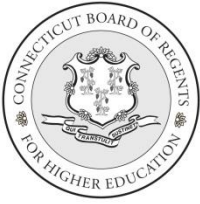


**BOR ACADEMIC AND STUDENT AFFAIRS COMMITTEE
AGENDA**

Friday, November 20, 2015 – 9:30 a.m.

61 Woodland Street, Htfd., CT - BOR Conference Room [ground floor]

1. Approval of Minutes
 - a. Regular Meeting - September 25, 2015
 - b. Special Meeting October 15, 2015
2. CONSENT ITEMS
 - a. Terminations
 - i. Computer Aided Drafting Certificate – ACC
 - ii. Publications Certificate - ACC
 - iii. Software Development Certificate - ACC
 - iv. Child Development Associate Prep Certificate - ACC
 - v. Community-Based Corrections Certificate – ACC
 - vi. Fine Arts: Photography Option – QVCC
 - vii. Fine Arts: Graphic Arts Option – QVCC
3. ACTION ITEMS
 - a. TAP
 - i. Update
 - ii. Biology Pathway
 - b. Modifications
 - i. Modern Languages-Specialization in Spanish – MA – CCSU
 - ii. Health Information Management – Cert – COSC
 - c. New Programs
 - i. Environmental Systems and Sustainability Studies – BS – SCSU
 - ii. Public Utilities Management – AS & BS – GCC, SCSU
 - iii. Precision Sheet Metal Manufacturing Cert – Three Rivers CC
 - iv. Doctorate of Nurse Anesthesia Practice (DNAP) – CCSU
4. INFORMATION ITEMS
 - a. State Board of Education Letter [re COSC, ECSU, CCSU, SCSU]
 - b. NEASC accreditation modification for Mfg. Training Center – MxCC
 - c. CEPH approval to begin accreditation of HPS program - WCSU
5. OTHER BUSINESS
 - a. Update – EPAC – Elsa Nunez
 - b. Highlights - Accountability Report – Bill Gammell, Rommel Guadalupe
6. EXECUTIVE SESSION
 - a. Security Police Forces Resolution



CT BOARD OF REGENTS FOR HIGHER EDUCATION

ACADEMIC & STUDENT AFFAIRS COMMITTEE

Meeting September 25, 2015
9:30 a.m.– 61 Woodland Street, Hartford

MINUTES

Regents Present: Merle Harris, Stephen Adair, Naomi Cohen, Lawrence DeNardis

Regents Absent: Catherine Smith

Staff Present: Estela Lopez, Corby Coperthwaite, William Gammell, Maureen McClay, Steve McDowell, Nancy Melnicsak, Arthur Poole, Erika Steiner, Ernestine Weaver

Other Attendees: Missy Alexander (WCSU), Lisa Bigelow (CCSU), Ann Branchini (TRCC), Irene Crawford (SCSU), Michael Davis (MCC), Sheri Fafunwa-Ndibe (CCSU), Robyn Housemann (WCSU), Jeremiah Jarrett (CCSU), Mark Kosinski (GCC), Kimberly Kostelis (CCSU), Evelyn Phillips (CCSU), Luis Recoder-Nunez (CCSU), Michael Rooke (TxCC), Gregory Sneed (CCSU), Lynn Stoddard (ECSU), Debbie Thomas (CCC), Paul Torcellini (ECSU)

Chair Merle Harris called the meeting to order at 9:37 a.m.

1. Minutes of August 28, 2015 – **N. Cohen moved to approve the minutes, seconded by L. DeNardis and unanimously approved.**
2. Executive Session – Chair Harris requested a motion to go into Executive Session stating the purpose of security issues and naming the state statutes. N. Cohen made the motion, seconded by L. DeNardis and unanimously approved. Chair Harris announced no votes would be taken and asked the following individuals to remain: Stephen Adair (ex-officio member of the committee), and CSCU staff members Erin Fitzgerald, Estela Lopez, Maureen McClay, Elsa Nunez, Chief Gregory Sneed, Erika Steiner, Ernestine Weaver.

Chair Harris announced the return to Open Session at 11:07 a.m. The public was invited back and the meeting agenda continued with Chair Harris first announcing the meeting was now in Open Session and no votes had been taken.

3. Consent Items – **A motion to approve consent items was made by N. Cohen, seconded by L. DeNardis. It was unanimously approved.** Item on Consent was:
 - a. Modification

i. International and Area Studies – BA – CCSU

4. Action Items

a. New Programs

- i. Dance Education – BS – CCSU. A motion to approve was made by N. Cohen, seconded by L. DeNardis. Provost Lopez presented the program and introduced Provost Carl Lovitt and Dr. Kim Kostelis. They mentioned the work to normalize the credits to 120 and provided details on the program and the need in the state. In answer to a question regarding jobs, they noted there were presently over 40 openings, many in magnet schools with others in commercial areas and hospitals. It was noted the program would be self-sustaining. Regent DeNardis offered comments stating he was again concerned about too many new programs and not enough discontinuances. Dr. Kostelis provided additional comments that CCSU is the only institution in the state to certify for dance and at this time students must take many more credits than needed in order to get certified. This program would greatly benefit the students. A side discussion ensued regarding program review and low enrolled programs with the regents asking Provost Lovitt to provide CCSU's plan to address the situation. Dr. Lovitt spoke about several initiatives they were undertaking, including reorganization and looking at terminating programs. Dr. Lopez added other comments on system initiatives being done. The vote was taken and the motion passed 2/0/1: two in favor; none opposed; DeNardis abstained.

b. State University Centers & Institutes – Seven-Year Reports.

i. Continuations

1. CCSU. Dr. Lopez provided an introduction and invited Provost Lovitt to present Central's reports. Dr. Lovitt provided general information on the Centers – what they do and what they provide to students. He then gave some details on each of the five Centers being considered and noted the directors from each were present. He observed how each addressed special needs, provided hands-on experiences and were part of the life-blood of the university. Funding for each varied and included grants, gifts, operational funds, fees. A motion to approve CCSU's Centers was made by N. Cohen, seconded by L. DeNardis and unanimously approved. CCSU's Centers approved for continuation were:
 - a. Center for Africana Studies
 - b. Center for Educational Research at Outer Island
 - c. Center for International Education
 - d. Latin American, Latino and Caribbean Center
 - e. Center for Public Policy and Social Research
2. ECSU. Dr. Lopez introduced Provost Pachis and the directors of Eastern's two centers, Dr. Paul Torcellini and Lynn Stoddard. They talked first about why there was a Center and an Institute, noting the Center had an Endowed Chair and centered on education. The independent Institute was established for far-reaching ideas and plans and was self-sustaining. It has raised over \$10 million dollars over the years. They commented on policy development, direct service to municipalities and the savings they help provide. A motion to approve by N. Cohen, seconded by L. DeNardi and unanimously approved. Approved for continuation at ECSU were:

- a. Center for Sustainable Energy Studies
 - b. Institute for Sustainable Energy
 - 3. WCSU. Dr. Lopez provided preliminary remarks and introduced Dr. Missy Alexander and Dr. Robyn Housemann from Western. Dr. Alexander spoke about the Nature Preserve noting it served Western's students as well as students from the local middle school and the public. They were looking to also expand to high schools. Students do on-site research. Funding was from an endowment and partially from the operational budget. Dr. Housemann provided details on the Institute for Holistic Studies, the programs offered and other opportunities for students and the outside community. A motion to approve was made by N. Cohen, seconded by L. DeNardis and unanimously approved. The approved continuations at WCSU were:
 - a. Institute for Holistic Health Studies
 - b. Westside Nature Preserve Center
 - ii. Discontinuation
 - 1. Center for Multicultural Research and Education – CCSU. Provost Lovitt noted CCSU was recommending discontinuation. The Center was not heavily used and the director had now stepped down. They were looking at other broader issues. A motion to approve discontinuation was made by L. DeNardis, seconded by M. Harris and unanimously approved.
 - iii. Suspension
 - 1. Institute of Hospitality and Tourism – CCSU. Provost Lovitt explained they were recommending suspension in order to allow them the opportunity to come back with a new plan and reinvigorate the institute. He stated their Hospitality/Tourism program now sits in the Geography department and there were plans to reorganize it into its own program. He noted the suspension was only until the Fall of 2017. A motion to approve made by L. DeNardis, seconded by M. Harris and unanimously approved.
 - c. Consideration of 2014-15 Academic Program Review by CSCU Institutions. Dr. Lopez introduced Arthur Poole and thanked him and other colleagues for providing this report. She noted this was a learning year to establish good timing and procedure. She pointed out some highlights under the Rationale section as well as the summation chart, noting the terminations. She spoke about the awareness of all the deans and provosts not to continue low-enrollment programs, also pointing out they were looking at patterns – low enrollments, number of resources, etc. Discussion ensued. Also discussed further was the process for termination that included phase-out for students in a program and other reasons for termination besides low enrollment, including quality and workforce demand.
- 5. Other Business
 - a. Revised ASA Committee Charter. Chair Harris pointed out the changes discussed at the last meeting had been incorporated. There was consensus for acceptance.

