
DTS*258	Data Journalism	**3**	ENG*101 and MAT*167 (can be taken concurrently)
DTS*201	Programming for Data Science	**3**	MAT*167
DTS*215	Data Ethics and Security	**3**	Eligibility for ENG*101W
	Certificate Program Total Credits	**12**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Program Name: French Studies, A.A.

Degree Type: Associates of Arts

Program Description:
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.

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

1. 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*.
2. Demonstrate speaking proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
3. Demonstrate reading proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
4. Demonstrate writing proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
5. Demonstrate analytic, interpretative, and critical thinking skills in regard to language and the communication process.
6. Recognize that understanding other cultures will enrich one's own life and result in lifelong learning.
7. Apply critical thinking skills to the understanding of cultural differences and similarities.

*(https://www.actfl.org/publications/guidelines-and-manuals/actfl-proficiency-guidelines-2012)

Program Descriptors: 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

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	**Written Communication I**: English Composition	**3**
2	Written Communication II	**Written Communication II**: Elective	**3**
3	Arts and Humanities	**Arts and Humanities**: Elective	**3-4**
4	Scientific Reasoning	**Scientific Reasoning**: Elective[1]	**3-4**
5	Scientific Knowledge and Understanding	**Scientific Knowledge and Understanding**: Elective[2]	**3-4**
6	Social and Behavioral Science	**Social and Behavioral Science**: Elective	**3**
7	Historical Knowledge	**Historical Knowledge**: Elective	**3**
8	Math > 137	**Math > 137** Any MAT course vetted for Quantitative Reasoning	**3-4**
9	COM*173	**Oral Communication**: Public Speaking	**3**
10	CCS*101	**Continued Learning and Information Literacy Elective**	**3**
		General Education Core Credits	**31-34**

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

Program Requirements (30 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
FRE* 111	**Elementary French I**	4 credits	Placement test or permission of instructor
FRE* 112	**Elementary French II**	4 credits	C- or better in FRE* 111 or placement test
FRE* 211	**Intermediate French I**	4 credits	C- or better in FRE* 112 or placement test
FRE*212	**Intermediate French II**	4 credits	C- or better in FRE* 211 or placement test
COM*202, GEO*111, HUM*119 or Global Knowledge	**Global Knowledge:** Recommended COM 202, GEO 111, or HUM 119	3 credits	TBD
Creativity	**Creativity-** Courses Currently Vetted for TAP Additional General Education Creativity	3 credits	TBD
Electives	**Unrestricted electives** Students who begin French at a higher level than FRE 111 will receive additional unrestricted electives. They should consider taking additional upper-level French courses.	8-20 credits	
	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).		
		30	
	Program Requirement Credits	**30**	
	General Education Core Credits	**31-34**	
	Program Total Credits	**61-64**	

Program Name: German Studies, A.A.

Degree Type: Associates of Arts

Program Description:
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.

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

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

*(https://www.actfl.org/publications/guidelines-and-manuals/actfl-proficiency-guidelines-2012)

Program Descriptors: 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 Core Courses (31-34 credits)			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	**Written Communication I**: English Composition	**3**
2	Written Communication II	**Written Communication II** : Elective	**3**
3	Arts and Humanities	**Arts and Humanities**: Elective	**3-4**
4	Scientific Reasoning	**Scientific Reasoning**: Elective[1]	**3-4**
5	Scientific Knowledge and Understanding	**Scientific Knowledge and Understanding**: Elective[2]	**3-4**
6	Social and Behavioral Science	**Social and Behavioral Science**: Elective	**3**
7	Historical Knowledge	**Historical Knowledge**: Elective	**3**
8	Math > 137	**Math > 137:** Any MAT course vetted for Quantative Reasoning	**3-4**
9	COM*173	**Oral Communication**: Public Speaking	**3**
10	CCS*101	**Continued Learning and Information Literacy Elective**	**3**
		General Education Core Credits	**31-34**

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

Program Requirements (30 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
GER* 111	**Elementary German I**	4 credits	Placement test or permission of instructor
GER* 112	**Elementary German II**	4 credits	C- or better in GER* 111 or placement test
GER* 211	**Intermediate German I**	4 credits	C- or better in GER* 112 or placement test
GER*212	**Intermediate German II**	4 credits	C- or better in GER* 211 or placement test
COM*202, GEO*111, HUM*119 or Global Knowledge	**Global Knowledge:** Recommended COM 202 Intercultural Communication, GEO 111 World Regional Geography or HUM 119 Short-Term Study Abroad	3 credits	TBD
Creativity	**Creativity-** Courses Currently Vetted for TAP Additional General Education Creativity	3 credits	TBD
Electives	**Unrestricted electives** Students who begin German at a higher level than GER 111 will receive additional unrestricted electives.	8-20 credits	
	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).		
		30	
	Program Requirement Credits	**30**	
	General Education Core Credits	**31-34**	
	Program Total Credits	**61-64**	

Program Name: **CSCU Pathway Transfer Degree: History Studies, A.A.**

Degree Type: Associate in Arts

Program Description:

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.

Program 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

1. Define and interpret primary and secondary historical sources.

2. Explain and evaluate the influence of historical agency (race, class, gender, region/location, and/or belief system) in the context of defined periods.

Framework30 General Education Core Courses (31-34 credits)			
Course Number or Category		**Course Name**	**# of Credits**
1	ENG*101	**ENG 101** Composition **(TAP Written Communication I)**	**3**
2		Any Math course higher than Math 137 vetted for quantitative reasoning	**3-4**
3		**Arts and Humanities** – Course vetted for TAP Arts and Humanities	**3-4**
4		**Scientific Reasoning*** – AST**,** BIO, CHE, EAS, ENV, EVS, GLG, MET, OCE, PHY, SCI course vetted for TAP Scientific Reasoning	**4**
5		**Social / Behavioral Science** – ANT, ECN, GEO, POL, PSY, SOC, WMS course vetted for TAP Social and Behavioral Science outcomes	**3**
6		**Written Communication II** – ENG course vetted for TAP Written Communication II outcomes	**3**
7		**Scientific Knowledge and Understanding*** – AST, BIO, CHE, EAS, ENV, EVS, GLG, MTR, OCEN, PHY, SCI course vetted for Scientific Knowledge and Understanding outcomes	**3-4**
8		**Historical Knowledge** – HIS course vetted for TAP Historical Knowledge outcomes (Must not be HIS 115, US History to 1877 or HIS 116, US History from Reconstruction)	**3**
9		**Oral Communication** – course vetted for TAP Oral Communication	**3**
10		CCS 101 College and Career Sucess	**3**
		General Education Core Credits	**31-34**

Program Requirements (30 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
	General Education Elective I: Creativity	**3**	
	General Education Elective II: Global Knowledge	**3**	
HIST 0115	US History to 1877	**3**	
HIST 0116	US History from Reconstruction	**3**	
	4 Unrestricted Electives (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 100- or 200- level 2. No more than 6 credits can be at the 200-level and no more than 6 can be at the 100-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. *HIS 101 Western History to 1500s and HIS 102 Western History since 1500s: WCSU will receive only one or the other in the major. 6. *HIS 121 World History to 1400s and HIS 122 World History from 1500s: WCSU will receive neither in the major.	**12**	
	200 Level HIST Elective	**3**	
	200 Level HIST Elective	**3**	
	Program Requirement Credits	**30**	
	General Education Core Credits	**31-34**	
	Program Total Credits	**61-64**	

Program Name: Hotel Management

Degree Type: A.S.

Program Description:

The Associate in Science degree in Hotel Management prepares students interested in careers in the management and day-to-day operations of hotels, inns, and other lodging businesses. This hospitality/ business degree teaches the technology used in the industry, cost controls, marketing, how to "wow" the customer and create customer loyalty, legal, accounting and human resources (hiring, terminating of staff, training and evaluation of employees) with emphasis on the lodging industry. Internships provide students with industry experience and teaches how to work effectively as a team member in the hospitality industry.

Program Learning Outcomes:

1. Demonstrate the processing of reservations. registering guests, processing guest departures, and resolving guest complaints.
2. Describe functional relationships among hotel divisions and departments
3. Identify and implement systems and processes for room status changes, front office posting, telephone/PBX, bank maintenance, cash transactions, and security and guest keys.
4. Effectively work as a team member, serve clients and customers, teach others new skills, exercise leadership behavior, and work with others from diverse backgrounds.
5. Identify current trends in the lodging industry
6. Perform basic mathematical computations accurately, especially regarding guest accounting, night audits, and cost controls for hotel and food and beverage operations within the hotel.
7. Describe and apply marketing, sales and merchandising methods in lodging operations.

Program Descriptors:

The program is designed for entry to career upon graduation. Many students begin their careers where they completed their internships. Graduates are qualified for employment as `supervisors in small hotels and inns, as trainees and assistants in large hotels, and as hotel salespersons and front office agents.

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition	3
2	MAT 109 or higher	MAT 109 or higher	3-4
3	PHL 111	**Arts and Humanities** Ethics	3
4	Scientific Reasoning or Knowledge	**Scientific Reasoning or Scientific Knowledge** Recommended ENV 100 Intro to Environmental Science	3-4
5	PSY 111 ECN 101 SOC 220	**Social /Behavioral Science** General Psychology I or Macroeconomics or Racial & Ethnic Diversity (pending GE approval)	3
6	BBG 210	**Oral Communication** Business Communication	3
7	CCS 101	**Continued Learning and Information Literacy** College & Career Success	3
		General Education Core Credits	**21-23**

CT State Community College Unique Program Template

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
HSP 100	Intro to Hospitality Industry	**3**	Eligibility for ENG* 101 or ENG * 093 taken concurrently
BMG 202	Principles of Management	**3**	Completion of ENG 101 with C- or better
HSP 134	Hospitality Customer Relations	**3**	None
HSP 117	Beverage Management	**3**	None
HSP 211	Food and Beverage Cost Control	**3**	MAT 095
HSP 231	Hospitality Law	**3**	None
HSP 237	Hospitality Marketing	**3**	C- or better in HSP* 100
HSP 244	Meetings, Conventions & Special Events Management	**3**	None
HSP 246	Hotel Accounting and Front Office Management	**3**	None
HSP 295	Hospitality Management Internship/Work Experience I	**3**	Program coordinator permission, min. GPA 2.5, completion of 18 HSP credits and a GPA of 2.75 in HSP courses
HSP 298	Hospitality Management Internship/Work Experience II	**1**	HSP 295, program coordinator permission, min. GPA 2.5, completion of at least half of their program and earned at least 18 HSP credits with GPA of 2.75 in HSP courses
ACC 113	Principles of Financial Accounting	**3**	MAT 095 or satisfactory placement on the Basic Skills Assessment
BMG 220	Human Resources Management	**3**	ENG 101 and BMG 202
CSA 135	Spreadsheet Applications	**3**	None
	Program Requirement Credits	**40**	
	General Education Core Credits	**21-23**	
	Program Total Credits	**61-63**	

Credit Certificate Program Name: Meetings, Conventions & Special Events Management

Certificate Description:

This certificate is designed for students seeking careers in the growing field of meeting planning. It will also develop and update the skills of those presently in the field. The certificate emphasizes the management of and services for meetings, conventions, trade shows, and special events. Students will be prepared for positions in such areas as independent or entry-level corporate meeting planning; conference, trade show, and association management; and convention/meeting services in the hotel industry. The certificate will also enable the veteran meeting planner to obtain college credentials in his/her profession. Furthermore, it gives administrative assistants and others who plan meetings as part of their regular jobs a formal opportunity to learn about this industry and enhance their planning skills.

Certificate Learning Outcomes:

1. Describe, define, and interpret the requirements for planning successful meetings, conventions, trade shows and special events.
2. Describe the roles of meeting planner, Convention & Visitors Bureaus, convention centers and event venues.
3. Discuss the economic impact of the meeting and convention industry.
4. Know the various career opportunities in the industry.
5. Understand the vocabulary and acronyms of the industry
6. Demonstrate knowledge of the financial aspects and budgeting for meetings.
7. Understand the legal and marketing components of meetings.
8. Describe how to choose the right location and venue for different types of meetings.

Certificate Descriptors:

Certificate Program Requirements (21 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
BBG 210	Business Communication	**3**	None
HSP 100	Introduction to the Hospitality Industry	**3**	Eligibility for ENG* 101 or ENG* 093 taken concurrently
BMK 215	Principles of eBusiness	**3**	None
HSP 231	Hospitality Law	**3**	None
HSP 237	Hospitality Marketing	**3**	C- or better in HSP* 100
HSP 244	Meetings, Conventions & Special Events Management	**3**	None
CSA 135 OR CSA 140 OR BOT 220	Spreadsheet Applications OR Database Applications OR Digital Workplace Technologies	**3**	CSA 135 - TBD CSA 140 - TBD BOT 220 Eligibility for ENG*093
	Certificate Program Total Credits	**21**	

Program Name: Restaurant Management

Degree Type: A.S.

Program Description:

The Associate in Science degree in Restaurant Management is designed for those interested in careers in the restaurants and other businesses that provide food and beverage to customers. This hospitality/business degree teaches the technology used in the restaurant industry, menu costing and cost control, marketing, how to "wow"the customer and create customer loyalty, writing food descriptions and other media related outreach, legal, accounting and human resources (hiring, terminating staff, training and evaluation of employees) aspects of business management, basic food preparation, how to be an entrepreneur and own a restaurant, food truck, catering or other food related business. Internships provide students with industry experience and learn how to work effectively as a team member in the hospitality industry.

Program Learning Outcomes:

1. Describe and apply marketing, sales, customer relations, legal, accounting and human resource techniques used in the restaurant and food service industries.
2. Accurately perform mathematical computations and interpret the results with regard to food and beverage cost controls and purchasing.
3. Demonstrate ability to write and present about food, such as writing food and concept descriptions, menus, blogs, press releases and media outreach documents, as well as presenting to staff and external constituents.
4. Identify and explain the entrepreneurial components of owning a business such as a restaurant, food truck or other food focused businesses.
5. Demonstrate knowledge of basic cooking techniques and use of typical industrial kitchen equipment.

Program Descriptors:

The program is designed for entry to career upon graduation. Many students begin their careers where they completed their internships. Upon completion of the program, students work as a restaurant manager trainee, catering sales associate, shift supervisor, assistant manager, event coordinator, assistant beverage manager.

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition	3
2	MAT 109 or higher	MAT 109 or higher	3-4
3	PHL 111	**Arts and Humanities** Ethics	3
4		**Scientific Reasoning** Recommended ENV 100 Intro to Environmental Science	3-4
5	PSY 111 or ECN 102 or SOC 201 or PSY 240	**Social /Behavioral Science** General Psychology I or Microeconomics or Contemporary Social Issues or (pending GE approval) Social Psychology (pending GE approval)	3
6	BBG 210	**Oral Communication** Business Communication	3
7	CCS 101	**Continued Learning and Information Literacy** College & Career Success	3
		General Education Core Credits	**21-23**

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
HSP 100	Intro to Hospitality Industry	**3**	Eligibility for ENG* 101 or ENG * 093 taken concurrently
HSP 101	Principles of Food Preparation	**3**	Elig. For MAT 095 and ENG 091. Pre or co-req. HSP 109
HSP 109	Food Safety Certification	**1**	Eligibility for ENG* 101 or ENG * 093 taken concurrently
HSP 112	Advanced Food Preparation	**4**	HSP 101 with C- or better
HSP 134	Hospitality Customer Relations	**3**	None
HSP 117	Beverage Management	**3**	None
HSP 211	Food and Beverage Cost Control	**3**	MAT 095
HSP 231	Hospitality Law	**3**	None
HSP 232	Restaurant Management	**3**	None
HSP 237	Hospitality Marketing	**3**	C- or better in HSP* 100
HSP 249	Food Writing	**3**	Eligibility for ENG 101 or permission
HSP 295	Hospitality Management Internship/Work Experience I	**3**	Program coordinator permission, min. GPA 2.5, completion of 18 HSP credits and a GPA of 2.75 in HSP courses
HSP 298	Hospitality Management Internship/Work Experience II	**1**	HSP 295, program coordinator permission, min. GPA 2.5, completion of at least half of their program and earned at least 18 HSP credits with GPA of 2.75 in HSP courses
ACC 113	Principles of Financial Accounting	**3**	MAT 095 or satisfactory placement on the Basic Skills Assessment
BES 218	Entrepreneurship	**3**	Completion of ENG 101 with C- or better
	Program Requirement Credits	**42**	
	General Education Core Credits	**21-23**	
	Program Total Credits	**63-65**	

Program Name: Italian Studies, A.A.

Degree Type: Associates of Arts

Program Description:
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.

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

1. 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*.
2. Demonstrate speaking proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
3. Demonstrate reading proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
4. Demonstrate writing proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
5. Demonstrate analytic, interpretative, and critical thinking skills in regard to language and the communication process.
6. Recognize that understanding other cultures will enrich one's own life and result in lifelong learning.
7. Apply critical thinking skills to the understanding of cultural differences and similarities.

*(https://www.actfl.org/publications/guidelines-and-manuals/actfl-proficiency-guidelines-2012)

Program Descriptors: 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.

General Education Core Courses (31-34 credits)			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	**Written Communication I**: English Composition	**3**
2	Written Communication II	**Written Communication II**: Elective	**3**
3	Arts and Humanities	**Arts and Humanities**: Elective	**3-4**
4	Scientific Reasoning	**Scientific Reasoning**: Elective[1]	**3-4**
5	Scientific Knowledge and Understanding	**Scientific Knowledge and Understanding**: Elective[2]	**3-4**
6	Social and Behavioral Science	**Social and Behavioral Science**: Elective	**3**
7	Historical Knowledge	**Historical Knowledge**: Elective	**3**
8	Math > 137	**Math > 137:** Any MAT course vetted for Quantitative Reasoning	**3-4**
9	COM*173	**Oral Communication**: Public Speaking	**3**
10	CCS*101	**Continued Learning and Information Literacy Elective**	**3**
		General Education Core Credits	**31-34**

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

Program Requirements (30 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
ITA* 111	**Elementary Italian I**	4 credits	Placement test or permission of instructor
ITA* 112	**Elementary Italian II**	4 credits	C- or better in ITA 111 or placement test
ITA*211	**Intermediate Italian I**	4 credits	C- or better in ITA 112 or placement test
ITA*212	**Intermediate Italian II**	4 credits	C- or better in ITA 211 or placement test
COM* 202, GEO*111 or HUM*119 or Global Knowledge	**Global Knowledge:** Recommended COM 202, GEO 111, or HUM 119	3 credits	TBD
Creativity	**Creativity-** Courses Currently Vetted for TAP Additional General Education Creativity	3 credits	TBD
Electives	**Unrestricted electives** Students who begin Italian at a higher level than ITA 111 will receive additional unrestricted electives.	8-20 credits	
	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).		
		30	
	Program Requirement Credits	**30**	
	General Education Core Credits	**30-34**	
	Program Total Credits	**61-64**	

Credit Certificate Program Name: Management Information Systems (MIS)

Certificate Description:

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:

1. Acquire a familiarization with terminology and structure of a programming language.
2. Demonstrate the ability to use software tools for program development.
3. Demonstrate a basic understanding of relational database concepts.
4. Preparedness to advance one's career, or move on to more advanced study in MIS, CIS, or related fields.

Certificate Descriptors:

Certificate Program Requirements (18 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CSC101 or CST201	Intro to Computers or Intro to MIS	**3**	CSC101- None CST201 Eligibility for ENG 101
CSCXXXX or CSC205 or CSCXXXX	JAVA I or Visual Basic, or Python Fundamentals	**3**	Java I -Eligible for College Algebra or higher VB – None Python-None
CSCXXXX or CSA 140	Intro to Database Design or Database Applications	**3**	CSCXXXX-100 level programming course CSA 140 – None
	Pick 9 credits of directed electives from list below:	**9**	
CSCXXXX	Project Management	**3**	None
CSC250	Systems Analysis and Design	**3**	Any programming language
CSC183	Information Systems in Organizations	**3**	None
CSCXXXX	Network I	**3**	None
CSA135	Spreadsheet Applications	**3**	None
CSC180	Computer Ethics	**3**	None
ACC Elective	Any ACC course	**3**	Varies
CSCXXXX	Network Security	**3**	Network I or permission of Instructor
CSTXXXX	Computer Hardware	**4**	None
	Certificate Program Total Credits	**18**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Program Name: Management Information Systems

Degree Type: Associate of Science

Program Description:

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.

Program Learning Outcomes:
Upon successful completion of all Management Information Systems degree program requirements, graduates will

1. Demonstrate relevant content knowledge of core business disciplines, accounting, business law, management, and business communications.
2. Define information systems and describe their importance to organizations.
3. Describe the basic methodologies used to develop and implement information systems.
4. Utilize business application software including spreadsheet, database, presentation, and word processing for business decision-making and analysis.
5. Recognize the importance of working in teams to achieve common goals and collaborate effectively in group assignments.
6. Apply current technology, analyze business problems, and design and develop software.
7. Communicate using network technologies, access information via the Internet, and understand information integrity and security issues.
8. 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

Program Descriptors:

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition	**3**
2	MAT 167	**Math** Statistics	**3**
3		**Arts and Humanities** course vetted for Arts and Humanities	**3-4**
4		**Scientific Reasoning** –course vetted for Scientific Reasoning or **Scientific Knowledge and Understanding -** course vetted for Scientific Knowledge and Understanding outcomes	**3-4**
5		**Social / Behavioral Science** course vetted for Social and Behavioral Science outcomes	**3**
6		**Oral Communication** COM courses vetted for Oral Communication outcomes	**3**
7	CCS 101	**Continued Learning and Information Literacy** College and Career Success	**3**
		General Education Core Credits	**21-23**

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ACC* 113	Principles of Financial Accounting	**3**	Pre-req: MAT 095 or satisfactory placement on the Basic Skills Assessment
ACC* 117	Principles of Managerial Accounting	**3**	Pre-req: Completion of ACC*113 with a C or higher ACC 113
ECN 101	Macroeconomics	**3**	Eligibility for ENG 101
CST* 201	Introduction to Management Information Systems	**3**	Eligibility for ENG 101
CSA* 135	Spreadsheet Applications	**3**	None
BMG* 202	Principles of Management	**3**	Pre-req: Completion of ENG* 101 with C- or better
BMG* 204 BBG 210	Managerial Communications or Business Communications	**3**	Pre-req: Completion of ENG* 101 with C- or better
CSC	Any Programming language	**3-4**	Varies
BBG* 231or BBG 234	Business Law I or Legal Environment of Business	**3**	Pre-req: Completion of ENG* 101 with C- or better
	Program Core Requirement Credits	**27-28**	

Program Designated Electives (12 credits)			
Students may choose from a list of specified courses. Common course numbering and common pre-requisites to be used for all courses. Some courses may only be offered at specific campus locations. Provide list of electives with campus specific location, if applicable.			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ECN 102	Microeconomics	3	Eligibility for ENG 101
CSC XXXX	Project Management	3	None
BMK 201	Principles of Marketing	3	Pre-req: Completion of ENG* 101 with C- or better
BMG 210	Organizational Behavior	3	Pre-req: Completion of ENG* 101 with C- or better
BBG 299 or CSC 295	Business Co-Op Internship/Coopertaive Work Experience	3	Permission of instructor
BFN 201	Principles of Finance	3	A grade of C- or better in all of the following courses: ACC113, ECN101, ECN102 and MAT167 (MAT167 may be taken concurrently.)
Any CSA, CSC, CST, MAT course	Choose any technical elective	3-4	Varies
	(Choose elective courses for a minimum of 12 credits)	12	
	Total Program Requirement Credits	**39-40**	
	General Education Core Credits	**21-23**	
	Program Total Credits	**60-63**	

Program Name: Mechanical Engineering Technology (MET) – ABET Accredited.

Degree Type: Associates in Science

Program Description:

The 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 CC 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.

Program Learning Outcomes: ABET requires two types of Objectives/Outcomes.

I. Program Educational Objectives (PEOs) which are "broad statements that describe what graduates are expected to attain within a few years of graduation."