There was no other business. **A motion to adjourn was made by N. Cohen, seconded by L. DeNardis and unanimously approved.** The meeting adjourned at 12:15 p.m.



CONNECTICUT STATE COLLEGES & UNIVERSITIES

BOARD OF REGENTS FOR HIGHER EDUCATION

CT BOARD OF REGENTS FOR HIGHER EDUCATION

ACADEMIC & STUDENT AFFAIRS COMMITTEE

Special Meeting October 15, 2015

Housatonic Community College

MINUTES

Regents Present: Merle Harris, Stephen Adair, Naomi Cohen, Sarah Greco

Regents Absent: Lawrence DeNardis, Catherine Smith

Staff Present: Estela Lopez

Chair Merle Harris called the meeting to order at 1:15 p.m. Members of the Committee were introduced.

1. Conversation with Housatonic Community College Faculty. Discussion and dialogue with faculty present proceeded.

There was no other business. A motion to adjourn was unanimously approved. The meeting adjourned at 2:05 p.m.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Termination of a Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Computer Aided Drafting, leading to an Certificate at Asnuntuck Community College effective December 15, 2015

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

Termination of a program **Computer Aided Drafting** leading to a Certificate at Asnuntuck Connecticut Community College, with no phase out period needed.

BACKGROUNDSummary

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment.

Rationale

During the spring 2011 semester, one student was enrolled. And during the fall 2012 semester, one student was enrolled. Since that time, this certificate has not had any students enrolled. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated.

Phase Out/Teach Out Strategy

Because there are currently no students enrolled in this certificate, there is no need to phase out the program. This certificate can be terminated effective Dec 2015.

October 14, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR DISCONTINUATION OF EXISTING PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 1: GENERAL INFORMATION

Institution: Asnuntuck Community College		Date of Submission to BOR Office:	
Discontinued Program: 003076 CIP: 151302 DHE# (if available):		Accreditation Date:	
Phase Out /Teach Out Period N/A Expected Date of Program Termination			
Program Characteristics			
Name of Program: Computer Aided Drafting Certificate			
Degree: Title of Award (e.g. Master of Arts)			
Certificate: (specify type and level) Certificate			
Modality of Program: On ground Online <input checked="" type="checkbox"/> Combined			
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program:			
Institutional Contact for this Proposal: Michael Stefanowicz		Title: Dean of Academic Affairs	Tel.: 860-253-3102 e-mail: mstefanowicz@asnuntuck.edu

BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):	
Log of BOR Steps Towards Discontinuation Approval:	
Resolution number for BOR Approval:	Date of Approval:
Conditions for Discontinuation Approval (if any)	

SECTION 2: RATIONALE AND JUSTIFICATION FOR PROGRAM DISCONTINUATION

Narrative

Please 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.

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment. During the spring 2011 semester, one student was enrolled. And during the fall 2012 semester, one student was enrolled. Since that time, this certificate has not had any students enrolled. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated.

Phase Out/Teach Out Strategy

Please 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.)

Because there are currently no students enrolled in this certificate, there is no need to phase out the program. This certificate can be terminated effective fall 2015.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Termination of a Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Publications, leading to an Certificate at Asnuntuck Community College effective December 15, 2015

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

Termination of a program in **Publications** leading to a Certificate at Asnuntuck Connecticut Community College, with no phase out period needed.

BACKGROUNDSummary

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment.

Rationale

During the fall 2009 semester, two students were enrolled. Since that time, this certificate has not had any students enrolled. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated.

Phase Out/Teach Out Strategy

Because there are currently no students enrolled in this certificate, there is no need to phase out the program. This certificate can be terminated effective Dec 2015.

October 14, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR DISCONTINUATION OF EXISTING PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 1: GENERAL INFORMATION

Institution: Asnuntuck Community College		Date of Submission to BOR Office:
Discontinued Program: 008970 CIP: 500402 DHE# (if available):		Accreditation Date:
Phase Out /Teach Out Period N/A Expected Date of Program Termination		
Program Characteristics		
Name of Program: Publications Certificate		
Degree: Title of Award (e.g. Master of Arts)		
Certificate: (specify type and level) Certificate		
Modality of Program: On ground Online <input checked="" type="checkbox"/> Combined		
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program:		
Institutional Contact for this Proposal: Michael Stefanowicz	Title: Dean of Academic Affairs	Tel.: 860-253-3102 e-mail: mstefanowicz@asnuntuck.edu

BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):	
Log of BOR Steps Towards Discontinuation Approval:	
Resolution number for BOR Approval:	Date of Approval:
Conditions for Discontinuation Approval (if any)	

SECTION 2: RATIONALE AND JUSTIFICATION FOR PROGRAM DISCONTINUATION

Narrative

Please 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.

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment. During the fall 2009 semester, this certificate had two students enrolled. However, since that time, no other students have enrolled. Currently, there are zero students enrolled. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated.

Phase Out/Teach Out Strategy

Please 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.)

Because there are currently no students enrolled in this certificate, there is no need to phase out the program. This certificate can be terminated effective fall 2015.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Termination of a Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Software Development, leading to an Certificate at Asnuntuck Community College effective December 15, 2015

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

Termination of a program in **Software Development** leading to a Certificate at Asnuntuck Connecticut Community College, with no phase out period needed.

BACKGROUNDSummary

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment.

Rationale

During the fall 2011, spring 2012 and fall 2012 semesters, this certificate had one student enrolled. Since the spring 2013 semester, zero students have been enrolled in this certificate. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated..

Phase Out/Teach Out Strategy

Because there are currently no students enrolled in this certificate, there is no need to phase out the program. This certificate can be terminated effective Dec 2015.

October 14, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR DISCONTINUATION OF EXISTING PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 1: GENERAL INFORMATION

Institution: Asnuntuck Community College		Date of Submission to BOR Office:
Discontinued Program: 002445 CIP: 110899 DHE# (if available):		Accreditation Date:
Phase Out /Teach Out Period N/A Expected Date of Program Termination		
Program Characteristics		
Name of Program: Software Development Certificate		
Degree: Title of Award (e.g. Master of Arts)		
Certificate: (specify type and level) Certificate		
Modality of Program: On ground Online <input checked="" type="checkbox"/> Combined		
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program:		
Institutional Contact for this Proposal: Michael Stefanowicz	Title: Dean of Academic Affairs	Tel.: 860-253-3102 e-mail: mstefanowicz@asnuntuck.edu

BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):	
Log of BOR Steps Towards Discontinuation Approval:	
Resolution number for BOR Approval:	Date of Approval:
Conditions for Discontinuation Approval (if any)	

SECTION 2: RATIONALE AND JUSTIFICATION FOR PROGRAM DISCONTINUATION

Narrative

Please 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.

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment. During the fall 2011, spring 2012 and fall 2012 semesters, this certificate had one student enrolled. Since the spring 2013 semester, zero students have been enrolled in this certificate. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated.

Phase Out/Teach Out Strategy

Please 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.)

Because there are currently no students enrolled in this certificate, there is no need to phase out the program. This certificate can be terminated effective fall 2015.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Termination of a Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Child Development Associate Preparation (CDA), leading to a Certificate at Asnuntuck Community College effective December 15, 2015

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

Termination of a program in **Child Development Associate (CDA) Preparation** leading to a Certificate at Asnuntuck Connecticut Community College, with no phase out period needed.

BACKGROUND

Summary

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment.

Rationale

During the fall 2009 semester, three students were enrolled in the certificate. As of the spring 2010 semester two students were enrolled. That number remained constant until the spring 2015 semester, which showed only two students enrolled. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated.

Phase Out/Teach Out Strategy

Because there are currently no students enrolled in this certificate, there is no need to phase out the program. This certificate can be terminated effective Dec 2015.

October 14, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR DISCONTINUATION OF EXISTING PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 1: GENERAL INFORMATION

Institution: Asnuntuck Community College		Date of Submission to BOR Office:	
Discontinued Program: 011778 CIP: 190709 DHE# (if available):		Accreditation Date:	
Phase Out /Teach Out Period N/A Expected Date of Program Termination			
Program Characteristics			
Name of Program: Child Development Associate Prep			
Degree: Title of Award (e.g. Master of Arts)			
Certificate: (specify type and level) Certificate			
Modality of Program: On ground Online <input checked="" type="checkbox"/> Combined			
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program:			
Institutional Contact for this Proposal: Michael Stefanowicz		Title: Dean of Academic Affairs	Tel.: 860-253-3102 e-mail: mstefanowicz@asnuntuck.edu

BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):	
Log of BOR Steps Towards Discontinuation Approval:	
Resolution number for BOR Approval:	Date of Approval:
Conditions for Discontinuation Approval (if any)	

SECTION 2: RATIONALE AND JUSTIFICATION FOR PROGRAM DISCONTINUATION

Narrative

Please 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.

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment. During the fall 2009 semester, three students were enrolled in the certificate. As of the spring 2010 semester two students were enrolled. That number remained constant until the spring 2014 semester, which showed only one student enrolled. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated.

Phase Out/Teach Out Strategy

Please 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.)

For the remaining student enrolled, the student's transcript will be reviewed to determine which course(s) still need to be taken to complete the certificate. Upon review of this information, a timeframe will be determined as to how long a period of time it is plausible for the student to complete the remaining requirement(s). The student will be contacted by the Registrar's Office to notify them that the certificate is being discontinued, the course(s) that still need to be taken, and the amount of time the student will have to complete the requirement(s).

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Termination of a Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Community-Based Corrections, leading to an Certificate at Asnuntuck Community College effective December 15, 2015

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

Termination of a program in **Community-Based Corrections** leading to a Certificate at Asnuntuck Connecticut Community College, with no phase out period needed.

BACKGROUNDSummary

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment.

Rationale

As of the spring 2014 semester, the one remaining student enrolled in the certificate graduated. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated.

Phase Out/Teach Out Strategy

Because there are currently no students enrolled in this certificate, there is no need to phase out the program. This certificate can be terminated effective Dec 2015.

October 14, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR DISCONTINUATION OF EXISTING PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 1: GENERAL INFORMATION

Institution: Asnuntuck Community College		Date of Submission to BOR Office:	
Discontinued Program: 013161 CIP: 430107 DHE# (if available):		Accreditation Date:	
Phase Out /Teach Out Period		Expected Date of Program Termination	
Program Characteristics			
Name of Program: Community-Based Corrections Certificate			
Degree: Title of Award (e.g. Master of Arts)			
Certificate: (specify type and level) Certificate			
Modality of Program: On ground Online <input checked="" type="checkbox"/> Combined			
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program:			
Institutional Contact for this Proposal: Michael Stefanowicz		Title: Dean of Academic Affairs	Tel.: 860-253-3102 e-mail: mstefanowicz@asnuntuck.edu

BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):	
Log of BOR Steps Towards Discontinuation Approval:	
Resolution number for BOR Approval:	Date of Approval:
Conditions for Discontinuation Approval (if any)	

SECTION 2: RATIONALE AND JUSTIFICATION FOR PROGRAM DISCONTINUATION

Narrative

Please 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.

Under the guidance of BOR policy, this certificate is being discontinued due to low enrollment. As of the spring 2014 semester, the one remaining student enrolled in the certificate graduated. Due to these low enrollments, the College has determined that this certificate is no longer in demand and therefore, should be terminated.

Phase Out/Teach Out Strategy

Please 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.)

There is no need for a phase out/teach out strategy because there are no students enrolled in this certificate.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Termination of a Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Fine Arts-Photography Option, leading to an Associate of Arts degree at Quinebaug Valley Community College effective January 1, 2016

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Termination of a Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Fine Arts-Graphic Arts Option, leading to an Associate of Arts degree at Quinebaug Valley Community College effective January 1, 2016

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

Termination of program in Fine Arts-Graphic Arts Option and Fine Arts- Photography Option leading to an Associate of Arts effective January 1, 2016.

BACKGROUNDSummary

The Quinebaug Valley Community College's Fine Arts-Graphic Arts Option and Fine Arts- Photography Option need termination for the following reasons:

1. QVCC's Fine Arts degree was previously split into three degrees (Fine Arts, Fine Arts-Graphic Arts Option and Fine Arts-Photography Option). Having the specific track options of Graphic Arts and Photography was too limiting. It forced students into a specialization too early. QVCC's program has been consolidated into one degree- Visual Arts which had previously been approved on May 21, 2015 and these terminations should have taken place at the same time.
2. Classroom enrollment was impacted since the eligible pool of students in the department required to take classes in a particular option was too small.
3. The Fine Arts Program was modified and is now the Visual Arts Program. The Visual Arts programs allows for electives in both of the prior specialized areas.
4. The newly named Visual Arts programs reduces the amount of credits from 66 to 60.

To review Fine Arts, Fine Arts-Graphic Option and Fine Arts- Photography Option were reduced to one program- Visual Arts. Fine Arts was renamed Visual Arts and approved on May 21, 2015. At the time the Graphic Option and Photography Option should have been eliminated but this did not occur. This termination completes the goal of the redesigned program.

Rationale

The Fine Arts program was reduced from three degrees options to one. It was done so to comply with normalization of credits (reduction to 60 credits), ease of transfer and to meet enrollment trends. Previously curriculum changes were approved (when program was renamed Visual Arts) to still allow for exposure to the Graphic Arts and Photography coursework. The renamed and approved Visual Arts Degree provides a strong basic foundation in art combined with a broad background in general education allowing for ease of transfer. The program provides a focus on Drawing, Two-Dimensional Design, Three-Dimensional Design, Art History and Computer Graphics. Elective courses allow exposure to Animation, Illustration, Graphic Design, Advanced Computer Graphics, Ceramics, Photography, Painting and Printmaking.

Phase Out/Teach Out Strategy

There is no teach out because the program has not changed. The same classes can be taken to satisfy the Graphic Arts Option or Photography Option. All students will simply receive the Visual Arts Degree.

Resources

No Additional Resources required.

October 14, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR DISCONTINUATION OF EXISTING PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 1: GENERAL INFORMATION

Institution:	Quinebaug Valley Community College	Date of Submission to BOR Office:	
Discontinued Option: PHOTOGRAPHY OPTION	CIP:	DHE# (if available):	Accreditation Date:
Phase Out /Teach Out Period: One Year	Expected Date of Program Option Termination		Fall 2015
Program Characteristics			
Name of Option: PHOTOGRAPHY OPTION			
Degree: Title of Award (e.g. Master of Arts)			
Certificate: (specify type and level)			
Modality of Program: On ground Online Combined			
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program:			
Institutional Contact for this Proposal:		Title:	Tel.: 860 932-4102
Annie Joly		Professor/Coordinator, Visual Art	e-mail:ajoly@qvcc.edu

BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):	
Log of BOR Steps Towards Discontinuation Approval:	
Resolution number for BOR Approval:	Date of Approval:
Conditions for Discontinuation Approval (if any)	

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR DISCONTINUATION OF EXISTING PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 2: RATIONALE AND JUSTIFICATION FOR PROGRAM DISCONTINUATION

Narrative

Please 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.

Parent Degree Program has been changed to Visual Arts. Photography Option no longer needed.

Phase Out/Teach Out Strategy

Please 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.)

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR DISCONTINUATION OF EXISTING PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 1: GENERAL INFORMATION

Institution:	Quinebaug Valley Community College	Date of Submission to BOR Office:	
Discontinued Option: GRAPHIC ARTS OPTION	CIP:	DHE# (if available):	Accreditation Date:
Phase Out /Teach Out Period: One Year	Expected Date of Program <i>Option</i> Termination		Fall 2015
Program Characteristics			
Name of Option: GRAPHIC ARTS OPTION			
Degree: Title of Award (e.g. Master of Arts)			
Certificate: (specify type and level)			
Modality of Program: On ground Online Combined			
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program:			
Institutional Contact for this Proposal:		Title:	Tel.: 860 932-4102
Annie Joly		Professor/Coordinator, Visual Art	e-mail:ajoly@qvcc.edu

BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):	
Log of BOR Steps Towards Discontinuation Approval:	
Resolution number for BOR Approval:	Date of Approval:
Conditions for Discontinuation Approval (if any)	

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR DISCONTINUATION OF EXISTING PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 2: RATIONALE AND JUSTIFICATION FOR PROGRAM DISCONTINUATION

Narrative

Please 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.

Parent Degree Program has been changed to Visual Arts. Graphic Arts Option no longer needed.

Phase Out/Teach Out Strategy

Please 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.)

Transfer and Articulation Policy
Name and local status of pathway transfer degrees

The Transfer and Articulation Policy degree will be an umbrella degree with designations for each specific pathway and will be labeled by discipline as,

CSCU Pathway Transfer A.A. / A.S. Degree: [Discipline] Studies

These pathways will not be advising options, but fully spelled-out degree pathways under the CSCU Transfer Pathway A.A. / A.S. Degree. Each campus will designate an individual who will provide general oversight for all pathways and directly oversee pathways for which there is no discipline-specific program coordinator. For programs that are identified as viable by their campuses and are part of existing programs with existing program coordinators, oversight will be shared between the discipline program coordinator and the campus's pathways overseer. In the case of joint oversight, the responsibilities and rights of the program coordinator and the TAP overseer should be clearly articulated by each campus. For any discipline that becomes viable as a potential program as a result of a TAP pathway, each campus will decide how it will be overseen.

The approval of the overall degree – designated as **CSCU Pathway Transfer A.A. / A.S. Degree** – will follow the full governance process on each college campus for new degree approval. Thereafter, the specific discipline pathways may follow a reduced process consistent with each campus's governance.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Modification of a Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve modification of the Masters of Arts in Modern Languages to allow for a wholly online option in Spanish at Central Connecticut State University.

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

Modification of the Masters of Arts in Modern Languages to allow for a wholly online option in Spanish at Central Connecticut State University

BACKGROUND

Summary

The MA in Modern Languages with a Specialization in Spanish has been awarded at CCSU since 2000. Over the last several years the department has increasingly offered online graduate courses that have been effective in delivering the material. The requirements of the proposed program do not differ from the existing MA.