MET program's PEOs are as follows. Graduates will:

1- Possess the educational background to do one or both of the following:
   a. Obtain employment in Mechanical Engineering Technology or another related field.
   b. 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 which are "the knowledge, skills and behaviors that students acquire as they progress through the program and describe what students are expected to know and be able to do by the time of graduation." Accredited programs have to demonstrate through a documented process of assessments and evaluations that they are meeting the Student Outcomes.

MET program's Students Outcomes are as follows. 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.

Program Descriptors: As a result of the training and preparation provided by our program, the Mechanical Engineering Technology student is ready to be employed by industry or to continue their education towards a bachelor's degree upon graduation. In fact, 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.

Accredited at Naugatuck Valley Campus.

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition	**3**
2	MAT*186	Precalculus (Prereq. MAT 172)	**4**
3		***Arts and Humanities*** Any course vetted for Arts and Humanities	**3-4**
4	PHY*121	***Scientific Reasoning/Scientific Knowledge + Understanding*** PHY 121 General Physics I with Lab	**4**
5		***Social / Behavioral Science or Historical Knowledge*** Any course vetted for Social/Behavioral or Historical Knowledge	**3**
6	COM*173 or ENG 202	***Oral Communication or Written Communication II*** COM 173 Public Speaking or ENG 202 Technical Writing	**3**
7	CCS 101	***Continued Learning/Information Literacy*** CCS 101 College and Career Success	**3**
		General Education Core Credits	**23-24**

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
TCN*101	Introduction to Engineering Technology	**3**	None
MAT*254	Calculus I	**4**	MAT*186
CAD*133	2D CAD (AutoCAD)	**3**	None
CAD*220	Parametric Design	**3**	None
EETA*102	Electrical Applications	**3**	MAT*137 or higher
MFG*104	Manufacturing Processes	**4**	None
MEC*114	Statics	**3**	MAT*186 or higher and PHY 121
MEC*271 OR MEC*240	Fluid Mechanics OR Fundamentals of Heat and Thermo	**4**	MAT*186 or higher for both
MEC*251	Materials Strength	**4**	MEC*114
MEC*238	Dynamics	**4**	MEC*114 and MAT*254 or higher
One Tech. Electives	Any 200 Level or higher in MEC, MFG, MAT, CAD, PHY, EGR, EET or EETA. Courses already used for program requirements don't count.	**3-4**	Depends on the course chosen
	Program Requirement Credits	**38-39**	
	General Education Core Credits	**23-24**	
	Program Total Credits	**61-63**	

Program Name: Nuclear Engineering Technology

Degree Type: Associate of Science Degree (A.S.)

Program Description:
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.

Program Learning Outcomes:

1. Apply an understanding of nuclear systems and operations.
2. Apply an understanding or radiological safety and radiation protection procedures.
3. Know the applicable rules and regulations and describe the roles of maintenance, control, performance, and the human interface in nuclear operation and quality assurance.
4. Understand, demonstrate, and value the safe operation of nuclear systems.
5. Conduct, analyze, and interpret laboratory experimental data.
6. Interpret laboratory analyses that measure nuclear and radiation processes.
7. Demonstrate effective oral and written communication skills.
8. Demonstrate the use of library and on-line information sources in problem solving.
9. Serve as productive team members.
10. Recognize the need to be life-long learners.

Program Descriptors:

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 (14 Credits)			
Course Number		**Course Name**	**# of Credits**
1	MAT*186	Precalculus	**4**
2	PHY*114	Physics Mechanics w/Lab	**4**
3	COM*173	Public Speaking	**3**
4	CCS*101	College and Career Success	**3**
		Total pre-program credits	**14**

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition	**3**
2	MAT*254	***Math*** Calculus I	**4**
3	***Arts & Humanities***	***Arts and Humanities*** Any course vetted for Arts and Humanities	**3-4**
4	PHY*115	***Scientific Reasoning or Scientific Knowledge and Understanding*** Physics Heat Sound Light w/Lab	**4**
5	***Soc/Beh Sci or HK***	***Social / Behavioral Science or Historical Knowledge*** Course vetted for Social/Behavioral Science or Historical Knowledge	**3**
6	ENG 202	***Written Communication II*** Technical Writing	**3**
7	CCS*101	***Continued Learning/Information Literacy*** College and Career Success	**[3]**
		General Education Core Credits	**20-21**

Program Requirements			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
CHE*121	General Chemistry w/Lab	**4**	ENG*101/MAT*172
CSC*ELEC	Computer Science Elective (CSA-105 or CSC-108 recommended)	**3-4**	TBD
EET*144	Fund. Electric Circuits & Machines	**3**	MAT*186/EET*145
EET*145	Fund. Electric Circuits & Machines Lab	**1**	MAT*186/EET*144
MAT*256	Calculus II	**4**	MAT*254
MEC*272	Fluid Mechanics & Thermodynamics	**4**	PHY*115
MEC*274	Heat Transfer	**2**	MAT*254, MEC*272, PHY*115/MEC*275
MEC*275	Thermal Sciences Lab	**1**	(None)/MAT*254; MEC*241 or MEC*270 or MEC*272
NUC*100	Intro to Nuclear Systems	**3**	-
NUC*110	Radiation Health Safety	**2**	MAT*186, CHE*121/NUC*111, NUC*117
NUC*111	Radiation Health Safety Lab	**1**	MAT*186, CHE*121/NUC*110, NUC*117
NUC*117	Atomic and Reactor Physics	**4**	MAT*186, NUC*100, PHY*114/ MAT*254, PHY*115, NUC*110/11
NUC*118	Nuclear Chemistry	**1**	CHE*121, MAT*186, NUC*100/ NUC*117
NUC*210	Nuclear Instruments and Control	**2**	EET*145, NUC*117/250/ NUC*211/220/221
NUC*211	Nuclear Instruments and Control Lab	**1**	EET*145, NUC*117/250/ NUC*210/220/221
NUC*220	Nuclear Simulator	**1**	NUC*117/118/250/261/ NUC*210/211/221
NUC*221	Nuclear Simulator Lab	**1**	NUC*117/118/250/261/ NUC*210/211/220
NUC*230	Nuclear Topics	**2**	NUC*117/118/250/261
NUC*250	Reactor Theory	**4**	MAT*254, NUC*117/118, PHY*114/115/ MAT*256, NUC*260/61
NUC*260	Nuclear Materials Science	**2**	MAT*254, NUC*117/118, PHY*114/115/MAT*256, NUC*250/261
NUC*261	Nuclear Materials Science Lab	**1**	MAT*254, NUC*117/118, MAT*256, NUC*250/260
	Program Requirement Credits	**47-48**	
	General Education Core Credits	**20-21**	
	Program Total Credits	**67-69**	
	Pre-program credits	**14**	

Semester Sequence

Nuclear Engineering Technology Curriculum Requirements

Prerequisites to the Program

- **MAT* K186 - Precalculus ° 4 CREDIT HOURS**
- **PHY* K114 - Mechanics ° 4 CREDIT HOURS**
- **COM* K173 - Public Speaking ° 3 CREDIT HOURS**

Semester I

- **CHE* K121 - General Chemistry I ° 4 CREDIT HOURS**
- _____- Computer Science Elective **3-4 CREDIT HOURS** +
- **ENG* K101 - Composition ° 3 CREDIT HOURS**
- **NUC* K100 - Introduction to Nuclear Systems 3 CREDIT HOURS**

Total: 13-14

Semester II

- **ENG* K202 - Technical Writing ° 3 CREDIT HOURS**
- **MAT* K254 - Calculus I ° 4 CREDIT HOURS**
- **NUC* K110 - Radiation Health Safety ° 2 CREDIT HOURS**
- **NUC* K111 - Radiation Health Safety Lab ° 1 CREDIT HOUR**
- **NUC* K117 - Atomic and Reactor Physics ° 4 CREDIT HOURS**
- **NUC* K118 - Nuclear Chemistry ° 1 CREDIT HOUR**
- **PHY* K115 - Heat Sound Light ° 4 CREDIT HOURS**

Total: 19

Semester III

- **EET* K144 - Fundamentals Electrical Circuits and Machines ° 3 CREDIT HOURS**
- **EET* K145 - Fundamentals Electrical Circuits and Machines Lab ° 1 CREDIT HOUR**
- **MAT* K256 - Calculus II ° 4 CREDIT HOURS**
- **MEC* K272 - Fluid Mechanics/Thermodynamics ° 4 CREDIT HOURS**
- **NUC* K250 - Reactor Theory ° 4 CREDIT HOURS**
- **NUC* K260 - Nuclear Materials Science ° 2 CREDIT HOURS**
- **NUC* K261 - Nuclear Materials Science Lab ° 1 CREDIT HOUR**

Total: 19

Semester IV

- **MEC* K274 - Heat Transfer ° 2 CREDIT HOURS**
- **MEC* K275 - Thermal Sciences Lab 1 CREDIT HOUR**
- **NUC* K210 - Nuclear Instruments and Control ° 2 CREDIT HOURS #**
- **NUC* K211 - Nuclear Instruments and Control Lab ° 1 CREDIT HOUR #**
- **NUC* K220 - Nuclear Simulator ° 1 CREDIT HOUR**
- **NUC* K221 - Nuclear Simulator Lab ° 1 CREDIT HOUR**
- **NUC* K230 - Nuclear Topics ° 2 CREDIT HOURS**
- _____- **Humanities/Social Sciences/Fine Arts** Elective **3 CREDIT HOURS**
- _____- Restricted Elective **3 CREDIT HOURS** ++

Total: 16

Program Name: Physical Therapist Assistant (PTA) Program

Degree Type: Associate of Science (AS)

Program Description:

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:

1. 70% or more of admitted students will complete the program within 1 ½ times the length of the program (3 years) as reported using Commision on Accreditation in Physical Therapy Education (CAPTE) standards.
2. 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%.
3. 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:

1. 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.
2. Demonstrate effective communication and education skills through professional interactions with consideration for individual differences, values, preferences, and expressed needs.
3. Demonstrate self-assessment and interest in lifelong learning by participating in professional development activities which include volunteerism, advocacy, and leadership.
4. Adhere to ethical, professional behavior, legal, regulatory, and licensure standards within their scope of work as a physical therapist assistant.
5. 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 Commision 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 CSCC Naugatuck campus has a spring semester (January) start to each cohort. The program at CSCC Nowalk 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 materials.
3. Completion of the prerequisite courses:
    a. BIO 121 (General Biology I) with a C+ or better within 5 years of the application deadline
    b. MAT (MAT 167 or higher) with a C or better within 5 years of the application deadline
    c. ENG 101 (English Composition) with a C or higher
    d. PSY 111 (General Psychology) with a C or higher
4. Have a minimum admissions GPA of 2.5. The 4 admission requirements and any previous PTA coursework 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.

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), American Physical Therapy Association, 3030 Potomac Ave., Suite 100, Alexandria, VA 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 Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	**Written Communication I** - English Composition	**3**
2	MAT* 167+	**Math** – Principles of Statistics or Higher	**3-4**
3	Any course vetted for TAP arts & humanities outcomes	**Arts & Humanities**	**3-4**
4	BIO* 121	**Scientific Reasoning –** General Biology I (BIO 121)	**4**
5	PSY* 111	**Social / Behavioral Science –** General Psychology I	**3**
6	Any ENG vetted for TAP written communication II outcomes	**Written Communication II**	**3**
7	BIO* 211	**Scientific Knowledge and Understanding** – Anatomy & Physiology I	**4**
		General Education Core Credits	**23-25**

CT State Community College Common Program Designated Electives - PTA

Program Required Courses			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
CCS 101	College and Career Success – includes diversity requirement	**3**	TBD
BIO 212	Anatomy & Physiology II	**4**	C or higher BIO 211
PTA* 1200	Introduction to Physical Therapy Currently PTA 120	**3**	PTA major
PTA* 1250	Foundational Skills in Physical Therapy Currently PTA 125	**4**	PTA major
PTA* 1300	Clinical Anatomy & Kinesiology Currently PTA 130 @ NVCC only	**3**	PTA Major
PTA* 1450	Physical Agents in Physical Therapy Currently PTA 145 @ NVCC, PTA 230 @ NCC	**3**	PTA Major, C or higher PTA 1200, 1250, 1300
PTA* 1500	Physical Therapy Interventions in Orthopedics Currently PTA 150 @ NVCC, PTA 235 @ NCC	**4**	PTA Major, C or higher PTA 1200, 1250, 1300
PTA* 1550	Pathology for the Physical Therapist Assistant I Currently PTA 155 @ NVCC, PTA 253 @ NCC	**3**	PTA Major, C or higher PTA 1200, 1250, 1300
PTA* 2500	Physical Therapy Interventions in Special Populations Currently PTA 251 @ NVCC, PTA 250 @ NCC	**3**	PTA Major, C or higher in PTA 1450, 1500, 1550
PTA* 2550	Pathology for the Physical Therapist Assistant II Currently PTA 255 @ NVCC, no equivalent @ NCC	**3**	PTA Major, C or higher in PTA 1450, 1500, 1550
PTA* 2580	The Physical Therapist Assistant in the Healthcare Arena Currently PTA 258 @ NVCC, PTA 259 @ NCC	**1**	PTA Major, C or higher in PTA 1450, 1500, 1550
PTA* 2600	PTA Part Time Clinical Experience Currently part of PTA 258 @ NVCC, PTA 261 @ NCC	**1**	PTA Major, C or higher in PTA 1450, 1500, 1550

PTA* 2700	PTA Full Time Clinical Experience I Currently PTA 262	**3**	PTA Major, C or higher in PTA 2500, 2550, 2580, 2600
PTA* 2800	PTA Full Time Clinical Experience II Currently PTA 265	**3**	PTA Major, C or higher in PTA 2500, 2550, 2580, 2600
PTA* 2900	Physical Therapy Seminar Currently PTA 260 @ NVCC, PTA 258 @ NCC	**3**	PTA Major, C or higher in PTA 2500, 2550, 2580, 2600
			TOTAL
	Total Program Requirement Credits (technical program + additional gen ed)		**37 + 7 = 44**
	General Education Core Credits		**23-25**
	Program Total Credits		**67-69**

Program Name: Political Science Studies

Degree Type: Associate of Arts

Program Description:

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.

Program 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

Program Descriptors:

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.

General Education Core Courses (31-34 credits)			
Course Number		**Course Name**	**# of Credits**
1	ENG 101	Composition	3
2	MAT	Any Math course higher than Math 137 vetted for quantitative reasoning	3-4
3	Arts and Humanities	Courses vetted for TAP Arts and Humanities	3-4
4	Scientific Reasoning	AST, BIO, CHE, EAS, ENV, EVS, GLG, MTR, OCEN, PHY, SCI course vetted for TAP Scientific Reasoning Note: You must complete one science course that includes a lab. It can be in either science category.	4
5	Social / Behavioral Science	ANT, ECN, GEO, POL, PSY, SOC, WMS Course vetted for TAP Social and Behavioral Science outcomes	3
6	Written Communication II	ENG course vetted for TAP Written Communication II outcomes	3
7	Scientific Knowledge and Understanding	AST, BIO, CHE, EAS, ENV EVS, GLG, MTR, OCEN, PHY, SCI Course vetted for Scientific Knowledge and Understanding outcomes Note: You must complete one science course that includes a lab. It can be in either science category.	3-4
8	Historical Knowledge	HIS course vetted for TAP Historical Knowledge outcomes	3
9	Oral Communication	Course vetted for TAP Oral Communication outcomes	3
10	Continued Learning & Information Literacy	CCS 101: College Career and Success.	3
		General Education Core Credits	**31-34**

Program Requirements (30 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
General Education Elective	Elective I – Creativity	3 credits	tbd
General Education Elective	Elective II – Global Knowledge	3 credits	tbd
POL 111	American Government	3 credits	none
POL	One additional POL course	3 credits	varies
POL	One additional POL course	3 credits	varies
Unrestricted Electives:	You are free to choose any courses at or above 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field; you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.	15 credits	tbd
	Program Requirement Credits	**30**	
	General Education Core Credits	**31-34**	
	Program Total Credits	**61-64**	

Program Name: Psychological Studies

Degree Type: A. A.

Program Description: 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. ++

Program Learning Outcomes:

1. Students can transfer to one of the four state universities in the CSCU System including Charter Oak State College.
2. Understand and use terminology appropriate to Psychology Studies.
3. Understand theories and research methods used in Psychology Studies.
4. Apply critical thinking and problem-solving skills in Psychology Studies.
5. Recognize the need to engage in life-long learning.

Program Descriptors: 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 – Can count as a Framework30 course at community colleges that have vetted it. 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 100-level to complete unrestricted electives, although you may need to use these credits to take courses that prepare you for required courses in the degree program. You should also consider using unrestricted electives to meet foreign language requirements at Central, Eastern and Western Connecticut State Universities or to begin work on completing a minor. Central Connecticut State University will require that you complete a minor by earning at least 18 credits in one area outside your major field; you must complete at least 9 of those minor credits at Central. You can also complete other General Education requirements for CCSU, SCSU, WCSU, and COSC—but not ECSU. You are encouraged to meet with your advisor to determine which courses to select.

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.

General Education Core Courses (31-34 credits)			
Course Number		**Course Name**	**# of Credits**
1	ENG 101	English Composition	**3**
2	MAT 167	Principles of Statistics	**3**
3	Arts and Humanities	Arts and Humanities: Courses vetted for TAP Arts and Humanities (replaces Aesthetic Dimensions) ARC 102, ART, COM, DGA, ENG, ESL (two top levels), GRA, HUM, MUS, PHL, THR, Language and Culture (ARA, CHI, FRE, GER, ITA, JPN, LAT, RUS and SPA)	**3-4**
4	Scientific Reasoning	Scientific Reasoning – AST**,** BIO, CHE, EAS, ENV, EVS, GLG, MTR, OCEN, PHY, SCI course vetted for TAP Scientific Reasoning	**4**
5	Social / Behavioral Science	Social / Behavioral Science – ANT, ECN, GEO, POL, PSY, SOC, WMS course vetted for TAP Social and Behavioral Science outcomes	**3**
6	Written Communication II	Written Communication II – ENG course vetted for TAP Written Communication II outcomes	**3**
7	Scientific Knowledge and Understanding	Scientific Knowledge and Understanding – AST, BIO, CHE, EAS, ENV EVS, GLG, MTR, OCEN, PHY, SCI course vetted for Scientific Knowledge and Understanding outcomes	**3-4**
8	Historical Knowledge	Historical Knowledge – HIS course vetted for TAP Historical Knowledge outcomes	**3**
9	Oral Communication	Oral Communication- course vetted for TAP Oral Communication outcomes	**3**
10	CCS 101	College Success	**3**
		Total General Education Core Credits	**31-33**

Program Requirements & Unrestricted Electives (30 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
PSY 111	General Psychology	**3**	
PSY 201, 204, or PSY 208	Lifespan Development, Child and Adolescent Development, or Adult Development and Aging *For students considering transferring to CCSU, PSY 201 is the recommended choice. For students considering transferring to WCSU, any course in this list other than PSY 201 is recommended.	**3**	PSY 111 with a grade of C- of better in PSY 201, 204 or 208.
PSY 245	Abnormal Psychology	**3**	PSY 111 with a grade of C- or better
PSY 240, 243, or 247	Social Psychology, Theories of Personality, or Industry and Organizational Psychology (choose one or two)	**3-6**	PSY 111 with a grade of C- or better in PSY 240 and 243 OR ENG 101 for PSY 247.
Elective	Unrestricted Electives* * Students are strongly encouraged to take PSY 112 General Psychology II – Can count as a Framework30 course at community colleges that have vetted it. Students can also take one or two additional PSY courses, with advisement.	**9-12**	
Global Knowledge	Global Knowledge- course vetted for Global Knowledge	**3**	
Creativity	Creativity- course vetted for Creativity	**3**	
	Program Requirement Credits	**18-21**	
	General Education Core Credits	**31-33**	
	Unrestricted Electives	**9-12**	
	Program Total Credits	**61-63**	

Program Name: Respiratory Care

Degree Type: **Associate of Science in Respiratory Care**

Program Description:
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.

Program Learning Outcomes:
The goal of the Respiratory Care Program is to prepare graduates with demonstrated competencies in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by Registered Respiratory Therapist (RRTs). Upon successful completion of the program, the graduate will:

1. Assist physicians/licensed independent practitioners in the diagnosis, management, and treatment of patients affected by cardiopulmonary disorders.
2. Collect and evaluate clinical information relevant to their role as a respiratory therapist.
3. Participate in the inter-disciplinary plan of care.
4. Provide patient education concerning health management and prevention of respiratory disease.
5. Demonstrate proficiency in all skills and competencies required of a respiratory therapist described by the Commission on Accreditation for Respiratory Care (CoARC).
6. Promote evidence-based practice by using established clinical practice guidelines and evaluating published research for its relevance to patient care.
7. Collaborate and communicate effectively with patients, their families, and members of the health care team to enhance patient care.
8. Adhere to American Association for Respiratory Care (AARC) statement of ethics and professional conduct.
9. Apply principles and practices of patient safety and process improvement in all aspects of respiratory care.
10. Incorporate principles of social, behavioral, biological sciences and humanities to the role of Respiratory Therapist.

Program Descriptors:
The Respiratory Care program is a two-year associate degree program designed to meet the standards of the Commission on Accreditation for Respiratory Care (CoARC) “CoARC accredits respiratory therapy education programs in the United States. To achieve this end, it utilizes an ‘outcome based’ process. Programmatic outcomes are performance indicators that reflect the extent to which the educational goals of the program are achieved and by which program effectiveness is documented.”

The program offers students a combination of classroom and laboratory preparation and clinical experience in a wide variety of healthcare settings.

Students who graduate from the Respiratory Care program are trained to care for patients with heart and lung diseases. Respiratory Therapists evaluate and treat patients of all ages, from premature infants with underdeveloped lungs to elderly people suffering from chronic breathing and other cardiopulmonary conditions.

The Respiratory Care Programs are accredited by the Commission on Accreditation for Respiratory Care. The Manchester campus Respiratory Care program number is 200044; Naugatuck Valley campus Respiratory Care program number is 200460; Norwalk campus Respiratory Care program number is 200090. Students who successfully complete the Respiratory Care program are eligible to take the national credentialing examinations offered by the National Board for Respiratory Care.

State Licensure Eligibility
The Respiratory Care Programs meet the state education requirements for a Respiratory Care Practitioner license in the state of Connecticut.

The Respiratory Care Programs have not determined if the associate degree in respiratory care 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 the program.

Each state is responsible for establishing the requirements for licensure/certification. Students who intend to seek licensure in any state other than Connecticut need to consult with the state professional licensing board or the state's department of public health. The states make the decision on whether an individual is eligible for a license based on the rules and regulations in place at the time the individual submits their application for licensure.

For more information on each state's requirements, please click here. (https://nv.edu/Portals/0/Documents/AcademicPrograms/RespiratoryCare/RespiratoryCarePracticeLawbyState.pdf)

Program (RSP) designated courses need to be completed at the appropriate/approved campuses.

Admission Process:
The 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.

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*101 Composition (grade of "C "or higher)
- MAT*136, or 137, or 138 Intermediate Algebra or higher {grade of "C" or higher)
- CHE* 111 Concepts of Chemistry or CHE*121 General Chemistry (grade of "C" or higher and within 5 years of program start date)

- BIO*211 Anatomy & Physiology I (meets the grade pre-requisite of Bio 212 and within the past five years of the program start date)
- BIO*235 Microbiology (grade of "C "or higher taken within the past five years of the program start date) **only for Norwalk campus**

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.ATItesting.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
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.