Need for the Program

As indicated by the State Department of Education, all language teachers in the State of Connecticut are required to obtain a master's degree in their language of specialty. The Department of Modern Languages at CCSU, well aware of the implications of this, has been working toward the creation of innovative avenues to allow students to fulfill State requirements. With these needs in mind, we are proposing to add a new specialization to the Modern Language Master of Arts degree program, offered completely online and designed to offer optimal preparation for already qualified teachers or other graduate students of Spanish.

The proposed modification to allow for a fully online MA is tailored to the needs of students seeking a graduate program in Spanish as it allows for more flexible ways to complete class activities and assignments from any location.

Curriculum

The Modern Language Department established the following four learning outcomes for students taking coursework leading to an MA degree. Students are expected to:

1. *Conduct research in different areas of the field of Spanish: literature, culture, pedagogy, and applied linguistics.* The Department assesses this outcome in ML 598 and uses several instruments to assess students' understanding of different literary approaches and research. These instruments include class participation, oral presentations, and written essays. Students must also present a portfolio at the end of the course.
2. *Use the target language to write about major works in Spanish or Spanish American literature.* The Department uses Written Essays in literature classes to assess this outcome.
3. *Use the target language to write about topics related to the cultures of Spain or to Spanish culture in the Americas.* The Department uses Written Essays in culture classes to assess this outcome.
4. *Use the target language to analyze Spanish grammar as well as to analyze the target language structure.* The Department uses several instruments to assess students' knowledge of the target language structure. These instruments include class participation, written essays and syntactical analysis of language structure.

The proposed online MA in Spanish program mirrors the existing program of 30 crs. of graduate coursework. Applicants for this degree program should have a baccalaureate degree with a minimum of 24 credits in preparation in Spanish. The department's Graduate Studies Committee

reserves the right to assess a candidate's oral and writing proficiency through an oral interview or written sample.

The structure and curriculum of this program will be as follows:

30 cr. Plan A or Plan B as follows:

Core courses (6 cr.):

SPAN 560* The Structure of the Spanish Language. (3 cr)

ML 598* Research in Modern Languages. (3 cr)

Directed electives (15 cr.):

Literature: Choose 12 cr. from SPAN 515, 520, 525*, 526*, 530, 535, 545, 551, 553, 571, 572*, 576.

Culture and Civilization: Choose 3 credits from SPAN 534, 588* or ML 550*.

Electives (6-9 cr.):

Selected in consultation with advisor. Students may include any of the above mentioned courses and also ML 490*, offered in the summer.

Capstone (0-3 cr.):

Spanish 599 Thesis (Plan A=3 cr.) or Comprehensive Examination (Plan B= 0 cr.)

Note: A maximum of 9 credits at the 400-level is allowed

*These courses have already been developed and offered online. ML 550 is a 3 cr. course offered in the summer as part of our Summer Institute for Teachers of Spanish (SITS). Students enrolled in our SITS program take 9 crs. of ML 550. The total number of credits already developed online is 30.

ML 598 (3 crs.) is offered every fall. Span 560 (3 crs.) is offered every spring. ML 550 (9 crs.) and ML 490 (3 crs.) are offered in the summer. For the past two academic years, our department has offered two online courses each semester. We are confident that within the next couple of years, our online offerings will be even higher.

Students

Spanish is unquestionably the second language of the United States, spoken natively by an estimated 35 million people or about 12% of the total U.S. population. Furthermore, the increase in the Spanish-speaking population throughout the country is projected to continue at an accelerated pace in the decades ahead.

These demographic changes have noticeably affected our national school systems where enrollments in Spanish are growing enormously at both middle and high school levels. Even in Connecticut, administrators are under great pressure to meet the demand for instruction in Spanish, to hire well-trained teachers, and to assure that the instruction is of excellent quality.

As indicated by the State Department of Education, all language teachers in the State of Connecticut are required to obtain a master's degree in their language of specialty. Given that the majority of the students participating in our graduate programs in Spanish are certified teachers in CT, the Department of Modern Languages at CCSU has been working toward the creation of innovative avenues to allow students to fulfill State requirements. With these needs in mind, the proposed new specialization to the Modern Language Master of Arts degree program, offered completely online and designed to offer optimal preparation for already qualified teachers or other graduate students of Spanish, is intended to address this need. Furthermore, our department has taken specific measures to advertise our already developed online courses to prospective students of other states. For the past several years, our department has participated at professional conferences in MA as exhibitors and has purchased full-page ads in professional association websites in MA, NY and VT. Our Summer Institute for Teachers of Spanish has already benefitted from these initiatives, and we expect enrollment in all of our graduate courses offered online to experience gradual but steady increases in the future.

Faculty

The Modern Language Department has seven full-time Spanish faculty members who are fully qualified to teach graduate courses. They all have doctoral degrees from both American and International institutions of higher education, and have several years of experience teaching courses at all levels, including online courses.

Learning Resources

All Spanish faculty have licensing permits to use Camtasia, a program that has allowed us to create professional videos through which part of the instruction is delivered. Our department has also purchased high definition microphones for all faculty to record our presentations with the highest possible quality. Our courses are delivered through Blackboard. Regular interaction between faculty and students as well as among students is done through chat rooms and WebEx. Kaltura Media allows our faculty to make additional comments about class content.

Five of the seven full-time and one of our part-time faculty members have been involved in designing and teaching online graduate courses. They have all attended online training workshops, including a recent Quality Matters (QM) training session. Quality Matters is a non-profit organization dedicated to quality assurance in online education. The QM Mission is to promote and improve the quality of online education and student learning through:

1. Development of research-supported, best practice-based quality standards and appropriate evaluation tools and procedures.
2. Recognition as experts in online education quality assurance and evaluation.
3. Fostering institutional acceptance and integration of QM standards and processes into organizational improvement efforts focused on improving the quality of online education.
4. Provision of faculty development training in the use of QM Rubric(s) and other quality practices to improve the quality of online/blended courses.

5. Provision of quality assurance through the recognition of quality in online education.

Facilities

This program modification has no effect on facilities.

Fiscal Note

All faculty and administrative costs are anticipated to remain the same. This modification will simply provide the means for more students to enroll in existing courses.

\$200 in equipment is needed for one additional high definition microphone and \$170 for one additional Camtasia license. \$1300 in estimated indirect costs include two online advertisements in the Language Educator Online, the online publication of the American Council on the Teaching of Foreign Languages (ACTFL)

Review of Documents:

- a) Campus Review
- b) Campus Budget and Finance
- c) Campus President
- d) Academic Council
- e) System Office

Accreditation:

NEASC

October 14, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) - 01/20/12

SECTION 1: GENERAL INFORMATION

Institution: Central Connecticut State University	Date of Submission to BOR Office:
Most Recent NEASC Institutional Accreditation Action and Date: August 2013	
Original Program Characteristics CIP Code No. 160101 Title of CIP Code: Modern Languages CIP Year: 2000 or 2010 X Name of Program: MA in Modern Languages – Specialization in Spanish Degree: Title of Award (e.g. Master of Arts) MA Certificate: (specify type and level) Graduate Date Program was Initiated: program was accredited in 1976 Modality of Program: x On ground Online Combined If "Combined", % of fully online courses? Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 30	Original Program Credit Distribution # Cr in Program Core Courses: 6 # Cr of Electives in the Field: 15 # Cr of Free Electives: 6-9 # Cr Special Requirements (include internship, etc.): 0-3 <u>Total # Cr in the Program</u> (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: 30
Type of Program Modification Approval Being Sought (mark all that apply): Licensure and Accreditation (specify whether New Certificate, Minor, Option, Concentration, or Other) Significant Modification of Courses/Course Substitutions Offering of Program at Off-Campus Location (specify new location) x Offering of Program Using an Alternate Modality (e.g. from on ground to online) we will still deliver the program on ground to some students. This will be one option available to all Change of Degree Title or Program Title	
Modified Program Characteristics Name of Program: MA in ML –Specialization MA in Spanish (online) Degree: Title of Award (e.g. Master of Arts) MA Certificate ¹ : (specify type and level) Graduate Program Initiation Date: Summer 2016 Modality of Program: On ground x Online Combined If "Combined", % of fully online courses? Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 30 Other: note this is an additional option to on ground delivery	Modified Program Credit Distribution # Cr in Program Core Courses: 6 # Cr of Electives in the Field: 15 # Cr of Free Electives: 6-9 # Cr Special Requirements (include internship, etc.): 0-3 <u>Total # Cr in the Program</u> (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: 30
If program modification is concurrent with discontinuation of related program(s), please list for such program(s): Program Discontinued: CIP: DHE# (if available): Accreditation Date: Phase Out Period Date of Program Termination	
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: College of Liberal Arts and Social Sciences	
Other Program Accreditation: <ul style="list-style-type: none"> 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: 	

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

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) - 01/20/12

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

Institutional Contact for this Proposal: Lilian Uribe

Title: Dept chair

Tel.: 832-2890 e-mail:
uribe@ccsu.edu

BOR REVIEW STATUS *(For Office Use Only - please leave blank)*

BOR Sequence Number (to be assigned):

Approved 2010 CIP Code No. ² (if applicable)

Title of CIP Code

Log of BOR Steps Towards Program Approval:

Nature and Resolution number for BOR Approval:

Date of Approval:

Conditions for Approval (if any)

² Final CIP assignment will be done by BOR staff in consideration of suggested number (if provided) and in consultation with administrative offices at the institution and system proposing the program. For the final assignment, the 2010 CIP definitions will be used.

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) - 01/20/12

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)

This proposed MA in Spanish online is tailored to the needs of students seeking a graduate program in Spanish as it allows for more flexible ways to complete class activities and assignments from any location. For the past few years, our department has consistently and increasingly offered online graduate courses that have proven to be effective in delivering the material and assessing students' content knowledge, conducting research, using the target language both orally and in written assignments, and overall performance. The requirements of the newly proposed program will not differ from the existing MA in Modern Languages (Spanish) except for the delivery of instruction.

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) Spanish is unquestionably the second language of the United States, spoken natively by an estimated 35 million people or about 12% of the total U.S. population. Furthermore, the increase in the Spanish-speaking population throughout the country is projected to continue at an accelerated pace in the decades ahead.

These demographic changes have noticeably affected our national school systems where enrollments in Spanish are growing enormously at both middle and high school levels. In Connecticut, school administrators are under great pressure to meet the demand for instruction in Spanish, to hire well-trained teachers, and to assure that the instruction is of excellent quality.

As indicated by the State Department of Education, all language teachers in the State of Connecticut are required, to obtain a master's degree in their language of specialty. The Department of Modern Languages at CCSU, well aware of the implications of this, has been working toward the creation of innovative avenues to allow students to fulfill State requirements. With these needs in mind, we are proposing to add a new specialization to the Modern Language Master of Arts degree program, offered completely online and designed to offer optimal preparation for already qualified teachers or other graduate students of Spanish.

- 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? For the past several years, our Spanish faculty have received training in order to design online coursework. We have purchased licensing permits to use Camtasia, a program that has allowed us to create professional videos through which part of the instruction is delivered. Our department has also purchased high definition microphones for all faculty to record our presentations with the highest possible quality. Our courses are delivered through Blackboard Learn. Regular interaction between faculty and students as well as among students is done through chat rooms and WebEx. Kaltura Media allows our faculty to make additional comments about class content.
- Please describe any transfer agreements with other institutions under the BOR 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) There are no appropriate transfer agreements in place at this time.
- Please indicate what similar programs exist in other institutions within your constituent unit ³, and how unnecessary duplication is being avoided. We believe this to be the first completely online MA program in the state.
- Please provide a description/analysis of employment prospects for graduates of this proposed program. Graduates of this program will have an enhanced knowledge of the literature and cultures of the Spanish-speaking world, acquire and practice research methods skills, use the target language to discuss and write about topics related to the Spanish-speaking world, analyze selected Spanish grammar topics, and enhance their knowledge, skills and understanding.

³ Constituent units are: the Connecticut Community College System, the Connecticut State University System, Charter Oak State College, and the University of Connecticut

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) - 01/20/12

related to technology, an aspect directly in line with the National Educational Technology Standards for Teachers (NETS-T).

Description of Modification *(Please provide a summary of the modifications to curriculum, admissions or graduation requirements, mode of delivery etc., and concisely describe how the institution will support these changes.*

The proposed program modification will not differ from the existing MA in Modern Languages (Spanish) in terms of admission criteria, course requirements and number of credits. The only modification is the delivery of instruction.

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)*

There are no additional resources needed

Other Considerations

Previous Three Years Enrollment and Completion for the Program being Modified

ACTUAL Enrollment	First Term, Year 2012-13		First Term, Year 2013-14		First Term, Year 2014-15	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Internal Transfers						
New Students	0	1	0	3	0	3
Returning Students	0	2	1	7	2	8
ACTUAL Headcount Enrollment	0	5	1	10	2	11
ACTUAL FTE per Year	1.00		4.33		5.66	
Size of Credentialed Group for Given Year	8		13		15	

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) - 01/20/12

Curriculum Details for a Program Modification (to be use as appropriate for specific modification request) ⁴						
Course Number and Name ⁵	L.O. #	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Program Core Courses				Other Related/Special Requirements		
ML 598 - Research in Modern Languages	<i>Conduct research in different areas of the field of Spanish: literature, culture, pedagogy, and applied linguistics</i>	Admission to program	3	9 crs. on Spanish or Spanish-American Literature courses as approved by academic advisor	<i>Use the target language to write about major works in Spanish or Spanish American literature.</i>	9
Span 560 – The Structure of the Spanish Language	<i>Use the target language to analyze Spanish grammar as well as to analyze the target language structure.</i>	Admission to program	3	3 crs. on the culture of Spanish of the Spanish-American world courses as approved by academic advisor	<i>Use the target language to write about topics related to the cultures of Spain or Spanish</i>	3
Core Course Prerequisites				Elective Courses in the Field		
Admission to program				6 – 9 crs. selected in consultation with advisor		6-9
Admission to program				0-3 capstone (comprehensive exam or Span 599)		0-3
Total Other Credits Required to Issue Modified Credential						
Learning Outcomes - L.O. (Please list up to seven of the most important student learning outcomes for the program, and any changes introduced) <ol style="list-style-type: none"> 1. <i>Conduct research in different areas of the field of Spanish: literature, culture, pedagogy, and applied linguistics.</i> 2. <i>Use the target language to write about major works in Spanish or Spanish American literature.</i> 						

⁴ 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.

⁵ Make any detail annotations for individual courses as needed to understand the curricular modifications taking place

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) - 01/20/12

3. *Use the target language to write about topics related to the cultures of Spain or Spanish America.*
4. *Use the target language to analyze Spanish grammar as well as to analyze the target language structure.*
- 5.
- 6.
- 7.

CT Board of Regents for Higher Education

Modification of an Accredited Program **PRO FORMA** ¹ **BUDGET** 1/20/12

Institution

CCSU

Date

10/19/2015

Proposed Program

MA in ML - Specialization MA in Spanish (online)

PROJECTED Enrollment	First Term Year 1		First Term Year 2			
	Full Time	Part Time	Full Time	Part Time		
Internal Transfers (from other programs)	0	0	0	0		
New Students (first time matriculating)	0	9	0	12		
Continuing (students progressing to credential)	0	11	0	16		
Headcount Enrollment	0	20	0	28		
Total Estimated FTE per Year	6.67		9.33			

PROJECTED Program Revenue	Year 1		Year 2			
	Full Time	Part Time	Full Time	Part Time		
Tuition (Do not include internal transfers)	\$0	\$20,520	\$0	\$28,728		
Program-Specific Fees	\$0	\$15,720	\$0	\$22,008		
Other Rev. (Annotate in text box below)						
Total Annual Program Revenue	\$36,240		\$50,736			

PROJECTED Expenditures*	Year 1		Year 2			
	Number (as applicable)	Expenditure	Number	Expenditure		
Administration (Chair or Coordinator)	0.03	\$3,363	0.05	\$5,606		
Faculty (Full-time, total for program)	0.125	\$12,333	0.2	\$19,733		
Faculty (Part-time -total for program)						
Support Staff						
Library Resources Program						
Equipment (List as needed)		\$370				
Other (e.g. student services)						
Estimated Indirect Cost (e.g. student services, operations, maintenance)		\$1,300		\$1,300		
Total ESTIMATED Expenditures		\$17,366		\$26,638		

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

Please provide any necessary annotations:

Please provide any necessary annotations: All faculty and administrative costs are anticipated to remain the same. This modification will simply provide the means for more students to enroll in existing courses.

\$200 in equipment is needed for one additional high definition microphone and \$170 for one additional Camtasia license.

\$1300 in estimated indirect costs include two online advertisements in the Language Educator Online the online publication of the American Council on the Teaching of Foreign Languages (ACTFL)

¹ This PRO FORMA budget provides reasonable assurance that the program can be established and is sustainable. Some assumptions and/or formulaic methodology may be used and annotated in the text box.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Modification of a Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve modification of the Health Information Management program to add a post-baccalaureate certificate at Charter Oak State College.

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

Modification of Program:

Charter Oak State College

Post-Baccalaureate Certificate in Health Information Management, a modification of its BS in Health Information Management

BACKGROUNDSummary

Charter Oak State College has a licensed (2012) and accredited (2015) Bachelor of Science in Health Information Management. The degree received accreditation from the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) in October 2015. This accreditation allows our graduates to sit for the AHIMA Registered Health Information Administrator (RHIA) credential exam. The addition of a post-baccalaureate certificate will allow students who already have a bachelor's degree the opportunity to take the relevant courses to allow them to sit for the RHIA examination. We do not envision this to be a large program, possibly four or five students a year. It requires no new course developments. It requires no new staff. And since we pay our faculty per student, the tuition more than covers the cost of instruction.