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

General Education Core Courses			
Course Number		**Course Name**	**# Of Credits**
1	ENG*101	English Composition [pre-admission requirement]	**[3]**
2	Math Intermediate Algebra or higher	Intermediate Algebra or higher [pre-admission requirement]	**[3]**
3	Arts and Humanities Elective	Courses vetted for arts and humanities elective	**3-4**
4	CHE*111 or higher	Concepts of Chemistry (pre-admission requirement)	**[4]**
5	PSY* 111	General Psychology	**3**
6	Oral Communication elective	COM courses vetted Oral Communication outcomes	**3**
7	CCS*101	College Career and Success	**3**
		Program General Education Core Credits	**12-13**
		Pre-program General Education Core Credits	**10**

Total Program Requirements			
Program Required Courses			
Course Number	**Course Name**	**# Of Credits**	**Pre-req/Co-req Course #**
BIO 105 or BIO 121 or BIO127	Introduction to Biology or General Biology or Cell Biology and Organ Systems	**4**	BIO 105: Elig for ENG101 & MAT137 BIO 127: Eligibility for ENG101. BIO 121: Elig for ENG101 & MAT137; CHE111 recommended
BIO 211	Anatomy & Physiology I (pre-admission requirement)	**[4]**	Bio 105 and CHE 111 or Bio 121 or Bio127
BIO 212	Anatomy & Physiology II	**4**	Bio 211
BIO 235	Microbiology (pre-admission at Norwalk only)	**4**	BIO105, BIO121, or BIO127, AND CHE111 or Higher, AND ENG101, all with a 'C' or higher
RSP 121	Cardiopulmonary Anatomy and Physiology	**3**	Admission to the RC program/ RSP 141 and RSP 141L
RSP 131	Respiratory Care Pharmacology	**3**	RSP 121/none
RSP 141	Principles of Respiratory Care I	**3**	Admission to the RC Program/ RSP 121 and RSP 141 L
RSP 141 L	Principles of Respiratory Care I Lab	**1**	Admission to the RC Program/ RSP 121 and RSP 141
RSP 160	Principles of Respiratory Care II	**5**	RSP 121, RSP 141 and RSP 141L/ RSP 131

RSP 181	Clinical Practicum	**2**	RSP 131, 160 and/or RSP 151/RSP 151 or RSP 260
RSP 201	Future Trends	**2**	RSP 260, RSP 251, RSP 271, RSP 281/RSP 282, RSP 291
RSP 251	Cardiopulmonary Pathophysiology	**3**	BIO 212, RSP 160, RSP 131/none
RSP 260	Mechanical Ventilation	**4**	RSP 160 or RSP 151/RSP 181 or RSP 281
RSP 262	Advanced Critical Care	**3**	RSP 260/none
RSP 271	Diagnostic Respiratory Care and Pulmonary Rehabilitation	**3**	RSP 251 or 121/RSP 251 and/or 281
RSP 281	Advanced Clinical Practicum I	**2**	RSP 181/RSP 251 or RSP 260
RSP 282	Advanced Clinical Practicum II	**2**	RSP 281, RSP 260/RSP 262
RSP 291	Perinatal and Pediatric Respiratory Care	**2**	RSP 281, RSP 260/RSP 282
	Program Required Credits	**50**	
	Pre-program requirement credits	**4**	

Program Differentiated Option #1 Name: MCC			
Required Courses			
Common course numbering and common pre-requisites to be used for all courses.			
Course Number	**Course Name**	**# Of Credits**	**Pre-req/Co-req Course #**
PHY 110	Introductory Physics	**4**	TBD
	Manchester Campus Requirement Credits	**4**	
	Program Requirement Courses with Differentiated Option #1	**54**	
	General Education Core Credits	**12-13**	
	Total Program Credits for Differentiated Option #1	**66-67**	
	Pre-program Credits	**14**	

Program Differentiated Option #2 Name: NVCC			
Required Courses			
Common course numbering and common pre-requisites to be used for all courses.			
Course Number	**Course Name**	**# Of Credits**	**Pre-req./Co-req. Course #**
NVCC	No designated courses; following Common Curriculum	**50**	
	Program Requirement Courses with Differentiated Option #2	**50**	
	General Education Core Credits	**12-13**	
	Total Program Credits for Differentiated Option #2	**62-63**	
	Pre-program Credits	**14**	

Program Differentiated Option #3 Name: NCC			
Required Courses			
Common course numbering and common pre-requisites to be used for all courses.			
Course Number	**Course Name**	**# Of Credits**	**Pre-req./Co-req. Course #**
NCC	No designated courses; following Common Curriculum BIO 235 must be completed prior to admission	**50**	
	Program Requirement Courses with Differentiated Option #3	**50**	
	General Education Core Credits	**12-13**	
	Total Program Credits for Differentiated Option #3	**62-63**	
	Pre-program Credits	**14**	

Program Name: Spanish Studies, A.A.
Degree Type: Associates of Arts

Program Description:
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.

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

1. 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*.
2. Demonstrate speaking proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
3. Demonstrate reading proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
4. Demonstrate writing proficiency in the target language at the Intermediate Low level as per the ACTFL guidelines*.
5. Demonstrate analytic, interpretative, and critical thinking skills in regard to language and the communication process.
6. Recognize that understanding other cultures will enrich one's own life and result in lifelong learning.
7. Apply critical thinking skills to the understanding of cultural differences and similarities.

*(https://www.actfl.org/publications/guidelines-and-manuals/actfl-proficiency-guidelines-2012)

Program Descriptors: 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

General Education Core Courses (31-34 credits)			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	Written Communication I: English Composition	**3**
2	Written Communication II	Written Communication II: Elective	**3**
3	Arts and Humanities	Arts and Humanities: Elective	**3-4**
4	Scientific Reasoning	Scientific Reasoning: Elective[1]	**3-4**
5	Scientific Knowledge and Understanding	Scientific Knowledge and Understanding: Elective[2]	**3-4**
6	Social and Behavioral Science	Social and Behavioral Science: Elective	**3**
7	Historical Knowledge	Historical Knowledge: Elective	**3**
8	Math > 137	Math > 137: Any MAT course vetted for Quantitative Reasoning	**3-4**
9	COM*173	Oral Communication: Public Speaking	**3**
10	CCS*101	Continued Learning and Information Literacy Elective	**3**
		General Education Core Credits	**31-34**

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

Program Requirements (30 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
SPA* 111	**Elementary Spanish I^**	4 credits	Placement test or permission of instructor
SPA* 112	**Elementary Spanish II^**	4 credits	C- or better in SPA 111 or placement test
SPA*210 or SPA*211	**Spanish for Heritage Speakers^^ or Intermediate Spanish I^^**	4 credits	C- or better in SPA 108 or 112 or placement test
SPA*212	**Intermediate Spanish II^^**	4 credits	C- or better in SPA 210 or SPA 211 or placement test
	^Or student may elect to replace SPA 111 and SPA 112 with SPA 108 Elementary Spanish I & II (8 credits) **^^Or student may elect to replace SPA 210 or 211 and SPA 212 with SPA 208 Intermediate Spanish I & II (8 credits)**		
COM*202, GEO*111 or HUM*119 or Global Knowledge	**Global Knowledge:** Recommended COM 202, GEO 111, or HUM 119	3 credits	TBD
Creativity	**Creativity-** Courses Currently Vetted for TAP Additional General Education Creativity	3 credits	TBD
	Unrestricted electives Students who begin Spanish at a higher level than SPA 111 will receive additional unrestricted electives. They should consider taking additional upper-level Spanish courses such as Advanced Spanish I SPA*251 or Advanced Spanish II *252.	8-20 credits	
	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).		
		30	
	Program Requirement Credits	**30**	
	General Education Core Credits	**31-34**	
	Program Total Credits	**61-64**	

Program Name: Sport Management

Degree Type: Associate of Science

Program Description: 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:

1. Demonstrate working knowledge of the scope of the sport industry, along with professional practices of working in the sport management profession. (Courses: BBG107)
2. Demonstrate knowledge of the historical and philosophical foundations of the sport management profession. (Courses: BBG107)
3. 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. (Courses: BBG107, Sport Finance)
4. 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. (Courses: BBG107, BBG231)
5. Explain and apply principles of mass media, communication, promotion, and public relations particularly as they relate to sport management. (Courses: Sport Media, BMK212)
6. Communicate effectively and professionally via presentation and public speaking opportunities, and in writing to internal and external audiences. (Courses: BBG210, Sport Media)
7. Explain the importance of and the procedure for organizing the workplace and defining tasks, responsibilities, and relationships. (Courses: BMG202, BMG 220)

Program Descriptors:

This is a career degree that is fully transferrable to Southern Connecticut. Jobs available to students with an associate degree focused in sport management include: facility and event management, sport sales, coaching, public relation specialist, fitness management at health clubs, YMCAs, etc, and more. For students transferring to a four year school, the degree also makes students more attractive for college work/study and internships within the schools' athletic departments. https://study.com/associate%27s_degree_programs_in_sports_management.html

Gateway worked directly with Southern Connecticut State University's Sport Management program to be sure the programs' learning outcomes and courses aligned. The two entities are working together to build a strong transfer track,and have outlined and agreed upon a 2+2 program which will graduate students with a 4-year degree. This past year Southern Connecticut had 210 students apply to the sport management program. Both schools agree that those 70 students not accepted would make perfect candidates for the program and eventually transferring on to Southern upon completion of the associate degree. We have discussed sharing resources, instructors, and student opportunities to build a strong network. Members of Southern's Sport Management program have already agreed to be part of Gateway's advising committee.

While this program will be able to be completed in a traditional on ground manner, it will also be able to be completed 100% online. Online course enrollment has increased steadily for over 14 years. This gives all students the ability to work courses into their schedule while also giving them access to the on ground support services they desire. This combines the academic as well as technological needs of students. (https://www.usnews.com/higher-education/online-education/articles/2018-01-11/study-more-students-are-enrolling-in-online-courses)

As far as cultural needs are concerned, 60% of all Americans, 62% of people in cities (i.e. New Haven), and 62% of minorities say they are sports fans, and the sports industry continues to grow. (https://news.gallup.com/poll/183689/industry-grows-percentage-sports-fans-steady.aspx) The Gateway student population is 23.8% African American and 25.8% Hispanic. (gatewayct.edu/about/institutional-research/gcc-at-a-glance)

It is directly in line with two of the three initiatives laid out by former President Ojakian – online programs and adult learners. Allowing online courses frees up educational times and options for adults who work or might have non-traditional schedules.

The Bureau of Labor Statistics reports that the demand for entertainment and sports occupations is expected to grow by 10% through 2026, which is faster than the national average. Being that this would be the first and only sport management program in the Connecticut community college level, it also responds to the economic needs of our community. (https://www.bls.gov/ooh/entertainment-and-sports/home.htm?view_full)

Job growth projections from the Bureau of Labor Statistics through 2026:

- Coaches and Scouts—13 percent, faster than average (9.3% in Connecticut)
- Sports Agent/Manager—7 percent, as fast as average
- Sports Marketing Manager—10 percent, a little faster than average

Within Connecticut, jobs in sports showed an18% increase in the last decade with coaching and scouts listed as a Hot Job. (https://www1.ctdol.state.ct.us/lmi/projections2010/arts.asp)

The sports industry is an approximately 450 billion dollar a year industry (Plunkett Research). Jobs in sport management range from athletic directors (high school and college, sports marketing, apparel, public relations, facility directors, and many more. For example, there are 11 sport venues in Connecticut, nine professional sports teams (including developmental leagues), and 23 colleges that play intercollegiate sports – each of which require numerous support positions such as media, marketing, ticket sales, event management, and more.

General Education Core Courses (21-22 credits)			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition	**3**
2	MAT*167	Principles of Statistics	**3**
3	Arts and Humanities	MUS*101, ART*101 or ART*102	**3**
4	Scientific Knowledge or Scientific Reasoning	Any course vetted for SK or SR	**3-4**
5	Social/Behavior Sci ECN*101	Social/Behavior Science Principles of Macroeconomics	**3**
6	Oral Comm BBG*210	Oral Communication Business Communications	**3**
7	CL/IL CCS*101	Continued Learning and Information Literacy College and Career Success (Business cohort)	**3**
		General Education Core Credits	**21-22**

Program Requirements (39 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
ACC113	Principles of Financial Accounting	**3**	MAT*095 or satisfactory place on Basic Skills Assessment
CSA135	Spreadsheet Applications	**3**	None
BBG231	Business Law I	**3**	Completion of ENG*101 with a grade of C- of better
ECN102	Principles of Microeconomics	**3**	Eligibility for ENG*101
BFN110 or BES218	Personal Finance or Entrepreneurship	**3**	BFN110: None BES218: Completion of ENG*101 with a grade of C- of better
BMK201	Principles of Marketing	**3**	Completion of ENG*101 with a grade of C- of better
BMG202	Principles of Management	**3**	Completion of ENG*101 with a grade of C- of better
BMG220	Human Resource Management	**3**	ENG* 101, BMG*202
BBG107	Introduction to Sport Management	**3**	None
BMK212	Sports Marketing	**3**	None
BBG211	Sports Media and Public Relations	**3**	BBG*210
BFNXXX	Sports Finance	**3**	ECN*101, ECN*102, ACC*113
HSP244	Meetings, Conventions and Special Events Management	**3**	None
		39	
	Program Requirement Credits	**21-22**	
	General Education Core Credits	**39**	
	Program Total Credits	**60-61**	

Program Name: Technology Studies

Degree Type: Certificates

Program Description:

The Technology Studies certificate provides the knowledge and skills within specific high-demand technology fields. The program consists of lecture and lab course work in manufacturing, technology, industrial technology, mathematics, welding and fabrication, robotics and mechatronics, and foundational requirements that provide a solid comprehensive background for continuation in a two-year technology degree program or entry into the workforce. Upon completion of these stackable certificates, students can enter the workforce to start a career in manufacturing or continue on to earn 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:

1. Apply mathematical, scientific and technological principles and concepts to identify and formulate solutions to technical problems.
2. Apply critical thinking and problem-solving skills to solve technical problems.
3. Demonstrate the ability to function on a team.
4. Recognize work ethic and etiquette in real world applications.
5. Recognize the need to engage in life-long learning.

Technology Studies Certificate options:

1. Advanced Manufacturing Machine Technology (QVCC and NVCC)
2. Advanced Manufacturing Machine Technology (ACC, HCC, MXCC, TCC)
3. Precision Manufacturing (MCC)
4. Welding and Fabrication Technologies (ACC)
5. Robotics and Mechatronics Technician (ACC and TCC)
6. Mechatronics Automation Technician (QVCC)
7. Mechanical CAD
8. CAD User
9. Architectural CAD

Certificate Descriptors:

The Community Colleges, under WIOA, are mandated "partners" to the Regional Workforce Development Boards. As such, our programs, including our certificates and credentials, credit and non-credit, are listed on the ETPL (Eligible Training Provider List) that allows WIOA eligible adults, in and out of school youth, dislocated workers, veterans, returning citizens and depending on funding steams, may also include incumbent workers. Every one of our programs can leverage WIOA funding, but WIOA funding levels can differ in each region.

The Certificates and programs offered have been designed in direct response to industry demands for skill sets to support their efforts, statewide. The Advanced Manufacturing Technology Centers (AMTC) are a way to assure a consistent delivery of core skills identifies as key to manufacturing by manufactures around the state. Yes, much has changed since we started on this journey and as such, our programs are evolving to meet new needs that we do understand can vary by region. Manufacturing Innovation Fund (MIF) funding, and in particular Incumbent Worker Training, have been another source of tax payer dollars being

reinvested into the manufacturing community at large.

The only pre-requisites are the course pre/co-requisites to enter one of our ATM certificate programs. We are open enrollment based on math pre-requisite.
National Institute of Metalworking Skills (NIMS) Credentialing, Occupational Safety and Health Administration (OSHA) 10, and Lean White Belts are examples of credentials can earn as a part of the certificate programs.

Certificate #1: Advanced Manufacturing Machine Technology (QVCC, NVCC)
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.

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 2 and 3-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

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
MFG*105	Manufacturing Math	3	MAT 085 or take MAT 051 Refresher or instructor permission
MFG*115	Safety in the Workplace	1	None
MFG*124 or EGR*112	Blueprint Reading I or Engineering Drawing Specs	3	MFG 124: Placement in MAT 085 or permission ENG 112: None
MFG*153	Benchwork	2	None
MFG*177	Machine Technology Fundamentals	4	Co-requisite or pre-requisite MFG 177 C- or better
MFG*178	CNC Fundamentals	3	Placement in MAT 085 or permission
MFG*179	Career Awareness for Manufacturing	1	None
MFG*256	Advanced CNC	3	MFG*178 C- or Better or Permission of Instructor
MFG*277	Advanced Machine Technology	4	MFG*177 C- or Better
	Directed Electives (9 credits)		
	Directed Elective MFG, CAD, or QUA listed below	3	
	Directed Elective MFG, CAD, or QUA listed below	3	
	Directed Elective MFG, CAD, or QUA listed below	3	
	Certificate Credits	**33**	

Directed Elective Options

MFG* 110 Solidworks/ CAD 220 Parametric Design (Solidworks) **(Cross-Listed)**
MFG* 114 Quality with Lean Principles
QUA*114 Principles of Quality Control
MFG*120 Metrology
MFG*125 Blueprint Reading II with GD&T (Pre-requisite: MFG*124 or EGR*112 C- or better)
MFG*205 Principles of CNC with Mastercam
MFG*239 Geometry Dimensioning and Tolerancing (GD&T) (Pre-requisite: MFG*124 or EGR*112 C- or better)
MFG*000 Advanced Metrology with CMM
MFG*109 Intro to Mastercam

Certificate #2: Advanced Manufacturing Machine Technology (ACC, HCC, MXCC, TCC)
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 twelve directed electives based on regional industry needs for specific courses.

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 in 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

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
MFG*105	Manufacturing Math	3	MAT 085 or take MAT 051 Refresher or instructor permission
MFG*115	Safety in the Workplace	1	None
MFG*124 or EGR*112	Blueprint Reading I or Engineering Drawing Specs	3	MFG 124: Placement in MAT 085 or permission ENG 112: None
MFG*153	Benchwork	2	None
MFG*177	Machine Technology Fundamentals	4	Co-requisite or pre-requisite MFG 177 C- or better
MFG*178	CNC Fundamentals	3	Placement in MAT 085 or permission
MFG*179	Career Awareness for Manufacturing	1	None
MFG*256	Advanced CNC	3	MFG*178 C- or Better or Permission of Instructor
MFG*277	Advanced Machine Technology	4	MFG*177 C- or better
	Directed Electives (12 credits)		
	Directed Elective MFG, CAD, or QUA listed below	3	
	Directed Elective MFG, CAD, or QUA listed below	3	
	Directed Elective MFG, CAD, or QUA listed below	3	
	Directed Elective MFG, CAD, or QUA listed below	3	
	Certificate Credits	**36**	

Directed Elective Options

MFG* 110 Solidworks/ CAD 220 Parametric Design(Solidworks) **(Cross-Listed)**
MFG* 114 Quality with Lean Principles
QUA*114 Principles of Quality
MFG*120 Metrology
MFG*125 Blueprint Reading II with GD&T (Pre-requisite: MFG*124 or EGR*112 C- or better)
MFG*205 Principles of CNC with Mastercam
MFG*239 Geometric Dimensioning and Tolerancing (GD&T) (Pre-requisite: MFG*124 or EGR*112 C- or better)
MFG*000 Advanced Metrology with CMM
MFG*109 Intro to Mastercam

Certificate #3: Precision Manufacturing (MCC)

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.

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 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

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
MFG*105	Manufacturing Math	3	MAT 085 or take MAT 051 Refresher or instructor permission
MFG*111	Mfg. Materials & Processes I	3	MFG 239 C- or better or instructor permission
MFG*114	Quality with Lean Principles	3	MFG 239 C- or better
MFG*115	Safety in the Workplace	1	None
MFG*120	Metrology	3	None
MFG*167	Conventional Process Machining Lab	4	Placement in MAT 085 or instructor permission
MFG*205	Principle of CNC with Mastercam	3	MFG 244 C- or better
MFG*239	Geometric Dimensioning and Tolerancing (GD&T)	3	EGR 112 C- or better
MFG*244	CNC I	3	MFG 167 C- or better
MFG*245	CNC II	4	MFG 244 C- or better
CAD*220	SolidWorks	3	EGR 112 C- or better
EGR*112 or MFG 124	Engineering Drawing or Blueprint Reading I	3	None Placement in MAT 085 or permission
MFG*179	Career Awareness for Manufacturing	1	None
	Certificate Credits	**37**	

Certificate #4: Welding and Fabrication Technologies (ACC)

This certificate provides detailed knowledge of welding principles as applied to modern manufacturing processes and applications. It will provide the student requisite advanced skills necessary to welding 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.

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, dissemble, 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 apart 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.

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
MFG XXX	Introduction to Welding	4	Co or Pre-requisite Welding Theory I with a C- or better
MFG XXX	Welding Theory I	3	Welding Theory I C- or better
MFG 128	Blueprint Reading for Welders	3	None
MFG XXX	Math for Welders	3	None
MFG 149	Introduction to Metal Fabrication	3	None
MFG*115	Safety in the Workplace	1	None
MFG*179	Career Awareness for Manufacturing	1	None
MFG XXX	Advanced Welding	3	Pre-requisite Introduction to Welding and Welding Theory I with a C- or better.
MFG XXX	Welding Theory II	3	Pre-requisite Welding Theory I with a C- or better.
MFG 273	Welding Codes, Testing and Certifications	3	Co-requisite Advanced Welding
MFG XXX	Advanced Fabrication	3	Pre-requisite Introduction to Welding, Introduction to Fabrication, and Blueprint for Welders with a C- or better.
MFG 270	Welding Automation and Processes	3	Co-Requisite Advanced Fabrication
MFG 267	Metallurgy	3	None
	Certificate Credits	36	

Certificate #5: Robotics and Mechatronics Technician (ACC and TCC)

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. Through the use of 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 is 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.

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
MFG*133	Math for Electricity and Electronics	3	MAT 085 or take MAT 051 Refresher or instructor permission
MFG*RXX	Digital Concepts	3	Co-requisite or Pre-requisite MFG 133 with a C- or better.
MFG*RXX	Robotic Automation	3	None
MFG*RXX	Circuit Design and Diagnostics	4	Co-requisite or Pre-requisite MFG 133 with a C- or better.
MFG*RXX	Motor Controls for Automation	3	Co-requisite or Pre-requisite MFG 133 and Circuit Design and Diagnostics with a C- or better.
MFG*RXX	Programmable Logic Controllers (PLC) Applications	3	Pre-requisite Digital Concepts C- or better.
MFG*RXX	Industrial Fluid Power	3	None
MFG*RXX	Industrial Maintenance Service and Repair	3	None
MFG*RXX	Digital Controls	3	Pre-requisite Digital Concepts C- or better.
MFG*RXX	Automation Fundamentals	3	None
MFG*115	Safety in the Workplace	1	None
MFG*179	Career Awareness for Manufacturing	1	None
	Certificate Credits	**33**	

Certificate #6: Mechatronics Automation Technician (QVCC)

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 full-time employment. This allows students to apply what they have learned directly to the needs of their employer.

Certificate Learning Outcomes:

1. Apply knowledge of theory and principles related to mechanics, electronics, computer science, and process control.
2. Apply critical thinking and problem-solving skills to troubleshoot electromechanical, hydraulic, and pneumatic automation systems.
3. Apply logical reasoning and mathematics to analysis of automation systems and their components.
4. Communicate technical information clearly.
5. Apply soft skills effectively to help gain employment and be successful in the workplace.
6. Understand and follow basic shop safety guidelines and protocol.

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
MFG*133	Math for Electricity and Electronics	3	Placement into MAT 085 or instructor permission
MFG*137 or MFG*162	Circuit Theory CNC Maintenance & Repair	3	Placement into MAT 085 or instructor permission
MFG*138	Digital Fundamentals	3	Placement into MAT 085 or instructor permission
MFG*140	Robotics	3	MFG 138, MFG 143 & MFG 146
MFG*142	Electronic Circuits & Devices	3	Placement into MAT 085 or instructor permission
MFG*143	Industrial Motor Controls	3	Placement into MAT 085 or instructor permission
MFG*144	Hydraulics and Pneumatics	3	Placement into MAT 085 or instructor permission
MFG*145	Electronic Variable Speed Drive Systems	3	Placement into MAT 085 or instructor permission
MFG*146	Programmable Logic Controllers	3	Placement into MAT 085 or instructor permission
MFG*159	Industrial Maintenance	3	Placement into MAT 085 or instructor permission
MFG*179	Career Awareness for Manufacturing	1	Placement into MAT 085 or instructor permission
MFG*115	Safety in the Workplace	1	Placement into MAT 085 or instructor permission
	Certificate Credits	**32**	

Certificate #7: Mechanical CAD Certificate

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:

1. Interpret complex engineering drawings.
2. Exhibit competency in turning the engineering concept drawings into CAD models.
3. Exhibit competency in two-dimensional, three-dimensional and solid-modeling skills as applied to complex computer-aided design technology.
4. Demonstrate an understanding of the role and function of parametric CAD modeling in the simplification of the design process.