Need for Program

To sit for the RHIA exam, students either have to graduate from a CAHIIM accredited undergraduate HIM program; graduate from a CAHIIM accredited graduate level HIM or Health Informatics program; or obtain a post-baccalaureate certificate in HIM from a CAHIIM accredited college. Charter Oak has the first option and this would allow us to offer the third option. It would allow for a new stream of HIM students into the health care information management field, which is a growing profession. (Bureau of Labor Statistic projects employment for health information technicians and managers to grow 22 percent from 2012-2022, much faster than the average for all occupations. In addition, it also predicts the addition of over 41,000 jobs in the same time period.)

Curriculum

The curriculum is 54 credits. The 54 credits are the Major Courses in the HIM undergraduate degree plus three of the courses from the Foundation Courses in the HIM degree--pathophysiology, anatomy and physiology, and medical terminology.

HCA 101 Health Care Systems and Admin.

HIM 115 Principles of Health Information Management

HIM 200 Health Information Systems

HIM 205 Reimbursement Methodologies

HIM 210 Medical Coding and Billing I - ICD-10

HIM 211 Medical Coding and Billing II - CPT

HIM 300 Medical Vocabularies and Classification Systems

HIM 305 Health Information Services Mgmt and Leadership

HIM 315 Health Statistics

HIM 320 Electronic Health Records and Health Info. Exchange

HIM 405 Health Information Law, Privacy, and Security

HIM 410 Healthcare Database Design and Development

HIM 420 Healthcare Research and Quality

HIM 498 Health Information Management Practicum

HIM 499 Health Information Management Capstone

Students

We are projecting 4 new part time students in the fall and another 2-4 in the spring. Currently in the HIM program we have 80 students. Advising and all student support services will be available to the certificate students.

Faculty

Students will be placed in existing courses with existing faculty. Faculty all have the appropriate credentials for the courses they are teaching and have gone through the required online orientation.

Learning Resources

No additional learning resources are needed.

Facilities: NA

Fiscal Note

We would generate approximately \$22,812 in the first year with expenditures of \$7394; year 2--\$45,624 revenue and expenditures of \$14,789; year 3 \$66,428 revenue and \$22,183 expenditures. No additional administrative resources, library holdings, specialized equipment, etc. will be needed. The cost of the faculty is covered by the tuition. Marketing for the program will be absorbed in the marketing budget for the HIM undergraduate degree.

Review of Documents:

- a) Campus Review--yes
- b) Campus Budget and Finance--yes
- c) Campus President--yes
- d) Academic Council--yes
- e) System Office

Accreditation

Charter Oak has received CAHIIM accreditation for its undergraduate degree in HIM. That accreditation will extend to the post-baccalaureate degree.

October 14, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) –
10/2/2015

SECTION 1: GENERAL INFORMATION

Institution: Charter Oak State College	Date of Submission to BOR Office:
Most Recent NEASC Institutional Accreditation Action and Date: 5 Year Review Fall 2011	
Original Program Characteristics CIP Code No. 51.9706 Title of CIP Code Health Info Mgmt/Medical Records Admin/Admin CIP Year: 2012 Name of Program: Health Information Management Degree: Title of Award (e.g. Master of Arts) Bachelor of Science Certificate: (specify type and level) Date Program was Initiated: September 2012 Modality of Program: On ground <input checked="" type="checkbox"/> Online Combined If "Combined", % of fully online courses? Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 121	Original Program Credit Distribution # Cr in Program Core Courses: 76 # Cr of Electives in the Field: NA # Cr of Free Electives: NA # Cr Special Requirements (include internship, etc.): 3 (HIM Practicum) <u>Total # Cr in the Program</u> (sum of all #Cr above): 121 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 121
Type of Program Modification Approval Being Sought (mark all that apply): <input checked="" type="checkbox"/> Licensure and Accreditation (specify whether New Certificate, Minor, Option, Concentration, or Other) New Certificate based on existing major. Major will continue. <input type="checkbox"/> Significant Modification of Courses/Course Substitutions <input type="checkbox"/> Offering of Program at Off-Campus Location (specify new location) <input type="checkbox"/> Offering of Program Using an Alternate Modality (e.g. from on ground to online) <input type="checkbox"/> Change of Degree Title or Program Title	
Modified Program Characteristics Name of Program: Post-Baccalaureate Certificate in Health Information Management Degree: Title of Award Certificate Certificate 1: (specify type and level) Post-Baccalaureate Program Initiation Date: January 2016 Modality of Program: On ground <input checked="" type="checkbox"/> Online Combined If "Combined", % of fully online courses? Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 54 Other:	Modified Program Credit Distribution # Cr in Program Core Courses: 54 (includes practicum) # Cr of Electives in the Field: # Cr of Free Electives: # Cr Special Requirements (include internship, etc) 3(HIM Practicum) <u>Total # Cr in the Program</u> (sum of all #Cr above): 54 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 54
If program modification is concurrent with discontinuation of related program(s), please list for such program(s): Program Discontinued: NA CIP: DHE# (if available): Accreditation Date: Phase Out Period Date of Program Termination NA	
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: Academic Affairs	
Other Program Accreditation: <ul style="list-style-type: none"> • 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: Prepares graduates to sit for 	

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

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) –
10/2/2015

the Registered Health Information Administrator (RHIA) exam through AHIMA

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

Institutional Contact for this Proposal: Shirley M. Adams	Title: Provost	Tel.: 860-515-3836 e-mail: sadams@charteroak.edu
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BOR REVIEW STATUS *(For Office Use Only - please leave blank)*

BOR Sequence Number (to be assigned):	
Approved 2010 CIP Code No. ² (if applicable)	Title of CIP Code
Log of BOR Steps Towards Program Approval:	
Nature and Resolution number for BOR Approval:	Date of Approval:
Conditions for Approval (if any)	

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)*

Charter Oak State College has the Bachelor of Science program in Health Information Management (HIM) that, upon graduation, allows graduates to sit for the AHIMA Registered Health Information Administrator (RHIA) credential exam. Currently, there are only three ways that a person is eligible to sit for this exam.

1. Graduate from a CAHIIM accredited undergraduate HIM program
2. Graduate from a CAHIIM accredited graduate level HIM or Health Informatics program
3. Obtain a post-baccalaureate certificate in HIM from a CAHIIM accredited college

Since Charter Oak already has the first option, the college could easily make the third option available for students who meet the admission requirements for this certificate. This would allow for a new stream of HIM students and simplify the admission process. There has been interest in the HIM program from those who already hold a bachelor's degree, who, upon hearing the number of credits they would still need to obtain for the major, decide not to move forward with the program. This certificate would allow for a quicker path to graduation and entry into the HIM field. This certificate would allow for a new marketing tool as well, to draw interest to the college and specifically the HIM program.

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)*

The Bureau of Labor Statistics job outlook projects employment for health information technicians and managers to grow 22 percent from 2012 to 2022, much faster than the average for all occupations. In addition, it also predicts the addition of over 41,000 jobs in the same time period.

² Final CIP assignment will be done by BOR staff in consideration of suggested number (if provided) and in consultation with administrative offices at the institution and system proposing the program. For the final assignment, the 2010 CIP definitions will be used.

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) –
10/2/2015

A search for Connecticut HIM jobs in the AHIMA job network resulted in 61 posted job openings at the time of this writing.

- 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?

This certificate builds on the strength of the Health Information Management major that is already demonstrating success. Once the HIM program receives the CAHIIM programmatic accreditation (expected in October 2015), this certificate is able to use all of the existing courses in the HIM program to allow a quicker path for students already possessing a bachelor's degree to obtain an RHIA credential.

- Please describe any transfer agreements with other institutions under the BOR 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)*

COSC already has transfer agreements in place with CT community colleges as well as community colleges in other states.

- Please indicate what similar programs exist in other institutions within your constituent unit ³, and how unnecessary duplication is being avoided

This will be the first certificate of this kind within the state of CT.

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

The American Health Information Management Association describes a vast array of employment prospects for graduates of an HIM program who successfully obtain the RHIA credential. Some common job titles for new graduates are Health Information Department Manager/Supervisor, Data Analyst, Medical Coder, Coding Supervisor, Clinical Document Improvement Specialist, Electronic Health Record Coordinator, EHR Trainer, Clinical Informatics Coordinator.

Description of Modification *(Please provide a summary of the modifications to curriculum, admissions or graduation requirements, mode of delivery etc., and concisely describe how the institution will support these changes.*

There is not a modification to the original Health Information Management major. This is an addition to the program that offers another option for those who already possess a bachelor's degree. This certificate makes use of all existing courses and no changes are necessary.

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 faculty, administrative resources, library holdings, specialized equipment, etc. will be required. Some minor marketing resources would benefit the certificate, such as addition of information to the website.

³ Constituent units are: the Connecticut Community College System, the Connecticut State University System, Charter Oak State College, and the University of Connecticut

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (Public Higher Education Institutions) –
10/2/2015

Other Considerations

Curriculum Details for a Program Modification (to be use as appropriate for specific modification request)⁴

The Post-Baccalaureate Certificate in Health Information Management would be available to any person who already holds a baccalaureate degree in any area. The purpose of the certificate is to allow those with a bachelor's degree to come to the college to take a core of HIM courses that would prepare them for the RHIA exam. The rationale is to enable a student who already holds a bachelor's degree to be recognized for that and not be required to take any additional general education or liberal arts courses.