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
EGR*112 or MFG*124	Engineering Drawing Interpretations Blueprint Reading	3	ENG 112: None MFG 124: Placement in MAT 085 or permission
CAD*133	2D CAD (AutoCAD)	3	None
Choose any four of the following:			
MFG*239	Geometric Dimensioning and Tolerancing	3	EGR 112
CAD*220	Parametric Design (Solidworks)	3	None
CAD*221	Advanced Parametric Design (Solidworks)	3	CAD*220
CAD*230	Parametric Design (NX)	3	CAD*220
MFG*205	Principles of CNC with Mastercam	3	CAD*133 or CAD*220
	Certificate Credits	**18**	

Certificate #8 CAD User Certificate

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:

1. Create basic engineering drawings
2. Create basic 3D models of parts and assemblies

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
CAD 133	2D CAD (AutoCAD)	3	None
CAD 220	Parametric Design (Solidworks)	3	None
	Certificate Credits	**6**	

Certificate #9 Architectural CAD Certificate

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:

1. Read and analyze building blueprints including floor, mechanical, and electrical plans
2. Annotate construction documents according to currently acceptable standards
3. Exhibit competency in turning the engineering concept drawings into CAD models.
4. Exhibit competency in two-dimensional, three-dimensional, and solid-modeling skills as applied to complex computer-aided design technology.
5. Render three-dimensional models for aesthetic representation
6. Cite and identify technical drafting practices, procedures, and processes according to current ANSI/ISO standards
7. Use currently available object-based CAD technology for design and documentation of architectural models
8. Create mass models from architectural sketches

Course Number	Course Name	# of Credits	Pre-req./Co-req. Course #
CTC*106	Blueprint Reading	3	C- or better in Integrated Reading and Writing II (ENG*075) OR Introduction to College Reading & Writing (ENG*093) OR Introduction to College English (ENG*096) OR Reading & Writing VI (ESL*162),or placement into Composition (ENG*101) Placement into MAT*137 or above.
CAD*133	2D CAD (AutoCAD)	3	None
CAD*204	CAD 3D Architectural AutoCAD	3	CAD*133
CAD*252	Architectural Design and Modeling	3	CAD*204
	Certificate Credits	**12**	

Credit Certificate Program Name: Data Science

Certificate Description:
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).

Certificate Learning Outcomes:

Outcomes
Upon successful completion of all program requirements, graduates should be able to:
1. Master key facets of data investigation, including data wrangling, cleaning, sampling, management, exploratory analysis, regression and classification, prediction, and data communication
2. Implement foundational concepts of data computation, such as data structure, algorithms, simulation, and analysis.
3. Utilize various technologies to organize, analyze, explore, and visualize data
4. Execute data organization, exploration, and develop proficiency in the programming language of R
5. Apply advanced statistical techniques
6. Understand machine learning models and their applications

Certificate Descriptors:

This certificate is for students that already have another degree and want to add to their skill set or this certificate can be paired with a concurrent degree to enhance another major. Credits can transfer into the Technology Studies: Data Science A.S. Degree option.

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
MAT*167	Principles of Statistics	3	MAT*137
MAT*222	Statistics II with Technology Applications	3	MAT*167
DTS*201	Programming in Data Science (Formerly Data Science in R)	3	MAT*167
DTS*220	Intro to Machine Learning	3	DTS*201
CSA*135	Spreadsheet Applications	3	
	Directed Elective (Students must consult with advisor to select elective.)	3	
	Certificate Program Total Credits	18	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Credit Certificate Program Name: Certificate in Energy Management

Certificate Description:
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.

Certificate Learning Outcomes:

1. Demonstrate a basic understanding of energy, its measurement and varied approaches to conserving/saving.

2. Demonstrate a basic understanding of commercial building systems and be able to explain their operation, interactions, and their energy use.

3. Perform energy analysis on potential conservation measures in commercial/industrial settings, and incorporate both conceptual and technical understanding in their project reports.

4. Demonstrate an increased proficiency with spreadsheets, charts, and graphs in Excel.

5. Practice technical writing and oral skills and will create technical documents.

Certificate Descriptors:

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.

Certificate Program Requirements (# credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co-req. Course #**
NRG*101	Introduction to Energy & Systems	3	N/A
MAT*137 **OR** MAT*139	Intermediate Algebra **OR** Elementary & Intermediate Algebra Combined	3 **OR** 4	Placement
PHY*121	General Physics	4	
NRG*123	Energy Efficiency Methods	3	C- or better in NRG*101
NRG*122 **OR** NRG*133	Commercial HVAC Systems & Analysis **OR** Lighting Fundamentals & Applications	3	C- or better in NRG*123 + PHY*121 OR N/A
	Certificate Program Total Credits	**16-17**	

Important Note: For a certificate program to be eligible for federal Pell/Title IV funding it has to include at least 16 credits and be at least one academic year in duration. In addition, it is important to document what students will gain from the certificate in terms of skills, outcomes, and potential opportunities for transfer and employment.

Program Name: Technology Studies

Degree Type: A.S.

Program Description:

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:

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

Technology Studies program options

1. Engineering Technology
2. Technology and Engineering Education
3. Biomolecular Sciences
4. Data Science
5. Industrial Technology
6. Computer Engineering Technology
7. Energy Management
8. Environmental Science
9. Advanced Manufacturing Machine Technology Option 1
10. Advanced Manufacturing Machine Technology Option 2
11. Precision Manufacturing
12. Welding and Fabrication Technologies
13. Robotics and Mechatronics Technician
14. Mechatronics Automation Technician
15. Manufacturing Engineering Technology
16. Artificial Intelligence

Program Descriptors:

The Technology Studies A.S. Degree transfers to Central Connecticut State University and the University of Hartford.

General Education Core Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG*101	English Composition	3
2	MAT 186	Pre-calculus	4
3	ART	Fine Art ART course vetted for Arts and Humanities outcomes	3
4	CHE 121 or CHE 111	Scientific Knowledge and Scientific Reasoning General Chemistry I w/ Lab or Concepts of Chemistry w/ lab	4
5	ECO or HIS	Economics or History elective HIS course vetted for Historical Knowledge outcomes or ECN course vetted for Social and Behavioral Science outcomes	3
6	Written Comm II ENG 202	Written Communication II Technical Writing and Presentations	3
7	IL/CL CCS 101	Info Lit/Continued Learning College and Career Success	3
		General Education Core Credits	**23**

Program Requirements			
Program Required Courses			
Course Number	**Course Name**	**# of Credits**	**Pre-req/Co-req Course #**
	Required Courses		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology, or Sociology)	3	Varies
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As Determined by MATH
BIO, CAD, CHE, CSC, CST, DTS, EET, EGR, EVS, GIS, GLG, MAT, MEC, MFG, OCE, PHY, QUA, or TCN	Specialization Courses and Electives	27-36	Varies depending on courses selected
	General Education Credits	**23**	
	Program Credits	**38-47**	
	Total Credits	**#60-70**	

#The program is requesting an exemption of the three credits of CCS 101, where needed, toward the credit normalization policy.

Program Differentiated Option #1 Name: Engineering Technology

Description and learning outcomes: 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:

1. Transition seamlessly into a Bachelor of Science Degree Program in Engineering with junior level status in the receiving institution as part of the Engineering Technology Pathway Program.
2. Apply appropriate mathematical and scientific principles to engineering and technology applications.
3. Analyze and resolve technology problems.
4. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
5. Assist in research, development, design, production, testing and various other functions associated with engineering.
6. Identify and apply engineering principles/ concepts.
7. Apply mathematical concepts.
8. Demonstrate the ability to think through a problem in a logical manner.
9. Organize and carry through to conclusion the solution to a problem.
10. Apply good communication skills.
11. Work in teams

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology, or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As Determined by MATH
	Specialization Courses:		
CAD	CAD Elective or Technical Drafting	3	Varies depending on courses selected
PHY 122 or PHY 222	General Physics II or Calc-Based Physics II	4	PHY 121 or PHY 212
CHE 122 or EGR 212 or EGR 221 or EET 252	General Chem II Dynamics Electrical Circuits Digital Electronics	3-4	Pre-reqs: CHE 122: CHE 121 EGR 212: C or better in EGR 211 EGR 221: C: or better in PHY 222 or may be

			taken concurrently Co-req: EGR 221: MAT* 286 or MAT*285 AND PHY 222 if not taken previously
MAT 254	Calculus I	4	As determined by MATH
MAT 256	Calculus II	4	MAT 254
EGR 211	Engineering Statics	3	Pre-req: "C "or better in MAT 256, or Co-req:MAT 256
BIO, CAD, CHE, CSC, CST, DTS, EET, EGR, EVS, GIS, GLG, MAT, MEC, MFG, OCE, PHY, QUA, or TCN	Specialization Electives	6-8	Varies depending on courses selected
	Total Program Requirement Credits with Differentiated Option #1	**37-41**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #1	**60-64**	

Program Differentiated Option #2: Technology and Engineering Education

Description and learning outcomes: This 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:

1. Possess and be able to teach and assess basic knowledge and skills in technology and engineering education.
2. Understand and be able to foster and assess student acquisition of age-appropriate technology and engineering concepts, as outlined.
3. 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.
4. Demonstrate an ability to critically assess technological and educational trends, and when appropriate, promote change in technology and engineering education.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology, or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Specialization Courses:		
CAD*133	2D CAD (AutoCAD)	3	None
CAD, CSC, CST, DTS, EET, EGR, EVS, GIS, MAT, MEC, MFG, QUA, or TCN	Technology Electives	12	Varies depending on courses selected
BIO, CAD, CHE, CSC, CST, DTS, EET, EGR, EVS, GIS, GLG, MAT, MEC, MFG,	Specialization Electives	15	Varies depending on courses selected

PHY, QUA, or TCN			
	Total Program Requirement Credits with Differentiated Option #2	**40-41**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #2	**#63-65**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #3 : Biomolecular Sciences

Description and learning outcomes: The objective of this 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:

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

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology, or Sociology)	3	Varies depended on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Specialization Courses:		
BIO121	General Biology I	4	As determined by Biology
BIO122	General Biology II	4	As determined by Biology
BIO235	Microbiology	4	As determined by Biology
BIO 260, 262, 263 or 264	200's level Genetics elective	3-4	As determined by Biology
CHE 122	General Chemistry II	4	As determined by Chemistry
PHY 122 or PHY 222	General Physics II or Calc-Based Physics II	4	PHY 121 or PHY 221

BIO 201 or BIO 211	Molecular & Cellular Biology OR Anatomy and Physiology I	4	As determined by Biology
BIO, CAD, CHE, CSC, CST, DTS, EET, EGR, EVS, GIS, GLG, MAT, MEC, MFG, OCE, PHY, QUA, or TCN	Specialization Electives	3	Varies depending on courses selected
	Program Requirement Credits with Differentiated Option #3	**40-41**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #3	**#63-64**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #4 : Data Science

Description and learning outcomes: 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:

1. Transition seamlessly into a Bachelor of Science Degree Program in Data Science or Technology Management
2. Apply appropriate mathematical and scientific principles to Data Science applications.
3. Demonstrate proficiency in technical fundamentals to analyze and resolve technology problems.
4. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
5. Demonstrate the ability to assist in research, development, design, production, testing and various other functions associated with Data Science.
6. Demonstrate a good understanding of Data Science principles/concepts.
7. Demonstrate a good understanding of mathematical concepts.
8. Demonstrate the ability to think through a problem in a logical manner.
9. Organize and carry through to conclusion the solution to a problem.
10. Demonstrate good communication skills.
11. Demonstrate teamwork skills.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology Psychology or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Specialization Courses:		
MAT, DTS, CSC, CST, CSA	Math or Programming or Computer Applications Elective	3-4	Varies based on course
MAT 254	Calculus I	4	As determined by MATH
MAT 222	Statistics II with Technology Apps	3	As determined by MATH
DTS 201 or DTS 203	Programming in Data Science or Elements of Data Science	3/4	Pre-req: DTS 201: MAT*167 Statistics I DTS 203: C or higher in MAT 165 or MAT 129 or permission of instructor
DTS 220	Intro to Machine Learning for Data Science	3	Pre-req: DTS*201
MAT, DTS, CSC, CST	Math or Programming Elective	3-4	Varies depending on course selected

MAT, DTS, CSC, CST	Math or Programming Elective	3-4	Varies depending on course selected
BIO, CAD, CHE, CSC, CST, DTS, EET, EGR, EVS, GIS, GLG, MAT, MEC, MFG, OCE, PHY, QUA, or TCN	Specialization Electives: DTS 299 Capstone and 6 credits electives	9	Varies depending on course selected Pre-req: DTS 299: Permission by Instructor Consult with advisor to select electives.
	Program Requirement Credits with Differentiated Option #4	**41-46**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #4	**#64-69**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #5 : Industrial Technology

Description and learning outcomes: The Technology Studies – Industrial Technology Option 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:

1. 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.
2. Assist in research, development, design, production, testing and various other functions associated with engineering.
3. Apply appropriate mathematical and scientific principles to engineering and technology applications.
4. Identify and apply engineering principles/ concepts.
5. Analyze and resolve technology problems.
6. Apply knowledge and skills to develop, interpret, and select appropriate technological processes.
7. Demonstrate the ability to think through a problem in a logical manner.
8. Organize and carry through to conclusion the solution to a problem.
9. Apply good communication skills.
10. Work in teams.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As dertermined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology or, Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Specialization Courses:		
CAD	CAD elective	3	Varies depending on courses selected
CSC 108 CSC XXXX CSC XXXX CSC XXXX CSC XXXX EGR 115 EGR 201 EGR 230	Choose one: Intro to Programming Programming Logic & Design with Python Programming Logic and Design with C++ Java I Java II Programming for Engineers MATLAB for Engineers C++ for Engineering	3	Varies depending on course selected. Pre-reqs: CSC courses: TBD EGR115: C or better in MAT*137 EGR230: "C" or better in MAT* 137, or higher AND placement into ENG* 101

EGR 250	Computational Methods for Engineering		EGR 250: EGR*111, AND MAT*254 *OR* TAKEN CONCURRENTLY
EGR 111	Intro to Engineering	3	Pre-req:“ “C” or better in MAT* 137, or higher AND placement into ENG* 101 Co-req: MAT 186 (or “C” or better if taken prior)
MFG, EVS 130 or EVS 131	Any MFG or EVS 130 or EVS 131	3	Varies depending on course selected
BIO, CAD, CHE, CSC, CST, DTS, EET, EGR, EVS, GIS, GLG, MAT, MEC, MFG, OCE, PHY, QUA, or TCN	Specialization Electives	18	Varies depending on course selected
	Program Requirement Credits with Differentiated Option #5	**40-41**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #5	**#63-64**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #6: Computer Engineering Technology

Description and learning outcomes: 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:

1. Develop the ability to analyze, develop, and design code through knowledge and comprehension of information systems concepts and skills.
2. 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.
3. Develop the ability to identify and solve unstructured problems in unfamiliar setting and exercise judgment based on facts.
4. 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.
5. 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.
6. 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.
7. Develop the skills to communicate using network technologies, access information via internet, and understand information integrity and security issues.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology, or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Specialization Courses:		
MAT*254	Calculus I	4	As determined by MATH
EGR*111	Introduction to Engineering	3	Pre-req:C or better in MAT* 137, or higher AND placement into ENG* 101 Co-req: MAT 186 (or C or better if taken prior)

MAT*256 or EGR*221	Calculus II or Introduction to Electrical Circuit Analysis	4	MAT*256 Pre-req: MAT*254 EGR 221: Pre-req: C: or better in PHY 222 may be taken concurrently Co-req: MAT* 286 or MAT*285 AND PHY 222 if not taken previously
CSC*101	Introduction to Computers	3	As determined by Computer Science
CSCXXXX	Java I	3	As determined by Computer Science
CSCXXXX	Java II	3	As determined by Computer Science
PHY*122 or PHY*222	General Physics II or Calc-Based Physics	4	PHY 121 or PHY 212
CST*231	Data Communication and Networking	3	As determined by Computer Science
CST*XXXX	Computer Hardware	4	As determined by Computer Science
	Program Requirement Credits with Differentiated Option #6	**41-42**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option	**#64-65**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #7: Energy Management (TXCC)

Description and learning outcomes: 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:

1. Demonstrate a basic understanding of energy, its measurement and varied approaches to conserving/saving.
2. Demonstrate a basic understanding of commercial building systems and be able to explain their operation, interactions, and their energy use.
3. Perform energy analysis on potential conservation measures in commercial/industrial settings, and incorporate both conceptual and technical understanding in their project reports.
4. Demonstrate an increased proficiency with spreadsheets, charts, and graphs in Excel.
5. Practice technical writing and oral skills and will create technical documents.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology, or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Specialization Courses:		
CAD* 133	CAD Mechanical AutoCAD	3	None
NRG*101	Introduction to Energy and Systems	3	N/A
NRG*122	Commercial HVAC Systems & Analysis	3	NRG*123 + PHY*121
NRG*123	Energy Efficiency Methods	3	NRG*101
NRG*130	Applied Renewable Energy Systems	3	NRG*123 + PHY*121
NRG*132	Industrial Energy Systems	3	NRG*123
NRG*133	Lighting Fundamentals & Applications	3	N/A
NRG*241	Commercial Energy Use Analysis & Simulations	4	NRG*123 + NRG*122
NRG*242	Energy Accounting	3	NRG*123
	Program Requirement Credits with Differentiated Option #7	**38-39**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option	**61-62**	

Program Differentiated Option #8 : Environmental Science

Description and learning outcomes: The Environmental Science option to the Technology Studies 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.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology, or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Specialization Courses:		
BIO*122	General Biology II	4	As determined by Biology
ECN 102	Economics	3	As determined by ECN
PHL 111	Ethics	3	As determined by PHL
ENV*101 and 101L	Environmental Science	4	College level math and English placement as determined by EVS/ENV
COM 173	Public Speaking	3	As determined by COM

Specialized Electives (12 credits)

Note: Students must choose three (3) of the following courses to complete the 12 credit requirement for the Specialization Electives portion of the degree: BIO* 121, BIO* 122, BIO* 270, CHE* 122, CHE* 232, EVS* 231, GLG*121, MAT* 254, or PHY* 122. Choices to be made with an Advisor based upon the student's desired transfer institution and baccalaureate degree plans

BIO*121	General Biology I	4	As determined by Biology
BIO*270	Ecology	4	BIO*121 or BIO*122
CHE*122	General Chemistry II	4	CHE*121
CHE*232	Introduction to Environmental Chemistry	4	CHE*121 or higher with a C grade or better
EVS*231	Sustainable Energy and the Environment	4	EVS*100
GLG*121	Introduction to Physical Geology	4	ENG101 and College level math placement
MAT*254	Calculus I	4	As determined by MATH
PHY*122 or PHY*222	General Physics II or Calc-Based Physics	4	PHY*121 or PHY 221
	Total Program Requirement Credits with Differentiated Option #8	**39-40**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #8	**#62-63**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #9: Advanced Manufacturing Machine Technology (QVCC, NVCC)

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.

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 2 and 3 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

Specialization Electives

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology Psychology or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Manufacturing Specialization		
MFG*105	Manufacturing Math	3	Pre-req:MAT 085 or take MAT 051 Refresher or instructor permission
MFG*115	Safety in the Workplace	1	None

MFG*124 or EGR*112	Blueprint Reading I Or Engineering Drawing Specs	3	MFG:*124: Placement into MAT 085 or instructor permission EGR*112: None
MFG*153	Benchwork	2	None
MFG*177	Machine Technology Fundamentals	4	Co-requisite or pre-requisite MFG 177 C- or better
MFG*178	CNC Fundamentals	3	Placement into MAT 085 or instructor permission
MFG*256	Advanced CNC	3	MFG*178 C- or Better or Permission of Instructor
MFG*277	Advanced Machine Technology	4	MFG*177 C- or Better
	Directed Electives (9 credits)		
	Directed Elective MFG, CAD, or QUA listed below	3	Varies depending on courses selected
	Directed Elective MFG, CAD, or QUA listed below	3	Varies depending on courses selected
	Directed Elective MFG, CAD, or QUA listed below	3	Varies depending on courses selected
	Program Requirement Credits with Differentiated Option #9	**42-43**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #9	**#65-66**	

Directed Elective Options

MFG* 110 Solidworks/ CAD 220 Parametric Design (Solidworks) **(Cross-Listed)**
MFG* 114 Quality with Lean Principles **OR** QUA*1114 Principles of Quality
MFG*120 Metrology
MFG*125 Blueprint Reading II with GD&T (Pre-requisite: MFG*124 or EGR*112 C- or better)
MFG*205 Principles of CNC with Mastercam
MFG*239 Geometric Dimensioning and Tolerancing (GD&T) (Pre-requisite: MFG*124 or EGR*112 C- or better)
MFG*000 Advanced Metrology with CMM (Computerized Measurement Machine)
MFG*109 Intro to Mastercam

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #10: Advanced Manufacturing Machine Technology (ACC, HCC, MXCC, TCC)

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 twelve directed electives based on regional industry needs for specific courses.

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 in 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

Specialization Electives

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Manufacturing Specialization		
MFG*105	Manufacturing Math	3	MAT 085 or take MAT 051 Refresher or instructor permission
MFG*115	Safety in the Workplace	1	None
MFG*124 or EGR*112	Blueprint Reading I Or Engineering Drawing	3	MFG:*124: Placement into MAT 085 or instructor permission EGR*112: None

MFG*153	Benchwork	2	None
MFG*177	Machine Technology Fundamentals	4	Co-requisite or pre-requisite MFG 177 C- or better
MFG*178	CNC Fundamentals	3	Placement into MAT 085 or instructor permission
MFG*256	Advanced CNC II	3	MFG*178 C- or Better or Permission of Instructor
MFG*277	Advanced Machine Technology	4	MFG*177 C- or better
	Directed Electives (12 credits)		
	Directed Elective MFG, CAD, or QUA listed below	3	Varies depending on courses selected
	Directed Elective MFG, CAD, or QUA listed below	3	Varies depending on courses selected
	Directed Elective MFG, CAD, or QUA listed below	3	Varies depending on courses selected
	Directed Elective MFG, CAD, or QUA listed below	3	Varies depending on courses selected
	Program Requirement Credits with Differentiated Option #10	**45-46**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #10	**#68-69**	

Directed Elective Options

MFG* 110 Solidworks/ CAD 220 Parametric Design(Solidworks) (Cross-Listed)
MFG* 114 Quality with Lean Principles **OR** QUA*114 Principles of Quality
MFG*120 Metrology
MFG*125 Blueprint Reading II with GD&T (Pre-requisite: MFG*124 or EGR*112 C- or better)
MFG*205 Principles of CNC with Mastercam
MFG*239 Geometric Dimensioning and Tolerancing (GD&T) (Pre-requisite: MFG*124 or EGR*112 C- or better)
MFG*000 Advanced Metrology with CMM (Computerized Measurement Machine)
MFG*109 Intro to Mastercam

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #11: Precision Manufacturing (MCC)
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.

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 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

Specialization Electives

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Manufacturing Specialization		
MFG*105	Manufacturing Math	3	MAT 085 or take MAT 051 Refresher or instructor permission
MFG*111 or	Manufacturing Processes I	3	MFG 239 C- or better or instructor permission
MFG*114	Quality with Lean Principles	3	MFG 239 C- or better

MFG*115	Safety in the Workplace	1	None
MFG*120	Metrology	3	None
MFG*167	Conventional Machining Lab	4	Placement into MAT*085 or instructor permission
MFG*205	CNC with Mastercam	3	MFG 244 C- or better
MFG*239	Geometric Dimensioning and Tolerancing (GD&T)	3	EGR 112 C- or better
MFG*244	CNC I	3	MFG 167 C- or better
MFG*245	CNC II	4	MFG 244 C- or better
CAD*220	SolidWorks	3	EGR 112 C- or better
EGR*112 or MFG 124	Engineering Drawing or MFG 124 Blueprint Reading I	3	MFG:*124: Placement into MAT 085 or instructor permission EGR*112: None
	Program Requirement Credits with Differentiated Option #11	**46-47**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #11	**#69-70**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #12: Welding and Fabrication Technologies (ACC)
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.

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, dissemble, 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.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Manufacturing Specialization		
MFG XXX	Introduction to Welding	4	Co or Pre-requisite Welding Theory I with a C- or better
MFG XXX	Welding Theory I	3	None
MFG 128	Blueprint Reading for Welders	3	None
MFG XXX	Math for Welders	3	None

MFG 149	Introduction to Metal Fabrication	3	None
MFG 115	Safety in the Workplace	1	None
MFG XXX	Advanced Welding	3	Pre-requisite Introduction to Welding and Welding Theory I with a C- or better.
MFG XXX	Welding Theory II	3	Pre-requisite Welding Theory I with a C- or better.
MFG 273	Welding Codes, Testing and Certifications	3	Co-requisite Advanced Welding
MFG XXX	Advanced Fabrication	3	Pre-requisite Introduction to Welding, Introduction to Fabrication, and Blueprint for Welders with a C- or better.
MFG 270	Welding Automation and Processes	3	Co-Requisite Advanced Fabrication
MFG 267	Metallurgy	3	None
	Program Requirement Credits with Differentiated Option #12	**45-46**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #12	**#68-69**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #13: Robotics and Mechatronics Technician (ACC and TCC)
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.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Manufacturing Specialization		
MFG*133	Math for Electricity and Electronics	3	MAT 085 or take MAT 051 Refresher or instructor permission
MFG XXX	Digital Concepts	3	Co-requisite or Pre-requisite MFG 133 with a C- or better.
MFG XXX	Robotic Automation	3	

MFG XXX	Circuit Design and Diagnostics	4	Co-requisite or Pre-requisite MFG 133 with a C- or better.
MFG XXX	Motor Controls for Automation	3	Co-requisite or Pre-requisite MFG 133 and Circuit Design and Diagnostics with a C- or better.
MFG XXX	Programmable Logic Controllers (PLC) Applications	3	Pre-requisite Digital Concepts C- or better.
MFG XXX	Industrial Fluid Power	3	None
MFG XXX	Industrial Maintenance Service and Repair	3	None
MFG XXX	Digital Controls	3	Pre-requisite Digital Concepts C- or better.
MFG XXX	Automation Fundamentals	3	None
MFG*115	Safety in the Workplace	1	None
	Program Requirement Credits with Differentiated Option #13	**42-43**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #13	**#65-66**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #14: Mechatronics Automation Technician (QVCC)

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.

Certificate Learning Outcomes:

1. Apply knowledge of theory and principles related to mechanics, electronics, computer science, and process control.
2. Apply critical thinking and problem-solving skills to troubleshoot electromechanical, hydraulic, and pneumatic automation systems.
3. Apply logical reasoning and mathematics to analysis of automation systems and their components.
4. Communicate technical information clearly.
5. Apply soft skills effectively to help gain employment and be successful in the workplace.
6. Understand and follow basic shop safety guidelines and protocol.

Specialization Electives

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Manufacturing Specialization		
MFG*133	Math for Electricity and Electronics	3	Math 085 or instructor permission
MFG*137 or MFG*162	Circuit Theory CNC Maintenance & Repair	3	MFG*137 or MFG*162:

			Placement into MAT 085 or instructor permission
MFG*138	Digital Fundamentals	3	Placement into MAT 085 or instructor permission
MFG*140	Robotics	3	MFG*138, MFG* 143 and MFG* 146
MFG*142	Electronic Circuits & Devices	3	Placement into MAT 085 or instructor permission
MFG*143	Industrial Motor Controls	3	Placement into MAT 085 or instructor permission
MFG*144	Hydraulics and Pneumatics	3	Placement into MAT 085 or instructor permission
MFG*145	Electronic Variable Speed Drive Systems	3	Placement into MAT 085 or instructor permission
MFG*146	Programmable Logic Controllers	3	Placement into MAT 085 or instructor permission
MFG*159	Industrial Maintenance	3	Placement into MAT 085 or instructor permission
MFG*115	Safety in the Workplace	1	None
	Program Requirement Credits with Differentiated Option #14	**41-42**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #14	**#64-65**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #15 Name: Manufacturing Engineering Technology (MCC and MXCC)

Description and learning outcomes:

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.

Upon successful completion of all Manufacturing Engineering Technology degree program requirements, graduates will

1. Demonstrate team-oriented skills that permit effective participation in multicultural work and social environments.
2. Apply appropriate mathematical and scientific principles to manufacturing applications.
3. Demonstrate proficiency in manufacturing engineering fundamentals to analyze manufacturing engineering problems and make appropriate decisions.
4. Assist in the design process to meet effective production objectives.
5. Possess knowledge of engineering materials and be able to demonstrate competency in their selection and utilization in manufacturing.
6. Apply knowledge and skills to develop, interpret and select appropriate manufacturing processes.
7. Maintain a practical knowledge of state-of-the-art hardware and software in support of manufacturing systems.
8. Be aware of and use available information and data sources in support of the manufacturing systems.
9. Apply skills and knowledge to effectively and efficiently plan, organize, implement, measure and control manufacturing processes.
10. Demonstrate a thorough knowledge and understanding of engineering graphics as well as engineering drawing interpretation and application of geometric dimensioning and tolerancing basics.
11. 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.
12. Demonstrate a thorough understanding of two-dimensional and isometric CAD concepts, procedures and applications.
13. 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.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS

ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As determined by MATH
	Specialization Courses		
EGR 112	Engineering Drawings Specifications	3	None
MFG 177 or MFG 167	Machine Technology Fundamentals or Conventional Manufacturing Processes Lab	4	Co-requisite or pre-requisite MFG 177 C- or better
PHY 122 or PHY 222	General Physics II or Calculus Based Physics	4	PHY 121 or PHY 212
MFG 239	Geometric Dimensioning & Tolerancing	3	EGR 112 C- or better
CAD 220	Parametric Design	3	None
MAT 254	Calculus I	4	MAT*186 with a grade of C or better, or college level ++ on BSA
MFG 111	Manufacturing Materials and Process I	3	MAT* 138 (may be taken concurrently) or permission of instructor
MFG 244	CNC I	3	MFG*115 and MFG*120
MFG 205	Principles of CNC with Mastercam	3	CAD*110 or permission of instructor
	Total Program Requirement Credits with Differentiated Option #15	**40-41**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #15	**#63-64**	

#The program is requesting an exemption of the three credits of CCS 101 toward the credit normalization policy if needed.

Program Differentiated Option #16 Name: Artificial Intelligence

Description and learning outcomes: 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 developes 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.

In addition to meeting the Technical Studies outcomes students successfully completing this option will:

1. Transition seamlessly into a Bachelor of Science Degree Program in Computer Science, Artificial Intelligence, or Technology Management.
2. Apply appropriate mathematical and scientific principles to Artificial Intelligence applications.
3. Demonstrate proficiency in developing and applying machine learning principles and algorithms to solve problems in business applications.
4. Apply knowledge and skills to develop, interpret, and apply natural language processing and computer vision algorithms.
5. Demonstrate the ability to assist in research, development, design, production, testing and various other functions associated with Artificial Intelligence.
6. Demonstrate a good understanding of Artificial Intelligence principles/concepts.
7. Demonstrate a good understanding of mathematical and computer programming concepts.
8. Demonstrate the ability to think through a problem in a logical manner.
9. Organize and carry through to conclusion the solution to a problem.
10. Demonstrate good communication skills.
11. Demonstrate teamwork skills.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology, or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or	Elementary Statistics with Computer Applications or, Principles of Statistics or	3-4	As Determined by MATH
	Specialization Courses:		
CSC 124	Programming Logic/Design with Python (or Comparable Computer programming course)	3	Varies depending on courses selected
DTSXXXX	Introduction to Artificial Intelligence	3	Co-Req: MAT 167
DTS 220	Introduction to Machine Learning	3	
MAT230 or MAT 254	Applied Caluculus or Calculus I	3-4	
DTSXXXX	Natural Language Processing	3	DTS 220 Introduction to Machine Learning

DTSXXXX	Artificial Intelligence for Computer Vision	3	DT S220 Introduction to Machine Learning
DTS299	Capstone Research	3	Permission by Instructor
CSC or CST	Computer Science or Computer Technology Elective	3	Varies depending on courses selected. Consult with advisor to select electives.
BIO,CAD, CHE,CSC,CST, DTS,EET,EGR, EVS,GIS,GLG, MAT,MEC, MFG,OCE, PHY,QUA,or TCN	Specialization Electives	3-4	Varies depending on courses selected. Consult with advisor to select electives.
	Total Program Requirement Credits with Differentiated Option #1	**37-40**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option #1	**60-63**	

Program Differentiated Option # 16: Artificial Intelligence

Description and learning outcomes:

The Artificial Intelligence Option 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.

Learning Outcomes

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

- 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.

Common course numbering and common pre-requisites to be used for all courses.

Course Number	Course Name	# of Credits	Pre-req/Co-req Course #
	Program Required		
PHY 121 or PHY 221	General Physics Calc –based Physics I	4	As determined by PHYSICS
ANT, PSY or SOC	Behavioral Science Elective (Anthropology, Psychology or Sociology)	3	Varies depending on courses selected
MAT 165 or MAT 167 or MAT 168	Elementary Statistics with Computer Applications or, Principles of Statistics or Elementary Statistics with Probability	3-4	As Determined by MATH
	Specialization Courses:		
CSC XXXX	Python Fundamentals (or comparable computer programming class)	3-4	None
MAT 230 or MAT 254	Applied Calculus or Calculus I	3-4	MAT 254 has a pre-req of MAT*186. MAT* 230 has a pre-req od MAT* 137.
DTS 200	Introduction to Artificial Intelligence`	3	Co-req: MAT* 165, MAT* 167, or MAT* 168
DTS 220	Introduction to Machine Learning	3	Pre-req: DTS* 200 or DTS*201
DTS 240	Natural Language Processing	3	Pre-req: DTS* 220
DTS 230	Artificial Intelligence for Computer Vision	3	Pre-req: DTS* 220
DTS 299	Capstone Research	3	Permission by Instructor
CST, or CSC	Computer Science or Computer Technology Elective	3	
BIO, CAD, CHE, CSC, CST, DTS, EET, EGR, EVS, GIS, GLG, MAT, MEC, MFG, OCE, PHY, QUA, or TCN	Specialization Electives:	3-4	
	Program Requirement Credits with Differentiated Option # 16	**37-41**	
	General Education Core Credits	**23**	
	Program Total Credits for Differentiated Option # 16	**60-64**	

Program Name: Theater

Degree Type: Associate of Arts (A.A.)

Program Description:

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:

1. Demonstrate competency in the analysis of theatrical art.
2. Demonstrate competency in the performance of theatrical art.
3. Demonstrate competency in the production of theatrical art.
4. Demonstrate competency in the standards and practices of the theater profession.
5. Demonstrate competency in the skills essential for further education in theater studies.

Program Descriptors:

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

General Education Core Courses (21-24 credits)			
Course Number		**Course Name**	**# of Credits**
1	ENG 101	English Composition	**3**
2	MAT	Math 100 or higher *MAT 103 or MAT 104 Recommended*	**3-4**
3	Arts and Humanities	Any courses vetted for TAP Arts and Humanities (replaces Aesthetic Dimensions) ARC 102, ART**,** COM, DGA, ENG, ESL (two top levels), GRA, HUM, MUS, PHL, THR, Language and Culture (ARA, CHI, FRE, GER, ITA, JPN, LAT, RUS and SPA)	**3-4**
4	Scientific Reasoning or Scientific Knowledge & Understanding	**Choose one from:** • **Scientific Reasoning** – AST**,** BIO, CHE, EAS, ENV, EVS, GLG, MET, OCE PHY, SCI course vetted for Scientific Reasoning • **Scientific Knowledge and Understanding** – AST, BIO, CHE, EAS, ENV, EVS, GLG, MET, OCE, PHY, SCI course vetted for Scientific Knowledge and Understanding *Recommended BIO 111*	**3-4**
5	Oral or Written Communication	**Choose one from:** • **Oral Communication** – COM courses vetted for TAP Oral Communication • **Written Communication II** – ENG course vetted for TAP Written Communication II outcomes	**3**
6	Historical Knowledge or	**Choose one from:** • **Social / Behavioral Science** – ANT, ECN, GEO, POL, PSY, SOC, WMS course	**3**

General Education Core Courses (21-24 credits)			
	Social/ Behavioral Science	vetted for TAP Social and Behavioral Science • **Historical Knowledge** – HIS course vetted for TAP Historical Knowledge	
7	CCS 101	Continued Learning & Information Literacy CCS 101: College & Career Success	**3**
		General Education Credits	**21-24**

Program Core Requirements (24 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co- req. Course #**
THR 102	Theater History	3	
THR 110	Acting I	3	
THR 210	Acting II	3	THR 110 or PC permission
THR 112	Voice and Diction	3	
THR 123/DAN 124	Movement and Expression	3	
THR 120	Stagecraft	3	
THR 190	Theater Practicum I	3	
THR 115	Improvisation	3	
	Program Core Requirement Credits	**24**	

Program Differentiated Option #1 Name: Theater			
Required Courses (15 credits)			
Common course numbering and common pre-requisites to be used for all courses.			
Course Number	**Course Name**	**# of Credits**	**Pre- req./Co-req. Course #**
Elective	THR Elective **See THR PC for Advising*	12	Varies
Elective	Open Elective	3	
	Differentiated Option #1 Credits	15	
	Program Core Credits	24	
	General Education Core Credits	21-24	
	Program Total Credits for Differentiated Option #1	**60-63**	

Program Differentiated Option #2 Name: Musical Theater			
Required Courses (15 credits)			
Common course numbering and common pre-requisites to be used for all courses.			
Course Number	**Course Name**	**# of Credits**	**Pre- req./Co-req. Course #**
Elective	Restricted DAN Elective DAN 102, 111, or 112	3	Varies
THR 228	Musical Theater Training, I	3	
THR 229	Musical Theater Training, II	3	THR 228
THR 290	Theater Practicum, II	3	THR 190
MUS 115	Music Theory I	3	
	Differentiated Option #2 Credits	15	
	Program Core Credits	24	
	General Education Core Credits	21-24	
	Program Total Credits for Differentiated Option #2	**60-63**	

Program Differentiated Option #3 Name: Design and Production			
Required Courses (15 credits)			
Common course numbering and common pre-requisites to be used for all courses.			
Course Number	**Course Name**	**# of Credits**	**Pre- req./Co-req. Course #**
THR 1xx	Costume Design and Production	3	
THR 1xx	Scenic Design and Production	3	
THR 1xx	Lighting Design and Production	3	
THR 1xx	Sound Design and Production	3	
THR 2xx	Stage Management	3	THR 120 or permission of program advisor.
	Differentiated Option #3 Credits	15	
	Program Core Credits	24	
	General Education Core Credits	21-24	
	Program Total Credits for Differentiated Option #3	**60-63**	

Program Name: Theater Studies

Degree Type: Associate of Arts (A.A.)

Program Description
The TAP Theater Studies 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.

Program Learning Outcomes:

1. Demonstrate competency in the analysis of theatrical art.
2. Demonstrate competency in the performance of theatrical art.
3. Demonstrate competency in the production of theatrical art.
4. Demonstrate competency in the standards and practices of the theater profession.
5. Demonstrate competency in the skills essential for further education in theater studies.

Program Descriptors:
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 100-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 the 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.

Program Requirements by Semester:

First Semester 15-16 credits
ENG 101 Composition 3 credits THR 102 Theater History I 3 credits THR 110 Acting I 3 credits
CCS 101 College Success 3 credits
Choose one Scientific Reasoning course 3-4 credits

Second Semester 15 credits THR 120 Stagecraft 3 credits
Choose one Quantitative Reasoning course 3 credits Choose one Written Communication II course 3 credits Choose one Historical Knowledge
Unrestricted Elective* 3 credits

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

Third Semester 15-16 credits
THR 112 Voice and Diction 3 credits
Choose one Aesthetic Dimensions I course 3 credits Choose one Social and Behavorial Sciences course 3 credits
Choose one Scientific Knowledge and Understanding Course 3-4 credits Choose one Unrestricted Elective* 3 credits

**During your last semester at CSCC, apply for graduation.*

Fourth Semester 15 credits
THR 210 Acting II 3 credits
Choose one Oral Communication course 3 credits Choose one Global Knowledge course 3 credits Choose two Unrestricted Electives* 6 credits

Degree Requirement Categories: General Education and Program

General Education Requirements 37 credits

Written Communication I 3 credits **ENG 101 Composition**
Written Communication II (select one) 3 credits Scientific Reasoning (select one) 3-4 credits
Scientific Knowledge and Understanding (select one) 3-4 credits Quantitative Reasoning (select one) 3 credits
Historical Knowledge and Understanding (select one) 3 credits Social and Behavioral Sciences (select one) 3 credits
Arts and Humanities (select one) 3 credits Oral Communication (select one) 3 credits
Creativity 3 credits **THR 110 Acting I**
Global Knowledge (select one) 3 credits

Major Program Requirements 12 credits

THR 102 Theater History I 3 credits THR 112 Voice and Diction 3 credits THR 120 Stagecraft 3 credits
THR 210 Acting II 3 credits

Unrestricted Electives* 12 credits

General Education (Framework30) Courses			
Course Number		**Course Name**	**# of Credits**
1	ENG 101	English Composition	**3**
2	MAT 167	Statistics	**3**
3	Arts & Humanities	**Arts and Humanities:** Courses vetted for TAP Arts and Humanities (replaces Aesthetic Dimensions) ARC 102, ART**,** COM, DGA, ENG, ESL (two top levels), GRA, HUM, MUS, PHL, THR, Language and Culture (ARA, CHI, FRE, GER, ITA, JPN, LAT, RUS and SPA)	**3-4**
4	Scientific Reasoning	**Scientific Reasoning** – AST**,** BIO, CHE, EAS, ENV, EVS, GLG, MTR, OCEN, PHY, SCI course vetted for TAP Scientific Reasoning	**3-4**
5	Social/Beh Science	**Social / Behavioral Science** – ANT, ECN, GEO, POL, PSY, SOC, WMS course vetted for TAP Social and Behavioral Science outcomes	**3**
6	Written Comm II	**Written Communication II** – ENG course vetted for TAP Written Communication II outcomes	**3**
7	Scientific Knowledge & Understanding	**Scientific Knowledge and Understanding** – AST, BIO, CHE, EAS, ENV EVS, GLG, MTR, OCEN, PHY, SCI course vetted for Scientific Knowledge and Understanding outcomes	**3-4**
8	Historical Knowledge	**Historical Knowledge** – HIS course vetted for TAP Historical Knowledge outcomes	**3**
9	Oral Comm	**Oral Communication** – courses vetted for TAP Oral Communication	**3**
10	CCS 101	**Continued Learning & Information Literacy** College & Career Success	**3**
11	THR 110	**THR 110 Acting I (Creativity)**	**3**
12	Global Knowledge	**Global Knowledge** – Any course vetted for Global Knowledge	**3**
		General Education Framework30 + Creativity Credits	**36-39**

Program Requirements (20-34 credits)			
Course Number	**Course Name**	**# of Credits**	**Pre-req./Co- req. Course #**
THR 102	Theater History	**3**	
THR 112	Voice and Diction	**3**	
THR 120	Stagecraft	**3**	
THR 210	Acting II	**3**	
Electives	Unrestricted electives	**12**	
	THR Program Requirement Credits	**12**	
	Unrestricted Electives	**12**	
	General Education Core Credits	**36-39**	
	Program Total Credits	**60-63**	

To: Dr. Ken Klucznik, CSCU Interim Provost
From: Amy Feest, CT State Associate Vice President, Academic Programs & Curriculum
Mike Stefanowicz, Administrative co-chair, CT State Aligned Program Review Committee
Re: ***Academic Council May 11, 2022*** meeting
Notification for Academic Council regarding aligned curriculum for CT State Community College
Date: April 18, 2022

The Aligned Program Review Committee (APRC), Students First Academic and Student Affairs Consolidation Committee (SF ASA CC), and College Consolidation Implementation Committee (CCIC) recommended the following degrees, certificates, and courses for approval for CT State Community College. Degrees and certificates are forwarded to the BOR for final approval. Courses are forwarded to the CT State Provost for final approval.

A. Degrees:

1) Aviation Maintenance Technology, A.S.
2) Banking, A.S.
3) Biotechnology, A.S.
4) Business Intelligence, A.S.
5) Chemistry Studies, A.A. (CSCU Pathway Transfer Degree)
6) Dance, A.A.
7) Diagnostic Medical Sonography, A.S.
8) Electronic Engineering Technology, A.S.
9) English Studies, A.A. (CSCU Transfer Pathway)
10) Environmental Science: Environmental Biology, A.S. (Naugatuck Valley Campus)
11) Environmental Science: Environmental Engineering Technology, A.S. (Three Rivers Campus)
12) Environmental Science: Environmental Science and Toxicology, A.S. (Gateway Campus)
13) Environmental Science: Environmental Science-Sustainability, A.S. (Manchester Campus)
14) Environmental Science: Natural Resources, A.S. (Northwestern Campus)
15) Fashion Merchandising and Retail Management, A.S.
16) Fire Technology and Administration, A.S.
17) Human Services, A.S.
18) Human Services: Child, Family, and Community Studies, A.S.
19) Human Services: Gerontology Studies, A.S.
20) Human Services: Mental Health, A.S.
21) Human Services: Human Services Management, A.S.
22) Interior Design Career Program, A.A.S.
23) Interpreter Training Program, A.S.
24) Mathematics Studies, A.A. (CSCU Pathway Transfer Degree)
25) Natural Sciences & Mathematics, A.S.
26) New Media Production: Audio & Music Production, A.A.S.
27) New Media Production: Corporate Media, A.A.S.
28) New Media Production: Film & Video, A.A.S.
29) New Media Production: Digital Marketing, A.A.S.
30) New Media Production: Multimedia, A.A.S.
31) New Media Production: News & Sports, A.A.S.
32) New Media Production: Web Design & Development, A.A.S.
33) Nuclear Medicine Technology, A.S.
34) Nursing, A.S.
35) Outpatient Medical Coding and Auditing, A.S.
36) Paralegal, A.S.
37) Pathway to Teaching Careers, A.A.
38) Pre-Dental Hygiene Transfer Compact, A.A.
39) Pre-Nutrition Transfer Degree, A.S.
40) Public Utility Management, A.S.
41) Radiography, A.S. (Naugatuck Valley/Capital)

42) Radiography: Gateway Option, A.S.
43) Radiography: Manchester Option, A.S.
44) Radiography: Middlesex Option, A.S.
45) Small Business Management and Entrepreneurship, A.S.
46) Social Work Studies, A.A. (CSCU Pathway Transfer Degree)

B. Certificates:

1) Archaeology Certificate
2) Biotechnology Certificate
3) Dance Certificate
4) Environmental Health & Safety Certificate (Three Rivers Campus)
5) Environmental Health and Toxicology Certificate (Gateway Campus)
6) Natural Resources Certificate (Northwestern Campus)
7) Deaf Studies Certificate
8) Fashion Merchandising and Retail Management Certificate
9) Firefighter 1 and 2 Certificate
10) Health Careers Pathway Certificate
11) Human Services: Behavioral Healthcare Specialist Certificate
12) Human Services: Gerontology Certificate
13) Human Services: Management Certificate
14) Human Services: Mental Health Certificate
15) Library Technology Certificate
16) Medical Billing & Outpatient Coding Specialist Certificate
17) New Media Production: Audio & Music Production Certificate
18) New Media Production: Corporate Media Certificate
19) New Media Production: Film & Video, A.A.S. Certificate
20) New Media Production: Digital Marketing Certificate
21) New Media Production: Multimedia Certificate
22) New Media Production: News & Sports Certificate
23) New Media Production: Web Design & Development Certificate
24) Paralegal Certificate
25) Phlebotomy: Certified Phlebotomy Technician Certificate
26) Small Business Management and Entrepreneurship Certificate