The core courses that would be required for the certificate would be 45 credits. An additional 9 pre-requisite credits would be required for those students who do not already have the required medical science courses.

Below is a comparison of the Major courses and those that will be required for the Certificate:

MAJOR		POST-BACCALAUREATE CERTIFICATE	
Foundation Courses:	Credits	Foundation Courses:	Credits
BIO 130 Human Biology	4	BIO 215 Pathophysiology	3
ITE 102 Introduction to Computer Science	3	BIO 212 Anatomy & Physiology	3
BIO 212 Anatomy & Physiology	3	HCA 105 Medical Terminology	3
HCA 105 Medical Terminology	3		
MGT 451 Team Leadership	3		
HIM 205 Reimbursement Methodologies	3		
BIO 215 Pathophysiology	3		
HIM 305 Health Information Services Mgmt and Leadership	3		
HIM 210 Medical Coding and Billing I - ICD-10	3		
HIM 211 Medical Coding and Billing II - CPT	3		
HRM 310 Human Resources	3		
HCA 211 Healthcare Finance	3		
Total HIM Foundation Credits	37		
Major Courses:		Major Courses:	
HCA 101 Health Care Systems and Admin.	3	HCA 101 Health Care Systems and Admin.	3
HIM 115 Principles of Health Information Management	3	HIM 115 Principles of Health Information Management	3
HIM 200 Health Information Systems	3	HIM 200 Health Information Systems	3
HIM 300 Medical Vocabularies and Classification Sysems	3	HIM 205 Reimbursement Methodologies	3
HIM 315 Health Statistics	3	HIM 210 Medical Coding and Billing I - ICD-10	3

⁴ 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.

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR MODIFICATION OF ACCREDITED PROGRAM (*Public Higher Education Institutions*) –
10/2/2015

HIM 320 Electronic Health Records and Health Info. Exchange	3	HIM 211 Medical Coding and Billing II - CPT	3
HIM 405 Health Information Law, Privacy, and Security	3	HIM 300 Medical Vocabularies and Classification Systems	3
HIM 410 Healthcare Database Design and Development	3	HIM 305 Health Information Services Mgmt and Leadership	3
HIM 420 Healthcare Research and Quality	3	HIM 315 Health Statistics	3
<i>MGT 460 Project Management</i>	3	HIM 320 Electronic Health Records and Health Info. Exchange	3
<i>HCA 301 Contemporary Ethical Issues in HCA</i>	3	HIM 405 Health Information Law, Privacy, and Security	3
HIM 498 Health Information Management Practicum	3	HIM 410 Healthcare Database Design and Development	3
HIM 499 Health Information Management Capstone	3	HIM 420 Healthcare Research and Quality	3
Total HIM Major Credits	39	HIM 498 Health Information Management Practicum	3
		HIM 499 Health Information Management Capstone	3
General Education Courses:	33		
Free Electives:	12		
Recommend HCA450, HCA 350, HCA401 + 1			
TOTAL COLLEGE CREDITS		121	54

As with all programs at Charter Oak State College, any student may be eligible for credit for certain credentials, training, experience, and other sources of prior learning. Students who have experience in the health care field may be able to receive credit for some of the required courses through formal processes to analyze each student's individual situation. Upon admission application, each student will be informed about prior learning opportunities and assessments.

SECTION 3: RESOURCE AND FINANCIAL CONSIDERATIONS

Two-Year Cost Effectiveness and Availability of Adequate Resources

(Please provide attach a Pro-Forma Budget for the modification of program in the format provided)

Since there are no changes to the original HIM program and the certificate is simply an additional option using all existing courses, no resources or separate budgeting is needed. It is expected that the certificate will attract some new students and meet the needs of some potential students who have inquired about the possibility of this option. Any new enrollees will be taking courses along with the HIM majors and no new courses or sections will be required. If the program grows, since the College pays the faculty per student from the tuition, if additional sections are needed, there is revenue to cover the faculty cost.

There will be no new marketing costs, as the marketing of this certificate will be included with marketing efforts for the HIM major which has already been budgeted.

There is the expectation that this will result in a slight uptick in enrollment initially, but it will not create a need for additional support staff or services.

Connecticut Board of Regents for Higher Education

APPLICATION FOR NEW PROGRAM APPROVAL PRO FORMA ¹ BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

Institution Charter Oak State College Date Oct-15

Proposed Program Health Information Management Cert.

PROJECTED Enrollment	First Term Year 1		First Term Year 2		First Term Year 3	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Internal Transfers (from other programs)						
New Students (first time matriculating)		4		4		4
Continuing (students progressing to credential)				4		8
Headcount Enrollment	0	4	0	8	0	12
Total Estimated FTE per Year	2.4 FTE		4.8 FTE		7.2 FTE	

PROJECTED Program Revenue	Year 1		Year 2		Year 3	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Tuition (Do not include internal transfers)		\$19,872		\$39,744		\$59,616
Program-Specific Fees						
Other Rev. (Annotate in text box below)	\$2,940		\$5,880		\$8,820	
Total Annual Program Revenue	\$22,812		\$45,624		\$68,428	

PROJECTED Expenditures*	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)						
Faculty (Full-time, total for program)						
Faculty (Part-time -total for program)		\$7,394		\$14,789		\$22,183
Support Staff						
Library Resources Program						
Equipment (List as needed)						
Other (e.g. student services)						
Estimated Indirect Cost (e.g. student services, operations, maintenance)						
Total ESTIMATED Expenditures		\$7,394		\$14,789		\$22,183

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

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."

Please provide any necessary annotations: Program specific fee is the student services fee of \$193 per fall, spring, and summer. and the semester tech fee of \$52 per semester. There are no other new expenses.. No additional staff or marketing dollars are required. Tutiton was calculated at current in-state rate of \$276 per credit. for 6 courses--two in each fall, spring, and summer. Faculty was calculated at current rate of \$237 per student plus an estimated fringe of 30%.

¹ This PRO FORMA budget provides reasonable assurance that the program can be established and is sustainable. Some assumptions and/or formulaic methodology may be used and annotated in the text box.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Approval of a New Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the licensure of a new program in Environmental Systems and Sustainability Studies leading to a Bachelor of Science (BS) degree at Southern Connecticut State University for a period of three years until December 30, 2018.

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

New Program for Environmental Systems and Sustainability Studies at Southern Connecticut State University

BACKGROUND

Summary

Southern Connecticut State University has developed a program leading to a Bachelors of Science degree in Environmental Systems and Sustainability Studies. SCSU's newly formed Department of the Environment, Geography and Marine Sciences (EGMS) proposes a 120-credit undergraduate major in Environmental Systems and Sustainability Studies (ESSS). The program is built on two existing undergraduate minors (Environmental Studies and Marine Studies) and uses existing courses from these minors as well as integrating existing courses from Geography, Business, Political Science and other existing courses from the natural sciences, social sciences, and the humanities. The program has three tracks: Environmental Systems (40 credits), Coastal Marine Systems (41 credits), and Policy and Management (40 credits). SCSU's program is focused on environmental problem solving in terrestrial and coastal marine settings.

SCSU's program will provide well-educated environmental professionals to help the state, its people, and its businesses to design sustainable solutions to current and future environmental challenges. A fundamental aspect of SCSU's program is the use of *systems thinking* to solve problems that involve complex interactions between natural systems and human systems. Another fundamental aspect of the program is *sustainability*. Sustainability addresses the development of workable solutions. Throughout the program, students will be engaged in fieldwork, class interactions and engagement with the community. This type of direct engagement allows students to develop skills that can be transferred to professional settings after graduation.

Need for the Program

The United States Bureau of Labor Statistics projects the job outlook for Environmental Scientists and Specialists to grow 15 percent from 2012 to 2022, faster than the average for all occupations. The need for people with sophisticated environmental problem solving skills encompasses many sectors of society and requires many types of expertise. This is why there are three concentrations in the proposed major. As a coastal state, for example, Connecticut has a real need to become more resilient in the face of rising sea levels, larger and more frequent storms, and coastal pollution including saltwater intrusion, thus the need for a coastal marine systems track. While also science based, the environmental systems track involves a different set of challenges. Water and air quality are both issues for Connecticut as is terrestrial ecosystem health. Finally, there is a need for people who may not be as science oriented but prefer the policy and management aspects of sustainability. The city of Bridgeport has reached out to Southern and other universities in the region with the aim of making Bridgeport a more sustainable city. Students from our policy and management track have potential opportunities to

be part of this initiative and to contribute to making Bridgeport as well as New Haven centers for sustainability.

SCSU's program is aligned with the University's mission by promoting academic excellence in environmental problem solving by its emphasis on critical thinking and systems thinking. Our students, in internships and in their future careers, will also be able to assist urban centers such as Bridgeport and New Haven to devise ways of becoming more sustainable and resilient cities. The proposed program will also provide our students with very important knowledge and skills to help Connecticut face a rapidly changing future. There is a pressing need for professionals who understand the complex interactions of human systems and natural systems and can devise sustainable solutions to the problems that have arisen.