C. Courses:

1) ANT 101 Introduction to Anthropology
2) ANT 105 Introduction to Cultural Anthropology
3) ANT 106 Introduction to Biological Anthropology
4) ANT 107 Introduction to Forensic Anthropology
5) ANT 198 Special Topics: Introduction to Japanese Culture → ANT 116 Introduction to Japanese Culture
6) ANT 118 Health, Healing, and Culture
7) ANT 121 Introduction to Archaeology
8) ANT 131 World Prehistory
9) ANT 133 Peoples of the World
10) ANT 136 Music Cultures of the World
11) ANT 142 Navajo Indians
12) ANT 198 Special Topics: Sports & Culture → ANT 150 Sports & Culture
13) ANT 145 Pueblo Indians
14) ANT 229 Historical Archaeology
15) ANT 223 Advanced Techniques in Archaeology
16) ANT 240 Native Cultures of the Americas
17) ASL 101 American Sign Language I
18) ASL 102 American Sign Language II

19) ASL 201 American Sign Language III
20) ASL 202 American Sign Language IV
21) ASL 205 Linguistics of American Sign Language
22) ASL 206 Advanced ASL for Interpreters
23) BBG 294 Business Internship
24) BMG 110 Public Utility Management
25) BMG 216 Rates and Revenues
26) BMG 219 Asset & Infrastructure Management
27) BMG 221 Customer Relations
28) BMK 103 Principles of Retailing
29) BMK 215 Principles of eBusiness
30) BMK 220 Sales
31) BMK 242 Retail Buying
32) BMK 255 Fashion Analysis
33) BMK 257 Textiles
34) BMK 2XX Field Experience I
35) BMK 296 Field Experience II
36) CHE 220/BIO 220 Biochemistry
37) CHE 101 Introduction to Chemistry
38) CHE 111 Concepts of Chemistry
39) CHE 112 Principles of Organic Chemistry & Biochemistry
40) CHE 121 General Chemistry I
41) CHE 122 General Chemistry II
42) CHE 211 Organic Chemistry I
43) CHE 212 Organic Chemistry II
44) CHE 250 Instrumental Analysis
45) CHE 298 Special topics in Chemistry
46) CSA 105 Introduction to Software Applications
47) CSA 135 Spreadsheet Applications
48) CSA 140 Database Applications
49) CSA 205 Advanced Applications
50) DAN 101 History and Appreciation of World Dance
51) DAN 102 Ballet I: Renaissance to Romantic
52) DAN 109 Ballroom Dance I
53) DAN 110 Tap Dance
54) DAN 111 Jazz I: Afro-Caribbean/American
55) DAN 112 Jazz II: Broadway and Film
56) DAN 113 Modern Dance I: Origins of Contemporary Dance
57) DAN 114 Hip-Hop Dance
58) DAN 118/ ECED 118 Dance Pedagogy for Young Children
59) DAN 131 Contemporary African Dance
60) DAN 140 / HPE 140 Pilates/Wellness [cross-listing pending]
61) DAN 175 Kinesiology for Dancers
62) DAN 202 Ballet II: Classical to Contemporary
63) DAN 209 Ballroom Dance II
64) DAN 213 Modern Dance II: Second Generation America
65) DAN 221 Dance Repertory/Ensemble I
66) DAN 222 Choreographic Principles/Ensemble I
67) DAN 224 Choreographic Principles/Ensemble II
68) DAN 225 Dance Repertory/Ensemble II
69) DAN 261 / HPE 261 Yoga [cross-listing pending]
70) DAN 264 /HPE 264 Yoga II [cross-listing pending]
71) DMS*100 Principles of Sonography
72) DMS *100L Principles of Sonography Lab
73) DMS*120 Abdomen/Small Parts Sonography 1
74) DMS *120L Abdomen/Small Parts Sonography 1 Lab

75) DMS*121 Obstetrics and Gynecology Sonography 1
76) DMS*121L Obstetrics and Gynecology Sonography 1 Lab
77) DMS*122 Clinical Practicum
78) DMS*123 Vascular Sonography 1
79) DMS*123L Vascular Sonography 1
80) DMS*124 Sonographic Physics and Instrumentation
81) DMS*125 Clinical Practicum II
82) DMS*220 Clinical Internship I
83) DMS*221 Abdomen/Small Parts Sonography II
84) DMS*222 Vascular Sonography II
85) DMS*223 Clinical Practicum III
86) DMS*224 Clinical Internship II
87) DMS*225 Obstetrics and Gynecology Sonography II
88) DMS*226 Advanced Sonography Seminar
89) DMS*227 Clinical Practicum IV
90) DNT 105 Introduction to Dental Hygiene I
91) DNT 106 Introduction to Dental Hygiene II
92) DSC 101 Visual Gestural Communication
93) DSC 110 Orientation to Deafness
94) DSC 112 Dear Communities: Facts and Perspectives
95) DSC 114 Introduction to Deaf People & Deaf Culture
96) DSC 219 American Sign Language Literature
97) DSC 222 Field Experience Deaf Studies
98) EAS 102 Earth Science
99) EAS 106 Natural Disasters
100) EAS 110 The Earth Sciences with Lab
101) EDU 210 Foundations of U.S. Public Education
102) EDU 220 Normal and Exceptional Childhood and Adolescent Development
103) EET 252 Digital Electronics
104) EET 262 Electrical Machinery & Controls
105) EET 272 Electronic Communications
106) EET 102 → EETA 102 Electrical Applications
107) EET 126 → EETA 126 Programming Using LabVIEW
108) EET 208 → EETA 208 Applied Calculus for Circuits
109) EET 251 → EETA 251 Electronic Instrumentation
110) EET 253 → EETA 253 Advanced Digital Electronics
111) EET 268 → EETA 268 Control Systems
112) EET 294 → EETA 294 Capstone Project
113) EET 104 → EETA XX1 Electronics Assembly and CAD
114) EET 110 → EETA XX2 DC Circuit Analysis
115) EET 114→ EETA XX3 AC Circuit Analysis
116) EET 136→ EETA XX4 Electronic Devices
117) EET 232→ EETA XX5 Advanced Electronic Devices
118) EET 256→ EETA XX6 Microcontrollers
119) EMT 100 Emergency Medical Technician
120) ENV 101 Introduction to Environmental Science
121) ENV 101L Introduction to Environmental Science Lab
122) ENV 110 Environmental Regulations
123) ENV 112 Environmental and Energy Law and Regulations
124) ENV 130 Sustainable Energy and the Environment
125) ENV 131 Occupational Safety & Health
126) ENV 135 Exploring Environmental Careers
127) ENV 163 Geomatics Spatial Analysis
128) ENV 172 Environmental Research Project I
129) ENV 200 Toxicology
130) ENV 208 Long Island Sound Conservation

131) ENV 220 HAZWOPER (Hazardous Waste Operations Emergency Response)
132) ENV 242 Hydrology
133) ENV 245 Water Resources Engineering with Lab
134) ENV 260 Geomatics
135) ENV 265 Fundamental Measurements and Applications Lab
136) ENV 277 Environmental Research Project II
137) ENV 278 Environmental Research Project III
138) ENV 279 Environmental Research Project IV
139) ENV 291 Environmental Engineering Technology Co-op
140) ENV 295 Environmental Issues Seminars
141) ENV 296 Environmental Science and Toxicology Internship
142) ENV 297 Environmental Science Internship
143) ENV 298 Special Topics in Environmental Science
144) ESL 017 / 027 High Beg. Communications I
145) ESL 025 High-Beginning Grammar I
146) ESL 135 Low-Intermediate Grammar Level II
147) ESL 137 Low Int. Communications II
148) ESL 139 Pronunciation I
149) ESL 145 High-Intermediate Grammar III
150) ESL 147 High Int. Communications III
151) ESL 149 / 144 Pronunciation II
152) ESL 155 Low-Advanced Grammar IV
153) ESL 163 Accelerated Low Intermediate
154) ESL 164 Accelerated High-Intermediate
155) ESL 169 ESL Composition Support (Coreq w/ENG 101)
156) ESL 192 Accelerated Integrated Skills V
157) ESL 250 TESOL Methodology
158) FTA 100 Fitness and Health for Firefighters
159) FTA 101 Fundamentals of Firefighting I
160) FTA 102 Fundamentals of Firefighting II
161) FTA 103 Civil Service Test Preparation
162) FTA 110 Fire Ground Hydraulics
163) FTA 112 Introduction to Fire Technology
164) FTA 116 Building Construction
165) FTA 118 Fire Prevention & Inspection
166) FTA 122 Fire Behavior & Combustion
167) FTA 126 Safety & Survival
168) FTA 210 Water Supply & Hydraulics
169) FTA 212 Legal Aspects of Emergency Services
170) FTA 216 Municipal Fire Administration
171) FTA 217 Occupational Safety & Health for Emergency Services
172) FTA 219 Fire Investigation I
173) FTA 227 Fire Protection Systems
174) FTA 229 Fire Investigation II
175) FTA 230 Strategy & Tactics
176) GER 211 Intermediate German I
177) GER 212 Intermediate German II
178) GLG 121 Introduction to Physical Geology
179) HIM 203 Human Diseases and Pathophysiology
180) HIM 211 Advance Coding and Auditing
181) HIM XXX Compliance in the Outpatient Setting
182) HLT 141 → PBT 141 Techniques of Phlebotomy
183) HLT 141 → PBT 172 Concepts in Specimen Processing for Phlebotomists
184) HLT 294 → PBT 294 Phlebotomy Practicum
185) HPE 101 Weight Control & Exercise
186) HPE 117 Weight Training

187) HPE 133 Pickleball
188) HPE 136 Tai Chi
189) HPE 148 Self Defense II
190) HPE 190 Volleyball
191) HSE 101 Introduction to Human Services
192) HSE 115 Child Advocacy in Human Services
193) HSE 133 Disabilities and Mental Health
194) HSE 134 Introduction to Mental Health Systems
195) HSE 141 Addictions & Mental Illness in Behavioral Healthcare → *Introduction to Behavioral Healthcare*
196) HSE 147 Change Theory & Strategies in Behavioral Health
197) HSE 170 Introduction to Gerontology
198) HSE 185 Family Violence → *Introduction to Family Violence Across the Lifespan*
199) HSE 198 Social and Contemporary Issues in Human Services
200) HSE 202 Introduction to Counseling and Interviewing
201) HSE 210 Group and Interpersonal Relations
202) HSE 236 Professional, Ethical, and Legal Issues in Human Services
203) HSE 241 Human Services Agencies and Organizations
204) HSE 243 Human Services Skills and Methods
205) HSE 247 Supervision in Human Services
206) HSE 251 Working with Individuals and Families
207) HSE 2xx/EDUC 2xx Foundations of Research Methods in HSE and EDUC
208) HSE 281 Human Services Field Work I
209) HSE 287 Practicum in Mental Health → Behavioral Health Field Placement
210) HSE 299 Human Services Independent Study
211) HUM 119 Short-term Study Abroad
212) HUM 146 Leadership Development Studies: A Humanities Approach
213) HUM 130 → IDS 1xx Philosophy and Practice of Yoga
214) HUM 231 → IDS 2xx Teaching of Yoga I
215) HUM 232 → IDS 2xx Teaching of Yoga II
216) IND 101 Interior Design Studio I (Interior Design)
217) IND 120 Materials, Textiles, and Finishes
218) IND 121 Color and Lighting for Design
219) IND 201 Interior Design Studio II – Residential (Residential Interiors)
220) IND 202 Interior Design Studio II – Commercial (Commercial Interiors)
221) IND 293 Interior Design Internship
222) INT 103 Pre-Interpreting Skills
223) INT 121 Professional Standards in Interpreting
224) INT 213 Interpreting I: Consecutive
225) INT 214 Sign-to-Voice
226) INT 215 Interpreting I: Simultaneous
227) INT 234 Educational Interpreting w/Specialized Populations
228) INT 242 Interpreting Practicum & Seminar
229) LGL*101 Introduction to Legal Studies
230) LGL*102 Legal Research & Writing
231) LGL*104 Real Estate Practice
232) LGL*204 Criminal Procedure
233) LGL*206 Bankruptcy Law
234) LGL*208 Litigation
235) LGL*209 Probate Practice & Estate Planning
236) LGL*210 Family Law
237) LGL*211 Business Organizations
238) LGL*212 Commercial Law
239) LGL*216 Administrative Law
240) LGL*220 Computer Applications in Law
241) LGL*230 Advanced Legal Issues Seminar

242) LGL*240 Legal Studies Capstone
243) LGL*210 Cooperative Education
244) LGL*270 Legal Internship
245) LGL*XXX Juvenile Law
246) LGL*2XX Criminal Law
247) LIB 101 Introduction to Library Public Services
248) LIB 104 Introduction to References Services
249) LIB 116 Cataloging and Classification
250) LIB 120 Literature for Children → Literature for Children & Young Adults
251) LIB 123 Introduction to Library Technology Services
252) LIB 125 Digital Media
253) LIB 127 Library & Media Center Management Strategies → Management Strategies, Communication, and Teamwork
254) LIB 201 Digital Resources → Digital Information Services and Library Technology
255) LIB 202 Supervised Field Placement
256) MATH 0988 (MAT* 095I) Elementary Algebra Intensive
257) MATH 0989 (MAT* 095) Elementary Algebra Foundations
258) MATH 1880 (MAT* 100) Intermediate Algebra Support
259) MATH 1881 (MAT* 137) Intermediate Algebra
260) MATH 1882 (MAT* 137L) Applied Algebra with Modeling (formerly Intermediate Algebra for Liberal Arts)
261) MATH 1000 (MAT* 103) Mathematics of Finance
262) MATH 1001 (MAT* 104) Quantitative Literacy (formerly Quantitative Reasoning)
263) MATH 1002 (MAT* 115) Mathematics for Science and Technology
264) MATH 1003 (MAT* 123) Elementary Statistics
265) MATH 0901 Quantitative Reasoning Support
266) MATH 1100 (MAT* 146) Quantitative Reasoning (formerly Math for the Liberal Arts)
267) MATH 0902 Statistics Support
268) MATH 1200 (MAT* 167) Statistics I (formerly Principles of Statistics)
269) MATH 1201 (MAT* 165) Statistics I with Computer Applications (formerly Elementary Statistics with Computer Applications)
270) MATH 2200 (MAT* 222) Statistics II (formerly Statistics II with Technology Applications)
271) MATH 0903 College Algebra Support
272) MATH 1300 (MAT* 172) College Algebra
273) MATH 1301 (MAT* 184) Trigonometry with Embedded Algebra
274) MATH 1310 (MAT* 186) Precalculus
275) MATH 2300 (MAT* 254) Calculus I (Already passed APRC)
276) MATH 2310 (MAT* 256) Calculus II (Already passed APRC)
277) MATH 2320 (MAT* 268) Calculus III: Multivariable (Already passed APRC)
278) MATH 2321 (MAT* 274) Linear Algebra (Already passed APRC)
279) MATH 2322 (MAT* 286) Differential Equations (Already passed APRC)
280) MATH 2323 (MAT* 287) Foundations of Advanced Mathematics (Already passed APRC)
281) MATH 1400 (MAT* 143) Mathematics for Elementary Education: Algebra/Number Systems
282) MATH 1410 (MAT* 144) Mathematics for Elementary Education: Geometry/Data
283) MATH 2495 (MAT* 170) Mathematics Education in Practice I
284) MATH 1500 (MAT* 158) Applied Business Mathematics
285) MATH 2500 (MAT* 230) Calculus for Business and Social Science (formerly Applied Calculus with a Modeling Approach)
286) MATH 2600 (MAT* 210) Discrete Mathematics for Computer Science (formerly Discrete Math)
287) MAT 254 Calculus I
288) MAT 256 Calculus II
289) MAT 268 Calculus III: Multivariable
290) MAT 274 Linear Algebra
291) MAT 286 Differential Equations
292) MAT 287 Foundations of Advanced Mathematics (previously Discrete Mathematics and Methods of Proof)

293) MET 101 Introduction to Meteorology
294) NMP 101 Digital Media Foundation
295) NMP 125 New Media Production
296) NMP 147 Digital Cinematography
297) NMP 153 Film Production
298) NMP 203 Media Literacy
299) NMP 220 Television Studio Production
300) NMP 228 News, Documentary and Reality Programming
301) NMP 264 Advanced Video Editing
302) NMP 287 Media Production Capstone
303) NMP 293 Center for New Media Productions Practicum
304) NMP 295 Experiential Learning and Practice in Media Production
305) NMP 296 Experiential Learning and Practice in Media Production II
306) NMP 1110 Introduction to Digital Graphics
307) NMP 1120 Image Editing and The Pixel
308) NMP 1130 Vector Graphics
309) NMP 1140 Digital Publishing and Layout
310) NMP 2200 Producing Interactive Media
311) NMP 2210 Web Production Fundamentals
312) NMP 2220 Web Production II
313) NMP 2100 Introduction to Animated Productions
314) NMP 2110 Visual Effects
315) NMP 2120 Foundations of 3D Animation
316) NMT*101 Introduction to Nuclear Medicine
317) NMT*102 Nuclear Medicine Procedures I
318) NMT*111 Clinical Practicum I
319) NMT*112 Clinical Practicum II
320) NMT*113 Clinical Internship I
321) NMT*121 Physics in Nuclear Medicine
322) NMT *126 Clinical Internship II
323) NMT*201 Nuclear Medicine procedures II
324) NMT*202 Nuclear Medicine Instrumentation
325) NMT*203 Radiopharmacy
326) NMT*211 Clinical practicum III
327) NMT*212 Clinical Practicum IV
328) NMT*216 Clinical Internship III
329) NMT*221 Nuclear Medicine Procedures III
330) NMT*223 Nuclear Medicine Seminar
331) NMT xxx Positron Emission Tomography (PET)/Computed Tomography (CT) and Cross-sectional Anatomy
332) NUR*120 Nursing in Health & Illness I
333) NUR*125 Nursing in Health & Illness II
334) NUR*126 Transition to the CT-CNP Concept Based Curriculum
335) NUR*152 Concept-Based Curriculum LPN to RN Transition
336) NUR*220 Nursing in Health & Illness III
337) NUR*225 Nursing in Health & Illness IV
338) NUR*226 Transition to Professional Nursing Practice
339) OCE 101 Introduction to Oceanography
340) RAD1001 Introduction to Radiologic Sciences and Patient Care
341) RAD1002 Radiographic Procedures I
342) RAD1002L Radiographic Procedures I Lab
343) RAD1010 Radiographic Procedures II
344) RAD1010L Radiographic Procedures II Lab
345) RAD1011 Imaging/Exposure I
346) RAD 1011L Imaging/ Exposure I Lab
347) RAD1012 Imaging/Exposure II

348) RAD1013 Advance Patient Care
349) RAD1094 Radiography Clinical I
350) RAD1094A Radiography Clinical Winter I
351) RAD1194 Radiography Clinical II
352) RAD1294 Radiography Clinical III
353) RAD2001 Radiographic Procedures III
354) RAD2001L Radiographic Procedures III Lab
355) RAD2002 Imaging/Exposure III
356) RAD2002L Imaging/Exposure III Lab
357) RAD2011 Senior Seminar
358) RAD2015 Radiographic Pathology
359) RAD2022 Radiobiology and Radiation Safety for the Radiographer
360) RAD2094 Radiography Clinical IV
361) RAD2094A Radiography Clinical Winter II
362) RAD2194 Radiography Clinical V
363) RAD 2295 Radiographic Clinical Internship
364) RES 211 Mentored Research Project I
365) RES 212 Mentored Research Project II
366) SOC 240 / CJS 201 Criminology
367) SPA 208 Intermediate Spanish I-II

Southern Connecticut State University

SCSU

Office of the President

May 9, 2022

Dr. Terrence Cheng
President
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105

Dear Dr. Cheng:

I wish to inform you that I have awarded the designation of Emeritus status to the following Professors for their exemplary service to Southern Connecticut State University:

Dr. Akbar Bidarian – Professorr, Physics
Dr, Mary Purdy – Professor, Communication Disorders
Dr. Elsie Okobi – Professor, Educational Leadership and Policy Studies

Sincerely,

Joe Bertolino
President

JB/meh

cc: B. Barnes, Human Resources for CSCU, Personnel File

501 Crescent Street • New Haven, Connecticut 06515-1355 • (203) 392-5250 • FAX (203) 392-5255 • SouthernCT.edu

Southern Connecticut State University

SCSU

Office of the President

May 16, 2022

Dr. Terrence Cheng
President
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105

Dear Dr. Cheng:

I wish to inform you that I have awarded the designation of Emeritus status to the following Professor for his exemplary service to Southern Connecticut State University:

Dr. Steven Burian – Professor, Department of Biology

Sincerely,

Joe Bertolino
President

JB/meh

cc: B. Barnes, Human Resources for CSCU, Personnel File

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Southern Connecticut State University

SCSU

Office of the President

May 24, 2022

Dr. Terrence Cheng
President
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105

Dear Dr. Cheng:

I wish to inform you that I have awarded the designation of Emeritus status to the following SUAOF Associate Director/Interim Director, for her exemplary service to Southern Connecticut State University:

Ms. Paula Kennedy – Associate Director, Undergraduate Admissions

Sincerely,

Joe Bertolino
President

JB/meh

cc: B. Barnes, Human Resources for CSCU, Personnel File

Southern Connecticut State University
SCSU
Office of the President

May 26, 2022

Dr. Terrence Cheng
President
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105

Dear Dr. Cheng:

I wish to inform you that I have awarded the designation of Emeritus status to the following Professors for their exemplary service to Southern Connecticut State University:

Dr. Thomas Fleming - Professor, Department of Earth Science
Dr. Deborah Weiss – Professor, Department of Communication Disorders
Dr. Sharon Misasi – Professor, Department of Health & Movement Sciences
Dr. Bonnie Edmondson – Professor, Department of Health & Movement Sciences
Ms. Patricia Panichas – Professor, Department of Health & Movement Sciences
Dr. Doris Marino – Professor, Department of Health & Movement Sciences

Sincerely,

Joe Bertolino
President

JB/meh

cc: B. Barnes, Human Resources for CSCU, Personnel File

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ASNUNTUCK COMMUNITY COLLEGE
170 Elm Street Enfield, CT 06082 860.253.3002 Fax 860.253.3007

Office of the Chief Executive Officer

May 11, 2022

Dear President Cheng,

The following are my recommendations for Promotion and Tenure, which will be effective for the contract year 2022-2023.

TENURE
Dr. Michele Howard-Swan
Daniel Coffin

PROMOTION
Muhammed Awais
Annaliese Barcsansky
Jennifer Brown
Robert Brown
Julie Cotnoir
Heather D'Orlando
Ben Durant
Beth-Ann Egan
Angelina Hinojosa
Charles Knurek
Michael Kunze
Richard Munroe
Stacey Musulin
Sherry Paquette
Marcos Rodriguez
Thayre Trzepacz
Qiong Zou

I request that the Board of Regents receive these recommendations as information. Please let me know if you have any questions.

Sincerely,

Michelle Coach

Michelle Coach, Ed.D.
Campus Chief Executive Officer

CAPITAL Community COLLEGE

Office of the CEO
G. Duncan Harris, Ed.D.
Chief Executive Officer

April 8, 2022

Terrance Cheng
President
CSCU
61 Woodland Street
Hartford, CT 06105

RE: 2021-2022 List of Promotion Awards

Dear President Cheng:

I'm pleased to share that I have elected to award promotion to the following members of the Capital Community College faculty and staff:

- *Marsha Ball-Davis*
- *Jenny Wang*
- *Ira Hessmer*
- *Sabrina Adams-Roberts*
- *Lisa Braverman*
- *Helena Carrasquillo*
- *Odile Dilone*
- *Bryan Lewis*
- *John Thomas*
- *Jose Velez-Otero*
- *Randall Ward*

These individuals have consistently demonstrated their commitment to student success and the mission of our institution.

Collegial Regards,

G. Duncan Harris, Ed.D,
Capital Community College CEO

Chief Executive Officer
Dwayne Smith, Ph.D.

p. 203.332.5222
f. 203.332.5247
DSmith@Housatonic.edu

TO: President Terrence Cheng

FROM: Dwayne Smith, Ph.D., CEO Dwayne Smith

XC: Victoria Thomas, Pam Heleen, Ken Klucznik, Fran Rosselli, Noreen Wilson, Pat Ryiz

DATE: May 19, 2022

Dear President Cheng:

The attached are my recommendations for Promotion and Tenure, which will be effective on July 1, 2022 (or as noted on the attached.)

DS/cc

Attachment

Housatonic Community College
A Connecticut Community College
900 Lafayette Boulevard, Bridgeport, CT 06604

TENURE: (Tenure effective on August 25, 2022)
Janet V. Hayes, Assistant Professor, Art Department
Felisha Guirand-Fleurimond, Advanced Manufacturing Technology Center, Project Manager
Kristin Lund, Director, Early Childhood Laboratory School
Hyoja Tully, Instructional Support Specialist Math

PROMOTION:

From Instructor to Assistant Professor
Sean Brown, Political Science

From Assistant Professor to Associate Professor
Rachel S. Cain, Biology
Kellyn Jeremy, ECE
David Platt, Math
Adam Scobie, Manufacturing Technology

From Associate Professor to Professor
Janet V. Hayes, Graphic Design
Jennifer L. Nohai-Seman, Developmental Math
Farshad Ravanshad, Computer Science
Laura A. Turiano, Psychology
Janet G. Yarrow, Biology

Staff (CCP):
Kofi Asare Adomako-Ayisi, Instructional Support Spec Eng
Medgine B. Bright, Director of Student Life
Peter A. Everett, Librarian
Milagros Gonzalez, Associate Registrar
Natalia Jimenez, IT Tech II
Omar Livingston, Director of Financial Aid Services
Wanda I. Mulero, Enrollment Services Assistant
Mirjeta Murati, Assistant Director of Financial Aid Services
Lindsey Balkcom Norton, Counselor
Colette J. Rossignol, Director, Ed Tech & Media Services
Bernard Shea, Assistant Director of Admissions/Recruitment
Daniela Squizzato, Guided Pathways Advisor 2
Hyoja Tully, Instructional Support Specialist Math

MIDDLESEX COMMUNITY COLLEGE
Your College • Your Future

Middlesex Community College
100 Training Hill Road
Middletown, CT 06457
1.800.818.5501 toll free
860.343.5800 phone
860.344.7488 fax

May 19, 2022

Mr. Terrence Cheng, President
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105
Sent via email tcheng@commnet.edu

Dear President Cheng,

The following individuals have been recommended for Promotion and Tenure as defined in Article XII and Article IX, section B of the Congress Bargaining Unit Agreement:

TENURE:
Professor Frank Stellabotte
Professor Kegan Samuel

PROMOTION:

From Assistant Professor to Associate Professor:
Bryan Goh

Staff (CCP):
Margarita Daisy Aiken
Emily DeToro
Melissa Hall
Landi Hou
Todd Levesque
Irene Martin
Hilary Phelps
Kimberly Riordan

I request that the Board of Regents receive these recommendations as information. Please let me know if you have any questions. Thank you for your consideration of this request.

Sincerely,

Kimberly A. Hogan
Interim Chief Executive Officer
khogan@mxcc.edu • 860-343-5702

Naugatuck Valley Community College

Office of the Chief Executive Officer

MEMORANDUM

To: President Terrence Cheng, Connecticut State Colleges & Universities

From: Dr. Lisa Dresdner, Chief Executive Officer

Date: April 8, 2022

Subject: NVCC AFSCME Promotions 2022

In accordance with the collective bargaining agreement and authority granted to me, I have implemented the following 2022 promotions for AFSCME staff:

Jaime Hammond	Director of Library Services
Nephtali Villanueva	Director of Information Technology

CC: Ben Barnes, Chief Financial Officer
Michael Lopez, Director of Human Resources
Diane Mazza, Director of Human Resources Strategies
Wendy Bovia, Regional Human Resources Manager, North-West Region
Linda Pestretto-Demers, Human Resources Generalist, NVCC

Naugatuck Valley Community College

Office of the Chief Executive Officer

MEMORANDUM

To: **President Terrence Cheng, Connecticut State Colleges & Universities**

From: **Dr. Lisa Dresdner, Chief Executive Officer**

Date: **April 8, 2022**

Subject: **NVCC AFT Promotions 2022**

In accordance with the collective bargaining agreement and authority granted to me, I have implemented the following 2022 promotions for AFT faculty:

Faculty	**Promotion to Rank of:**
Camela Gertner	Assistant Professor of Accounting
Nikki McGary	Professor of Sociology and Anthropology
Christopher Rempfer	Professor of English

CC: Ben Barnes, Chief Financial Officer
Michael Lopez, Director of Human Resources
Diane Mazza, Director of Human Resources Strategies
Wendy Bovia, Regional Human Resources Manager, North-West Region
Linda Pestretto-Demers, Human Resources Generalist, NVCC

Naugatuck Valley Community College

Office of the Chief Executive Officer

MEMORANDUM

To: **President Terrence Cheng, Connecticut State Colleges & Universities**

From: **Dr. Lisa Dresdner, Chief Executive Officer**

Date: **April 8, 2022**

Subject: **NVCC Congress Promotions 2022**

In accordance with the collective bargaining agreement and authority granted to me, I have implemented the following 2022 promotions for Congress faculty and staff:

Faculty	**Promotion to Rank of:**
Amanda Lebel	Professor of Art
Thomas Leszczynski	Assistant Professor of Mathematics
Ursula Mobilio	Associate Professor of Nursing
Latisha Nielsen	Associate Professor of Sociology

Community College Professionals

Karen Blake, Director of Student Activities
Deirdre D'Amore, Enrollment/Retention Specialist
Bonnie Goulet, Campus Advising Lead
Susan Houlihan, Academic Advisor/Student Retention Specialist- GPA 1

CC: Ben Barnes, Chief Financial Officer
Michael Lopez, Director of Human Resources
Diane Mazza, Director of Human Resources Strategies
Wendy Bovia, Regional Human Resources Manager, North-West Region
Linda Pestretto-Demers, Human Resources Generalist, NVCC

Naugatuck Valley Community College

Office of the Chief Executive Officer

MEMORANDUM

To: **President Terrence Cheng, Connecticut State Colleges & Universities**

From: **Dr. Lisa Dresdner, Chief Executive Officer**

Date: **April 8, 2022**

Subject: **NVCC AFSCME, AFT, and Congress Tenure 2022**

In accordance with the collective bargaining agreement and authority granted to me, I have implemented the following 2022 tenure for NVCC faculty and staff:

AFSCME:

Lourdes Cruz, Registrar

AFT:

Gilad Harel, Associate Professor of Music
John Leonetti, Librarian

Congress:

Lisa Boyko, Associate Director of Financial Aid & Veterans Affairs Office
Alexander Bratt, Associate Professor of Theater
Janet Gangaway, Professor and Program Director, Physical Therapist Assistant Program
Bonnie Goulet, Campus Advising Lead
Susan Houlihan, Academic Advisor/Student Retention Specialist- GPA 1
Amanda Lebel, Associate Professor of Art

CC: Ben Barnes, Chief Financial Officer
Michael Lopez, Director of Human Resources
Diane Mazza, Director of Human Resources Strategies
Wendy Bovia, Regional Human Resources Manager, North-West Region
Linda Pestretto-Demers, Human Resources Generalist, NVCC

NCCC
Northwestern Connecticut Community College • Park Place East • Winsted, Connecticut 06098-1710
Phone: (860) 738-6406 www.nwcc.commnet.edu Fax: (860) 738-6488
OFFICE OF THE PRESIDENT

May 11, 2022

To President Cheng:

The following are my recommendations for Promotion and Tenure, which will be effective on July 1, 2022:

TENURE:
Samantha Palombizio

PROMOTION:
Samantha Palombizio: Staff (CCP)

Robert Turner: Staff (CCP)

Lalit (John) Jagtiani: Instructor to Assistant Professor

Mami Kajiyama-Bequillard: Staff (CCP)

Rebecca Russo: Staff (CCP)

Adriane Cavanna: Associate Professor to Professor

Joanna Cyr: Assistant Professor to Associate Professor

Jeffrey Southworth: Staff (CCP)

Jaclyn Vincent: Assistant Professor to Associate Professor

I request that the Board of Regents receive these recommendations as information. Please let me know if you have any questions.

Sincerely,

Dr. Michael A. Rooke
President

OFFICE OF THE CAMPUS CEO
QUINEBAUG VALLEY COMMUNITY COLLEGE

May 13, 2022

Dr, Terrence Cheng
President
Board of Regents for Higher Education
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105

Dear President Cheng:

The following are my recommendations for Promotion and Tenure, which will be effective on June 3, 2022.

TENURE:

Jarrod Borek
Mike Benoit
Deborah Rimkus

PROMOTION:

From Instructor to Assistant Professor:
Norly Germain

From Assistant Professor to Associate Professor:
Brian Clinton

From Associate Professor to Professor:
Deborah Rimkus

Staff (CCP):

Mike Benoit
Kevin Davis
Jeremy Espeseth
Lois Kelly
Alessandra Lundberg

I request that the Board of Regents receive these recommendations as information. Please let me know if you have any questions.

Sincerely,

Karen Hynick

Karen Hynick, Ed.D.
Quinebaug Valley Community College Chief Executive Officer

742 UPPER MAPLE STREET · DANIELSON, CONNECTICUT 06239 · 860.932.4140

Three Rivers
COMMUNITY COLLEGE
574 New London Turnpike • Norwich, CT 06360-6598
860.215.9007 FAX: 860.215.9917

Office of the President

Terrence Cheng
President
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105

Dear President Cheng:

The following are my recommendations for consideration by the Board of Regents for Three Rivers Community College faculty and staff promotion and/or tenure, to be effective on July 1, 2022:

TENURE: TRCC FACULTY

Last Name	First Name	Union		Status
Basu	Vandana	AFT	Faculty	Tenure
Emmerthal	Carol	AFT	Faculty	Tenure

TENURE: TRCC STAFF

Boyko	Wayne	AFSCME	Staff	Tenure

PROMOTION: TRCC FACULTY

Last Name	First Name	Union	From	To
Allen	Elizabeth	4C's	Assoc Professor	Professor
Amenta	Kevin	4C's	Assoc Professor	Professor
Amor	Karen	4C's	Assistant Professor	Associate Professor
Arpin	Cindy	AFT	Associate Professor	Professor
Basu	Vandana	AFT	Assistant Professor	Associate Professor
Emmerthal	Carol	AFT	Associate Professor	Professor
Neill	Melissa	4C's	Associate Professor	Professor
Zupan	Jillian	4C's	Associate Professor	Professor

PROMOTION: TRCC STAFF

Last Name	First Name	Union	From	To
Boyko	Wayne	AFSCME	Promotion to	Next Step
Mueller	Jennifer	4C's	Promotion to	Next Step

I respectfully request that the Board of Regents receive these recommendations as informational items to the BOR agenda. Please let me know if you have any questions.

Sincerely,

Mary Ellen Jukoski

Mary Ellen Jukoski, Ed.D.
President

Tunxis Community College

Education That Works For a Lifetime

OFFICE OF THE CAMPUS CEO

May 11, 2022

President Terrence Cheng
Board of Regents for Higher Education
Connecticut State Colleges & Universities
61 Woodland Street
Hartford, CT 06105

Dear President Cheng:

The following are my recommendations for Promotion and Tenure, which will be effective on July 1, 2022 (or as noted below):

TENURE:

Tatiana Machado, Associate Professor/Program Coordinator, Business Administration (Tenure effective on 8/25/2022)

PROMOTION:

From Instructor to Assistant Professor:

Angela Fierro, Law and Ethics
LaKisha Grant-Washington, Psychology
Alva Hanson, First Year Experience
Rashida Williams, English

From Assistant Professor to Associate Professor:

Alicia Hall, English as a Second Language
Lauren Heron, Dental Hygiene

From Associate Professor to Professor:

Kelly O'Brien Mann, Psychology

Staff (CCP):

Rachel Hyland, Librarian
Qing Mack, Regional Director of Institutional Research
Susan Passini, Director of Workforce Development & Non-Credit Programs
Monica Kedzior (EMSA), Enrollment Management Specialist

I request that the Board of Regents receive these recommendations as information. Please let me know if you have any questions.

Sincerely,

Darryl Reome, Ed.D.
Campus Chief Executive Officer
Tunxis Community College

Tunxis Community College
271 Scott Swamp Road
Farmington, CT 06032
860.773.1300
tunxis.edu
A Connecticut Community College

Year End Report: ACME English (submitted by Coordinators James Gentile and Andrew Sottile)

During the past year, James Gentile and Andrew Sottile, the ACME English coordinators, in collaboration with an ACME English team, designed the ENG 101 Workshop (ENG 101 W) corequisite course. After a review of national models, consultation with the Dana Center, and a survey of CCET faculty on current corequisite models, the coordinators drafted an ENG 101 W template. Working from the current English 101 course, they created a course description, course objectives, and topic outline. During this period, they also formed a team of English faculty who wanted to collaborate on this project, and working with them, the coordinators and the newly appointed English team chair revised the template. They then sought feedback from all English faculty, departments through their chairs, and CCET. During this time, Provost Miah LaPierre-Dreger indicated parameters for contact hours and grading practices, which resolved several design concerns. The team revised the template based on the feedback received, which included notes from ten English Departments, the CCET Steering Committee, and several individual faculty. The course was then approved by APRC and SF ASA CC and forwarded to CCIC.

Since Fall 2021, the ACME coordinators also offered five webinars: a case making introduction to local and national data on corequisite models in November 2021; three webinars on the design and implementation work of the California Acceleration Project in February, March, and April 2022; and a panel discussion on local corequisite models featuring three members of the ACME English team in April 2022. The corequisite curriculum and these webinars are available at https://www.ct.edu/curriculum/acme#acmeEnglish.

During the Spring, the English team has worked on three projects: a breakdown of the outcomes in preparation of the design of an online course for faculty who will teach English 101 with corequisite support; identification of transitional support opportunities (including collaboration with writing centers and libraries and in-class support such as embedded tutoring and supplemental instruction); and design of a directed self-placement process involving adjusted GPA recommendations, an informational video, a student survey of past reading and writing experiences, and representative syllabi and assignments.

For summer 2022, the English team will shift its focus to professional learning and communication channels in anticipation of full-scale implementation in Fall 2023.

Regents, leaders, administrators, and colleagues may reach out to Professors Gentile and Sottile at any time with questions, comments, requests, or concerns.

Year End Report: ACME ESOL

Dr. Hannelore Moeckel-Rieke, (ACME ESOL Lead; NCC ESL Department Chair; ESL Council Co-Chair)
Carl Guerriere, (CCC ESL Department Director; past ESL Council Co-Chair)
Professor Melanie Majeski, (NVCC ESL Professor; Co-Chair, ESL Council)

Curriculum Design

Over the past year and a half, the ESL Council has worked on aligning ESL courses across our system and has developed an ESL framework that encompasses integrated skills core courses and includes electives to provide additional support to ELLs that need them. This framework is based on research related to best practices in ESOL course content and delivery at community college models nationwide as detailed in the ESL Council White Paper submitted in Fall 2021. The framework also stipulates that students proceed to ENG 101 after completing the ESL course work and no longer take developmental English classes after completing ESL, which was the case at some colleges in the state.

The Council also aligned elective courses for additional grammar and communication work and revised two accelerated learning models currently offered at MCC and NCC. A small writing group developed course descriptions, outcomes, and topics for all course templates, which were then vetted by the ESL Council and subsequently approved by the APRC and the BOR. We have also started working with colleges that have programs that are not aligned with the framework, but that work has to continue over the Fall and Spring 2022/23.

We successfully aligned our Advanced English Proficiency Certificate which now has 21 credits and includes both ESOL courses and mainstream courses in writing and communication. The certificate replaces the multiple legacy versions that were implemented between 2001 and 2019. The revised certificate was also passed by APRC and the BOR in Spring 2022.

Transitional Supports

While the framework spells out support levels for high-beginning to advanced proficiency levels, the ESL Council also aligned a three credit ENG101 co-requisite course, ESOL 1602, versions of which were already in place at a few colleges. In preparation of that revision, Council members and leadership studied research from and met with representatives of the California Acceleration Project as suggested by the DANA Center. Through meetings with Jose Cortes from Solano CC, California, facilitated by the DANA Center, we learned more about the challenges California was facing during the implementation of their public Law 705. For the most part, Californian colleges did not have integrated skills or foreign language credit for ESL course work. Their starting point and achievements helped us reflect on the specific challenges, opportunities, and solutions for ESOL programs and students in our state. The ENG101 ESOL co-requisite course will now be scaled up across our system and we'll be refining the content through a summer workgroup.

In the upcoming academic year, we will connect with programs that have built ESL pathway programs through offering learning communities at the top level, like Bunker Hill. In addition to learning communities, during the next academic year some colleges will investigate simpler pairings of the high-advanced core course with non-ESL courses that can apply to all majors with the aim of piloting the paired format in Fall 2023.

Directed Self Placement

During Spring 2022, we also began developing a placement process for new and continuing ELLs. Council members conducted research on different national models and also connected with two programs from the California Acceleration Project. Our modified GSP includes three identifying questions on the application form that will funnel multilingual learners who might need additional English instruction into a brief ESL placement process. This process will include an adaptive language test and a writing sample. Coordinators and chairs, or their representatives, will place students based on these scores and have those placements entered into Banner for advisors to use. We'll continue to work on the logistics involved in scaling up this process and on protocols for inclusion in Banner.

We are also planning to create short videos giving an overview of the ESL framework and highlighting students who received ESL support who will explain how this helped them succeed. We intend to produce these student testimonials by the end of the year, and they should become part of the placement procedure and onboarding process.

Professional Learning

In the spring, we met with work groups as well as the ESL Council on a regular basis to update, discuss and develop aligned course work.

In addition, ESL leadership organized a workshop with Jose Cortes, who shared his experience with the California Acceleration Project, including co-requisite course work, regular ESL courses, and different attempts to develop a GSP system for ELLs. ESL leadership also attended workshops hosted by the English group and shared that material back with the council.

Over the summer, The ESL Council will work on developing detailed learning modules for the ESL co-requisite course to be shared across institutions. These learning modules will help colleges think about the purpose, structure, and success criteria for the co-requisite course. We will also train instructors to teach this course and work with English faculty to make sure the ESL instructors are thoroughly familiar with the College Composition courses.

During Summer 2022, a workgroup will develop an ESL module to be incorporated into the GPA training, and in Fall 2022, we'll begin work on materials and workshops for non-ESL faculty.

In the fall and spring, ESL faculty will organize workshops on working with ELLs and "teaching teachers".

Year End Report: ACME Math (submitted by Coordinator Debora Rimkus)

During the 2021-2022 academic year, the Math Pathways Group, led by Debora Rimkus, consisted of 15 math faculty from 8 community colleges. Additional community college faculty and CSU faculty assisted at times.

Curriculum Design

The following curriculum design tasks were completed:

- Development of 3 math pathways that will serve the majority of students and will be implemented at scale in fall 2023: Quantitative Reasoning, Statistics, and STEM (Algebra)
- Identification of 4 additional specialized pathways that will be investigated during the 2022-2023 academic year: Business, Education, Nursing/Health Careers, and Terminal
- TAP Mathematics Studies Program alignment
- Alignment and consolidation of 76 math courses into 28 aligned courses
- Development of three new corequisite courses
- Beginning development of curricular materials for the corequisite courses

Professional Learning

The Math Pathways Group engaged in a number of professional learning activities to inform the curricular work on math pathways and corequisite design. These activities included:

- Three Foci Series training workshops from the Dana Center
- Six webinars presented by the Dana Center to the Math Pathways Group, CMAC, and MATYCONN
- A Math Professional Learning Day on January 18 that was a collaborative effort including the Dana Center, the CT State Office of Teaching & Learning, the Math Pathways Group, and CMAC
- Informal presentations from colleagues in other states that have implemented corequisite courses at scale

Professional Learning for all math faculty who will teach corequisite courses in fall 2023 is a priority for the 2022-2023 academic year. Math faculty have been asked to include one hour per week in their Additional Responsibility proposals for this purpose.

Placement

Based on data on course completion rates during COVID, a modification to the math placement policy was proposed by the Math Pathways Group and approved by the Provost for the 2022-2023 academic year.

Beginning in fall 2023, The Math Pathways Group is recommending that Guided Self Placement be done via a Math Inventory that students complete prior to meeting with their advisor for the first time. The

Math Inventory combines measures of students' attitudes and study habits, math history and grades, and familiarity with content. A preliminary overview of the process is attached as well as a sample Math Inventory. Both of these documents are first drafts, and we expect to modify the details of these documents.

The placement process includes the use of software designed to assess readiness and then refresh math skills. This software is required for students in the STEM pathway who wish to place above College Algebra. This software is recommended for all students as a means of refreshing math skills prior to the start of the semester as well as possibly bumping the student out of the corequisite course. A decision must be made by administration as to whether to fund this software. The Math Pathways Group plans to invite all math faculty to a demo of ALEKS PPL and Stemify in September, and then to take a vote on which software to recommend.

Transitional Supports

Work on transitional supports has just begun and will continue next academic year. A representative from the Math Pathways Group is a member of the Transitional Supports multi-department group.

The proposed math placement process (see paragraph above) includes a transitional support in the form of software that allows students to refresh their math skills prior to the start of the semester.

Process for New Students Advising Early

1. Students will be prompted to take a math inventory as part of their Guided Self Placement and onboarding. Samples are available. (TBD if pathway specific or generic)
2. Students will total the columns of their inventory and will identify if their highest score is in Column 1, 2, or 3.
3. Student meets with GP advisor.
    a. If the highest total is in Column 1: advise the student to register for the pathway course without support and offer *** to see if a higher course would be appropriate. Students can use *** to review before the start of term regardless of desire to place up.
    b. If the highest total is in Column 2: advise the student to register for the pathway course with support and offer *** to determine if they can be exempt from the support course. Students can use *** to review before the start of term regardless of desire to waive supports.
    c. If the highest total is in Column 3: advise the student to register for the pathway course with support and STRONGLY encourage *** to determine if a transitional strategy should be offered. Students can use *** to review before the start of term regardless of interest in a transitional strategy.

Additional outreach for potential transitional students:

4. Ten weeks before the start of term, CRM Advise "software" will be programmed to contact all students registered in any corequisite math course and encourage participation in *** to begin content review. All students whose highest total was column three will be directly contacted by the campus transitional coordinator and offered an opportunity to enroll in a bootcamp. (Fall term only)
5. Five weeks before the start of term, CRM Advise "software" will be programmed to contact all students registered in any corequisite math course and encourage participation in *** to begin content review. All students whose highest total was column three will be directly contacted by the campus transitional coordinator and offered an opportunity to enroll in a bootcamp.
6. Five days before the start of term, CRM Advise will software" will be programmed to contact all students whose highest total was column three to give them a final opportunity to participate in *** to determine if a change to course enrollment is recommended.
7. Four days before the start of term, we switch to the just in time advising process.

Process for Just in Time New Student Advising

This process is intended for students who have completed and totaled their math inventory and will meet with their GP advisor for the first time within four days of the start of term:

a. If the highest total is in Column 1: advise the student to register for the pathway course without support and offer *** to see if a higher course would be appropriate.
b. If the highest totals are in column 2 or 3: advise the student to take *** prior to registering for any math for the current term.
    i. If a student opts to participate in ***, course recommendations should be based on those results.
    ii. If a student opts out of participation in ***, advise the student of their choices: to register for the pathway course with support, to register for an in-term transitional strategy, or to delay math until the following term. Students who opt to delay math should be encouraged to use *** for the semester to review before the start of the subsequent term and the advisor should schedule CRM Advise to outreach for early student advising next semester.

All students should be strongly discouraged from starting a corequisite course after the start of the course.

Transitional strategies may include the development of pathway specific pre-term synchronous bootcamps, in-term stand-alone preparatory courses, or supported terminal courses.

*** is a place holder until a decision on Stemify or PPL has been made. Anticipated decision date mid-September.

MATH 1100 QUANTITATIVE REASONING

Quantitative Reasoning highlights the connection between mathematics and the society in which we live, with an emphasis on real-world applications for meaning and context. This course explores set theory and logic, mathematical modeling, probability and statistics, and consumer math.

Does Your Program Require Quantitative Reasoning?

You may be required to take Quantitative Reasoning if you are pursuing a degree or certificate in….
Check with your Guided Placement Advisor to confirm which math course is the best choice for you.

Are You Prepared for Quantitative Reasoning?

Before entering your first college-level math course, you should reflect on the strength of your academic habits, math attitude, and content knowledge to determine whether or not you might need additional support to be successful in the course. In the tables that follow, use check marks to indicate the responses you identify with best to help you choose your ideal level of support.

This statement sounds…	very much like me	somewhat like me	not at all like me
I can read and understand math word/story problems and am able to identify the important information.			
I actively participate in class discussions and activities, and regularly complete my assignments on time.			
I am able to interpret the solutions to math problems and can usually tell when an answer isn't reasonable.			
I work persistently to solve math problems, even if the problems are challenging or unfamiliar to me.			
I feel comfortable seeking help from an instructor or tutor when I do not fully understand something.			
I study or do extra work beyond required assignments to strengthen my understanding of the material.			

There are times when I feel excited or curious about new mathematical problems and techniques.			

Previous Math Experiences	**Check the response that best describes you**		
My overall high school GPA was _____.	3.5 – 4.0	2.5 – 3.5	below 2.5
In high school, I took ____ math classes.	4 or more	3	2 or fewer
I typically earn _____ in math classes.	A's	B's or C's	D's or F's
I took my last math class _____.	less than one year ago	1 – 2 years ago	more than 2 years ago

Without a Calculuator…	**I can do this**	**I need a review**	**I need to learn**
Fill in the box with a < or > symbol: $-2 \ \square \ -5$			
Write in order: $5,\ -3,\ \frac{5}{2},\ -\frac{1}{4},\ 0,\ 2.75,\ -0.5$			
Round to the nearest tenth: 38.249			
Convert to a decimal: 20.4%			
Find the value of $2x + y$ when $x = -6$ and $y = 10$			
Solve for *t*: $I = prt$			
Solve the equation: $x + 2 = 5$			
Solve the proportion: $\frac{5}{3} = \frac{20}{x}$			
Plot the points: $(3, 0),\ (-2, 4),\ (1, -5)$			
Graph the line: $y = \frac{1}{2}x - 3$			

Where Should You Go From Here?

Once you have completed all three parts of the survey, count the total number of check marks in each of the columns. Your column totals can help you and your advisor determine whether you

are ready to take the college-level course, would benefit from also taking a co-requisite support, or may also need to seek additional support resources to ensure your success in the course.

Column 1 Total: _____ Column 2 Total: _____ Column 3 Total: _____

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
Connecticut State Colleges & Universities
BELOW THRESHOLD: ***NEW ACADEMIC OFFERING*** *- INFORMATION REPORT FORM*

SECTION 1: BELOW-THRESHOLD GENERAL PROGRAM INFORMATION[1]

Institution: Central CT State University	Date of Submission to CSCU Office of the Provost: 4/27/22
Characteristics of Below-Threshold Offering Name of Offering: Certificate in Gerontology Type of Offering *(e.g. Grad Certificate)* **Certificate** Anticipated Initiation Date: Fall 2022 Anticipated Date of First Completion *(if applicable)* : Modality of Program: x On ground Online Combined If "Combined", % of fully online courses? Locality of Program: x On Campus Off Campus Both	**Credit Distribution of the Offering** # Credits in General Education: # Credits in Program Core Courses: 3 # Credits of Electives in Field: 9 # Credits of Electives: # Credits Special Requirements *(e.g. internship):* Total # Credits the Institution Requires to Award the Credential 12
CIP Code No. 19.07002 Title of CIP Code. Adult Development and Aging.	

Description of Offering, Context and Justification *(Please provide a concise description of the proposed offering and learning objectives, including a list of courses if necessary for clarity. In one paragraph, please address need and anticipated benefits of the offering)*

This interdisciplinary certificate is designed for currently enrolled students and continuing education students to meet the growing demand for professionals who understand the opportunities, concerns, and needs associated with our aging population. The program will provide students with a foundation in the biopsychosocial aspects of aging, the difference between aging and disease, and the consequences of ageism. The Gerontology Certificate prepares students to understand the social and economic promise of an aging population to meet the diverse needs of older adults in our state in medical and health services, social and community services, and business. The Gerontology Certificate can prepare students for work in nonprofit organizations, for-profit social service companies, government agencies, and offices in health care facilities, particularly those serving older adults.

Required course (3 credits)
GERO 101 – Introduction to Gerontology

Electives (9 credits; no more than 2 courses from a single designator)
EXS 215, GERO 491, GERO 495, GERO 498, NRSE 270, PSY 241, PSY 364, PSY 380, SOC 340, SOC 440, SOC 441, SOC 461

The gerontology certificate will allow students to earn a credential in gerontology in cases where they have a major that does not require or have room for a minor (e.g., social work, nursing, exercise science), in cases where students already have a minor but are interested in gerontology, or in cases where the students are not yet currently enrolled in a degree program but have need for specialized training in aging. The Academy for Gerontology in Higher Education has published new competency-based guidelines for gerontology education that allow for micro credentials that cover the foundational competencies. We believe that this certificate will be a good alternative for students who are not able to take the 19-credit

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a) new degree options or certificate programs:
i. an undergraduate certificate of program of 30 credit hours or fewer which falls within an approved program,
iii. a new undergraduate degree option or certificate program of 15 or fewer semester credit hours,
iv. a new graduate option or certificate program of 12 or fewer semester credit hours
b) academic programs that do not qualify students to become eligible for federal financial aid.

minor in gerontology.

According to the U.S. Bureau of Labor Statistics increased longevity is contributing to above-average job growth in careers in social and community services as well as medical and health services. A recent market analysis by Hanover revealed that entry-level managers in these areas typically hold a bachelor's degree or less and thus a gerontology certificate can set students apart when applying for these jobs. An undergraduate certificate in gerontology prepares students for entry-level careers in aging and increases competitiveness for graduate work in a variety of fields. This can also serve as a gateway to undergraduate education if students completing the certificate program decide to pursue a bachelor's degree.

Cost Effectiveness and Availability of Adequate Resources *(As applicable, please provide a one paragraph narrative addressing resources, financial aspects of the program and how it will be sustained)*

All courses in the certificate are already being regularly offered for other programs and therefore we do not anticipate the need for additional resources at this time.

Institutional Contact for this Proposal: Carrie Andreoletti	Title: Professor of Psychological Science, Gerontology Program Coordinator	Tel.: 860-832-1646 e-mail: andreolettic@ccsu.edu

Institution's Unit: *(e.g. School of Business)* and Location *(e.g. main campus)* Offering the Program: College of Liberal Arts and Social Sciences

SECTION 2: DETAILS OF NEW OFFERING *(Community Colleges)*

Curriculum

*(Please provide details of the courses for the proposed offering. Mark any new courses with an asterisk * and attach descriptions. Mark any courses that are delivered fully online with a double asterisk **. Please modify this format as needed for each case)*

Course Number and Name	L.O. #	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Core Courses				**Other Requirements**		
Prerequisites						
				Total Other Credits Required to Issue Credential		

Other Details

Learning Outcomes - L.O. *(Please list up to three of the most important student learning outcomes for the offering and concisely describe assessment methodologies to be used in measuring the outcomes. If the program will seek external accreditation or qualifies the completer to opt for a professional/occupational license, please frame outcomes in attention to such requirements.)*

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CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
Connecticut State Colleges & Universities
*BELOW THRESHOLD: **NEW ACADEMIC OFFERING** - INFORMATION REPORT FORM*

SECTION 1: BELOW-THRESHOLD GENERAL PROGRAM INFORMATION[1]

Institution: Southern Connecticut State University	Date of Submission to CSCU Office of the Provost: 4.27.2022
Characteristics of Below-Threshold Offering Name of Offering **Disaster Mental Health** Type of Offering *(e.g. Grad Certificate)* **Graduate Certificate** Anticipated Initiation Date: Fall 2022 Anticipated Date of First Completion *(if applicable)* : Spring 2023 Modality of Program: On ground **X Online** Combined If "Combined", % of fully online courses? Locality of Program**: X On Campus** Off Campus Both	**Credit Distribution of the Offering** # Credits in General Education: 0 # Credits in Program Core Courses: 9 # Credits of Electives in Field: 3 # Credits of Electives: 0 # Credits Special Requirements *(e.g. internship):* 0 Total # Credits the Institution Requires to Award the Credential 12
CIP Code No. 51.1599 Title of CIP Code Mental and Social Health Services and Allied Professions, Other.	

Description of Offering, Context and Justification *(Please provide a concise description of the proposed offering and learning objectives, including a list of courses if necessary for clarity. In one paragraph, please address need and anticipated benefits of the offering)*

The Disaster Mental Health graduate certificate is designed for health and human services providers who are interested in disaster relief with a focus on mental health. Drawing from interdisciplinary theories and research, students prepare to assess the biological, psychological, cultural, and social impact of disasters; to analyze how structural inequalities affect disasters and disaster recovery; and to select and apply trauma-informed, culturally responsive mental health interventions with individuals, families, groups, and communities at various phases of the disaster recovery process.

The Disaster Mental Health graduate certificate may be pursued in conjunction with other graduate degrees or as an independent graduate certificate program. The certificate will appeal particularly to graduate students in the SCSU College of Health and Human Services and to post-baccalaureate health and human services providers, first responders, community leaders, and disaster relief volunteers. No comparable graduate program exists in the CSCU system or in other New England colleges or universities.

Learning Objectives: Upon completion of this graduate certificate, students will be able to:

1. Identify stages of disaster recovery
2. Analyze the impact of structural factors, such as the role of marginalized identities and historical oppression, on disaster preparation, disasters, and disaster recovery
3. Define key theories and concepts related to trauma and post-traumatic growth
4. Identify and select trauma-informed, culturally responsive strategies for assessing, engaging, and intervening with children, families, and communities in the aftermath of a disaster
5. Understand and respond to unique features of grief and loss associated with a disaster experience
6. Appreciate the phenomenon of meaning-making as it relates to the aftermath of a disaster
7. Develop protective strategies to limit vicarious trauma and compassion fatigue in disaster relief

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iv. a new graduate option or certificate program of 12 or fewer semester credit hours
b) academic programs that do not qualify students to become eligible for federal financial aid.

8. Identify and resolve ethical issues in disaster mental health.

Course requirements

Core requirements (9 credits):

- SWK 586 Trauma and Disaster Mental Health (3 credits)
- SWK 522 Introduction to Post-Traumatic Growth (3 credits)
- SWK 524 Disaster Mental Health: Children and Families (3 credits)

Elective requirements (3 credits): Choice of one of the following:

- SWK 585 Grief and Loss: A Multidimensional Perspective (3 credits)
- Other elective by approval of the department (3 credits)

Cost Effectiveness and Availability of Adequate Resources *(As applicable, please provide a one paragraph narrative addressing resources, financial aspects of the program and how it will be sustained)*

The Disaster Mental Health Certificate will not require additional resources and will generate new revenue while serving three purposes: 1) enhance the MSW curriculum; 2) increase graduate enrollments; and 3) expand interprofessional education.

1) Enhance the MSW curriculum: The social work department does not currently schedule any graduate-level elective courses on a regular basis, although one elective course is required of all MSW students. Based on our curricular review and increasing MSW enrollments, the department has determined that at least two elective courses should be regularly scheduled every semester (summer, fall, and spring). Courses in the Disaster Mental Health graduate certificate will serve as useful elective courses for MSW students in every concentration and focus area. Because Social Work faculty are qualified, prepared, and scheduled to teach these courses, the graduate certificate **will not require additional resources**.
2) Increase graduate enrollments: The Disaster Mental Health graduate certificate will **generate new revenue** by enrolling non-matriculated students, encouraging matriculated students to take additional courses beyond their master's degree requirements, and by interesting certificate students in pursuing another graduate degree.
3) Expand interprofessional education: In developing the Disaster Mental Health graduate certificate, faculty look forward to collaborating with other SCSU departments in proposing interprofessional elective courses. Faculty plan to build community partnerships at the local, national, and international levels to provide MSW field placements, interprofessional internships, and other experiential learning opportunities. In the long-term, these community partnerships will lead to **grant writing and developmental opportunities** for various SCSU graduate programs concerned with health, education, ecology, and environmental justice.

Institutional Contact for this Proposal: Trudy Milburn	Title: AVPAA	Tel.: `203.392.5761 milburnt1@southernct.edu

Institution's Unit: *(e.g. School of Business)* and Location *(e.g. main campus)* Offering the Program:
College of Health and Human Services, main campus

SECTION 2: DETAILS OF NEW OFFERING *(Community Colleges)*

Curriculum

*(Please provide details of the courses for the proposed offering. Mark any new courses with an asterisk * and attach descriptions. Mark any courses that are delivered fully online with a double asterisk **. Please modify this format as needed for each case)*

Course Number and Name	L.O. #	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Core Courses				**Other Requirements**		
***SWK 586 Trauma and Disaster Mental Health	1	None				
**SWK 524 Disaster Mental Health: Children and Families	2, 3	SWK 586				
**SWK 522 Introduction to Post-Traumatic Growth	1, 3	SWK 586				
***SWK 585 Grief and Loss: A Multidimensional Understanding	1, 3	None				
Prerequisites						
Regionally-accredited bachelor's degree						
				Total Other Credits Required to Issue Credential		

Other Details

Learning Outcomes - L.O. *(Please list up to three of the most important student learning outcomes for the offering and concisely describe assessment methodologies to be used in measuring the outcomes. If the program will seek external accreditation or qualifies the completer to opt for a professional/occupational license, please frame outcomes in attention to such requirements.)*

1. Analyze the impact of structural factors, such as the role of marginalized identities and historical oppression, on disaster preparation, disasters, and disaster recovery
   Measured by SWK 586 Population framework assignment; SWK 522 Program proposal paper.
2. Identify and select trauma-informed, culturally responsive strategies for assessing, engaging, and intervening with children, families, and communities in the aftermath of a disaster
   Measured by SWK 524 Final paper; SWK 586 Case studies; SWK 567 Online Trauma-focused training.
3. Understand and respond to unique features of grief, loss, and post-traumatic growth associated with a disaster experience
   Measured by SWK 522 Program proposal paper; SWK 524 Case study; SWK 585 Final paper.

Course descriptions for **new courses**: SWK 585 and SWK 586

SWK 585 Grief and Loss: A Multidimensional Understanding (3 credits)
Exploration of theory and research on grief and loss, including the types of grief and loss; the grief process through the lifespan; the impact of upbringing and life experiences; measuring grief and loss; and structural factors on the grief process of individuals and communities, such as the role of marginalized identities, historical oppression, and structural violence. Students will gain understanding of the professional stress response and the importance of managing compassion fatigue and vicarious grief and loss for themselves and other front-line responders.

SWK 586 Trauma and Disaster Mental Health (3 credits)
This course is designed for social workers and other helping professionals who are preparing to serve individuals, families, groups, and communities in the aftermath of disasters. Students examine the scope of trauma and stress responses in general and in the context of disasters; consider medical, psychological, spiritual, social, and ecological conceptualizations of trauma; identify structural factors affecting disaster mental health among marginalized populations; and explore different understandings of trauma in various cultures around the world. As a culminating assignment, students develop a population-specific framework for assessing trauma and stress reactions in disaster mental health situations.

Course descriptions for **existing courses**: SWK 522 and SWK 524

SWK 522 Introduction to Post-Traumatic Growth (3 credits)
This course explores key issues and concepts in Post-Traumatic Growth (PTG) theory as applied in the field of disaster mental health. Students examine PTG in relation to the stages of lifespan development; consider neuro-biological concepts on the impact of trauma on the brain and how brain function evolves through the development of PTG; compare the concepts of PTG, resilience, and coping; and review current issues in researching PTG in individuals, families, and communities. Particular attention is paid to the professional stress response and the importance of managing compassion fatigue and vicarious trauma for front-line responders. Prerequisite: SWK 586 or by permission of the instructor.

SWK 524 Disaster Mental Health: Children and Families (3 credits)
This course explores interdisciplinary theories and research on the impact of disasters, disaster preparedness, and intervention methods with children and families. Topics include disaster stages, cycles, and populations; biological, psychological, and social factors that affect function and recovery; current research, policies, and barriers to gathering data; and the impact of preexisting structural social inequalities in the aftermath of a disaster. Prerequisite: SWK 586 or by permission of the instructor.

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SECTION 1: BELOW-THRESHOLD GENERAL PROGRAM INFORMATION[1]

Institution: Southern Connecticut State University	Date of Submission to CSCU Office of the Provost: 4.27.22
Characteristics of Below-Threshold Offering Name of Offering: Political Economy Type of Offering *(e.g. Grad Certificate)* **Minor** Anticipated Initiation Date: Fall 2023 Anticipated Date of First Completion *(if applicable)* : Modality of Program: On ground Online x Combined If "Combined", % of fully online courses? 40% Locality of Program: On Campus Off Campus **X** Both	**Credit Distribution of the Offering** # Credits in General Education: # Credits in Program Core Courses: # Credits of Electives in Field: 9 # Credits of Electives: 9 # Credits Special Requirements *(e.g. internship):* N/A Total # Credits the Institution Requires to Award the Credential 18
CIP Code No. 45.1004 Title of CIP Code Political Economy	

Description of Offering, Context and Justification *(Please provide a concise description of the proposed offering and learning objectives, including a list of courses if necessary for clarity. In one paragraph, please address need and anticipated benefits of the offering)*

The minor in political economy welcomes students who are interested in the connections between economics and politics. Economics has political effects and politics has economic effects, and these can be seen in a variety of areas including: international trade, international finance, globalization, health policy, education policy, urban politics, economic development and taxation. The minor also offers the opportunity for students to develop their quantitative skills and then to learn to apply them in assessing, evaluating and modeling public policy outcomes.

Electives (9 credits to be selected from ECO; 9 credits to be selected from PSC courses, from the list below)

ECO 270	Applied Business Statistics	ECO 200	Macro-Economic Analysis
ECO 305	Economic Data Analysis	ECO 201	Micro-Economic Analysis
ECO 311	Public Finance	ECO 303	Development Economics
ECO 320	Health Economics	ECO 307	Urban Economics
ECO 360	Eco. of Poverty & Inequality	ECO 316	Game Theory
ECO 321	Introductory Econometrics	ECO 330	Economics of Entrepreneurship
ECO 350	International Trade	ECO 351	International Finance
PSC 351	Public Policy	PSC 314	Urban Politics
PSC 310	Comparative Public Policy	PSC 328	State and Local Government
PSC 367	Quantitative Analysis	PSC 305	Political Economy of Development
PSC 335	Global Politics	PSC 331	International Organization

Students wishing to add this minor should take the following prerequisites as part of the LEP: ECO 100 Principles of Macroeconomics, ECO 101 Principles of Microeconomics, and either PSC 260 US Government (for

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b) academic programs that do not qualify students to become eligible for federal financial aid.

any of the 300 level American Politics courses) or PSC 270 International Relations (for any of the 300 level international relations courses)		
Cost Effectiveness and Availability of Adequate Resources *(As applicable, please provide a one paragraph narrative addressing resources, financial aspects of the program and how it will be sustained)* This minor is not expected to require any additional resources from either department. The courses currently listed for the minor are offered on a regular rotation. While the minor is expected to enhance enrollments in the listed courses, it is not expected to require additional sections of the courses or additional teaching faculty.		
Institutional Contact for this Proposal: Trudy Milburn	Title: AVP AA	Tel.: 2033925761 e-mail: milburnt1@southernct.edu
Institution's Unit: *(e.g. School of Business)* and Location *(e.g. main campus)* Offering the Program: School of Business, Main campus		

SECTION 2: DETAILS OF NEW OFFERING *(Community Colleges)*

Curriculum

*(Please provide details of the courses for the proposed offering. Mark any new courses with an asterisk * and attach descriptions. Mark any courses that are delivered fully online with a double asterisk **. Please modify this format as needed for each case)*

Course Number and Name	L.O. #	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Pre-Requisite	Cr Hrs
Total Other Credits Required to Issue Credential							

Learning Outcomes - L.O. *(Please list up to three of the most important student learning outcomes for the offering and concisely describe assessment methodologies to be used in measuring the outcomes. If the program will seek external accreditation or qualifies the completer to opt for a professional/occupational license, please frame outcomes in attention to such requirements.)*

1. Students will develop an understanding of how economics and politics interact and affect major national and global issues.
2. Students will learn the major concepts and theories within political economy and be able to apply them in order to explain and understand issues and problems.
3. Students will develop quantitative skills that will allow them to assess, evaluate, and model economic and public policies.
4. Students will develop their ability to critically think as they explore the intersection of economics and politics in the policy making process.

CT State Below Threshold Program Modifications
Spring 2022

1) Communication, A.S.
   - Additional course options added to electives lists
2) Criminal Justice, A.S. (Notification to APRC pending)
   - Updated with new CT State CJS course numbers
   - Added CJS 2590 Writing and Research in Criminal Justice as option within General Education Written Communication II category
   - Added appropriate course prerequisites throughout
   - Each concentration area now has 10 course options
   - Non CJS option courses reviewed for hidden prerequisites; any such course options removed
   - Reviewed CT State course outlines for SOC, PSY, SHE, CAR, ANT, ART, LGL, ACC, POL, COM, CSC, and CST courses. Based on this review, added new course options within concentration (if courses were complimentary to concentration and had no hidden prerequisites)
3) Criminology Studies, A.A. (Notification to APRC pending)
   - Updated with new CT State CJS course numbers
   - ENG 102 Literature and Composition identified as required course to fulfill Written Communication II requirement as it will satisfy prerequisite on CSU 200-level literature courses
   - Language added to Arts & Humanities general education elective recommending a 200-level literature course for transfer to CSU's
   - MATH 1200 Statistics I or MATH 1201 Statistics with Computer Applications identified as required course to fulfill Quantitative Reasoning requirement
   - Choice of CJS 105 Introduction to Law Enforcement or CJS 120 Police and the Community replaced with requirement of CJS 105 (CJS 1050)
4) Dental Assistant Certificate
   - Replace BIO 115 Human Biology with BIO 127 Cell Biology and Organ Systems
5) Digital Arts Technology
   - Course title changes
6) Early Childhood Education, A.S.
   - Remove choice of ECED 102 (ECE 182) Child Growth and Development or PSY 204 Child and Adolescent Development; ECED 102 required
7) Early Childhood Education (Transfer Studies), A.S.
   - Choice of ECED 102 (ECE 182) or PSY 204
   - Remove choice of SOC 111 Child, Family, School, and Community or ECED 275 Children, Families, and Communities; ECED 275 required.
   - Reduce open electives from 12 to 9
   - ECED 222 Curriculum and Methods for Diverse Learners added as a program requirement
8) Early Childhood (Teacher) Credential Studies, ECTC Level A, A.S.
   - Choice of ECED 102 (ECE 182) or PSY 204
9) Environmental Science: Sustainability, A.S.
   - Additional courses added to elective options
10) ESOL: Advanced English Proficiency Certificate
    - Revision to course numbers to reflect CT State aligned courses
11) Health Information Technology – Data Management, A.S.
    - Replace CSA*140 Database Application with CSC*231 Database Design
    - Replace MAT 167 with the aligned CT State MATH 2200.
    - Change HIM*280 Health Information Professional Practice Experience to 1 credit and add new course HIM*XXX Medical Coding Case Studies for 2 credits.
    - Add CSC*101 Introduction to Computers to program requirements.
12) Massage Therapy, A.S. Program
    - Replacing program required course MED 116 Anatomy & Physiology for Medical Assisting with MAS 116 Anatomy & Physiology for Healthcare
13) Occupational Therapist Assistant, A.S.

- Replace BIO 115 Human Biology with BIO 127 Cell Biology and Organ Systems

14) Radiation Therapy, A.S Program
    - Replace required RST 200 Cross-sectional Anatomy course with a choice of RST 200 or RDT 140 CT Imaging and Sectional Anatomy
15) Speech Language Pathology Assistant, A.S.
    - New required course SLP 125 Speech Sound Disorders & Treatment in Children added; program course titles revised
16) Surgical Technology, A.S.
    - Replace BIO 115 Human Biology with BIO 127 Cell Biology and Organ Systems
17) Visual Art: Graphic Design Option
    - Additional course options added to the electives list