Curriculum

The program has three tracks: Environmental Systems (40 credits), Coastal Marine Systems (41 credits), and Policy and Management (40 credits). SCSU's program is focused on environmental problem solving in terrestrial and coastal marine settings.

All students will complete a required 15 credits of foundational coursework consisting of an introduction to environmental and marine studies and an introduction to the principles of sustainability and a research methods course. All students will also complete an experiential component in the major. Possible outcomes include: an internship, research experience, experience abroad, civic engagement, volunteer experience, or seminar participation. This requirement assures that students will have an experience that bridges their academic studies with the outside world. This requirement prepares students to integrate academic understanding of sustainability with applied participation, experience, and leadership.

Students will also be required to complete a four course (12 credit Environmental Systems and Environmental Policy and Management; or 13 credit Coastal Marine Systems) sequence within one of the three areas of concentration. The remaining 12 credits will include the selection of three relevant environmental, marine, or policy and management elective courses (9 credits) and one elective course in the social sciences or humanities (3 credits).

The proposed program leverages EGMS participation in the Liberal Education Program (LEP). THE LEP is Southern's general education program consisting of three tiers: Tier I Competencies, Tier II Areas of Knowledge, and Tier III Capstone Experience. As part of the EEES program, students will be required to complete MAR 210 Coastal Marine Studies and ENV 220 Climate Change in Tier II. Students will also be required to complete either CSC 200 Information Management or COM 205 Fundamentals of Professional Presentations as part of their Tier I requirement.

Finally, all students will be required to complete the Tier III Capstone course ENV 491 Environmental Problem Solving (3 credits). This course focuses on devising solutions to complex, capacious, environmental problems while training students to be effective writers and communicators.

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - **01/20/12**

SECTION 1: GENERAL INFORMATION

Institution: SCSU	Date of Submission to BOR Office: 10/9/15	
Most Recent NEASC Institutional Accreditation Action and Date: June 2012-reaffirmation until 2021		
Program Characteristics Name of Program: Environmental Systems and Sustainability Studies Degree: Title of Award (e.g. Master of Arts) B.S. Certificate: (specify type and level) Anticipated Program Initiation Date: Fall 2016 Anticipated Date of First Graduation: Spring 2018 Modality of Program: X On ground Online Combined If "Combined", % of fully online courses? Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 120	Program Credit Distribution # Cr in Program Core Courses: 28/29 # Cr of Electives in the Field: 12 # Cr of Free Electives: 28/29 # Cr Special Requirements (include internship, etc.): 48 LEP Plus 3 Cognate <u>Total # Cr in the Program</u> (sum of all #Cr above): 120 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 120	
Type of Approval Action Being Sought: Licensure OR X Licensure and Accreditation Suggested CIP Code No. (optional) Title of CIP Code CIP Year: 2000 or 2010		
If establishment of the new program is concurrent with discontinuation of related program(s), please list for each program: Program Discontinued: CIP: DHE# (if available): Accreditation Date: Phase Out Period Date of Program Termination		
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: School of Arts and Sciences, Department of the Environment, Geography and Marine Studies, SCSU Main Campus		
Other Program Accreditation: <ul style="list-style-type: none"> • 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: Dr. Bette Bergeron	Title: Provost	Tel.: 203 392-5350 e-mail: Bergeron@southernct.edu

BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):	
Approved 2010 CIP Code No. ¹	Title of CIP Code
Log of BOR Steps Towards Program Approval:	
Nature and Resolution number for BOR Approval:	Date of Approval:
Conditions for Approval (if any)	

¹ Final CIP assignment will be done by BOR staff in consideration of suggested number (if provided) and in consultation with administrative offices at the institution and system proposing the program. For the final assignment, the 2010 CIP definitions will be used.

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

SECTION 2: PROGRAM PLANNING ASSESSMENT (To be Used for BOR Review Only)

Alignment of Program with Institutional Mission, Role and Scope

(Please provide objective and concise statements)

SCSU's newly formed Department of the Environment, Geography and Marine Sciences proposes a 120-credit undergraduate major in *Environmental Systems and Sustainability Studies*. The program is built on two existing undergraduate minors (Environmental Studies and Marine Studies) and uses existing courses from these minors as well as integrating existing courses from Geography, Business, Political Science and other existing courses from the natural sciences, social sciences, and the humanities. The program has three tracks: Environmental Systems (40 credits), Coastal Marine Systems (41 credits), and Policy and Management (40 credits). SCSU's program is focused on environmental problem solving in terrestrial and coastal marine settings. The environmental systems track focuses on solving environmental problems that are essentially terrestrial in nature, the solutions to which require understanding the very complex interactions between human systems and natural systems. The types of problems that might be addressed would include water, food and climate change. The coastal marine systems track has a greater reliance on science and understanding the environmental science of the coastal marine environment. Approximately 40% of humanity lives within 60 miles of the coast. This is a critical environment that requires in-depth understanding of aquatic ecosystems and processes. This emphasis makes SCSU's program unique within the CSU system. The term coastal resiliency is often used to describe the set of solutions to coastal problems such as pollution, preserving coastal ecosystems and biodiversity, sustainable aquaculture, sea level rise and changes in the intensity and frequency of storms. Every town along the Connecticut coast must now contend with these issues. The environmental and coastal marine systems tracks are essentially environmental analytics and problem solving tracks. The third track, policy and management, emphasizes implementing solutions to these problems in civic and business settings. Students in this track require an understanding of politics and sustainable business practices, particularly the formulation and implementation of public and corporate policy.

SCSU's program is aligned with the University's mission, role and scope in the following ways. The program will **promote academic excellence** in environmental problem solving by its emphasis on critical thinking and systems thinking. It will **promote service to the public good**. The quality and health of our environment is being challenged every day. Whether it is the energy we use to fuel our cars and heat our homes and its role in our changing climate, or how actions impact the quality of the water we drink and the food we consume, virtually everything we take for granted is being challenged from a rapidly expanding population and globalization of our goods and services. Our students, in internships and in their future careers, will be able to **assist urban centers such as Bridgeport and New Haven** to devise ways of becoming more sustainable and resilient cities. It will also provide our students with very **important knowledge and skills** to help Connecticut face a rapidly changing future. There is a pressing need for professionals who understand the complex interactions of human systems and natural systems and can devise sustainable solutions to the problems that have arisen.

A fundamental aspect of SCSU's program is the use of *systems thinking* to solve problems that involve complex interactions between natural systems and human systems. Another fundamental aspect of the program is *sustainability*. Sustainability addresses the development of workable solutions. There are three basic foundations of a sustainability program:

- 1) A sustainability major is fundamentally interdisciplinary in nature, at the systems level, and should be structured to require *integrated collaboration* between students in different disciplines,
- 2) Scientific understanding of environmental systems and issues, including marine systems and issues, is essential for understanding the nature of sustainability principles and practices, and is the foundation for the major,
- 3) Because the most pressing issues societies face at many scales are complex and interrelated, the best solutions address and take into account co-benefits and co-solutions of multiple problems at once, necessitating cross-disciplinary understanding and collaboration. This collaborative capacity can garner *better, more flexible, more creative and resilient* solutions than those with a single discipline focus.

These principles are embedded, in one way or another, in the courses in the proposed major and are manifested in lectures, reading and writing assignments, field and lab experiences and in course projects. Many of the courses in SCSU's proposed major that contain a substantial sustainability component are courses that were instructor certified or department certified as sustainability courses and reported as such to SCSU's Office of Sustainability.

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

There are, in addition, two dedicated sustainability courses [Principles of Sustainability (required) and Applied Sustainability (elective)]. The capstone course (Environmental Problems Solving) focuses on systems analysis as well as developing sustainable solutions. The students choose an actual problem to address, analyze it, and produce a workable solution to the problem that has long-term viability. Throughout the program, students will be engaged in fieldwork, class interactions and engagement with the community. This type of direct engagement allows students to develop skills that can be transferred to professional settings after graduation.

Addressing Identified Needs

• 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)*

The United States Bureau of Labor Statistics has this to say about the job outlook for Environmental Scientists and Specialists:

"Employment of environmental scientists and specialists is projected to grow 15 percent from 2012 to 2022, faster than the average for all occupations. Heightened public interest in the hazards facing the environment, as well as the increasing demands placed on the environment by population growth, is expected to spur demand for environmental scientists and specialists." (<http://www.bls.gov/ooh/life-physical-and-social-science/environmental-scientists-and-specialists.htm#tab-1>)

As Connecticut is a leader in environmental policy, the job outlook for Connecticut may be larger than the national projection quoted above. Environmental specialists work for large industrial companies such as United Technologies Corporations, utilities such as United Illuminating, educational Institutions such as Yale University, and consulting and remediation firms such as the cutting-edge Directional Technologies in Wallingford. The following is a quote from the Pratt & Whitney (a United Technologies subsidiary) website:

"Pratt & Whitney's greenhouse gas reduction target is equivalent to taking more than 16,000 cars off the road. In the first two years of the program, Pratt & Whitney has reduced greenhouse gas emissions by 11 percent, water usage by 13 percent, air emissions by 49 percent, and non-recyclable waste by 4 percent. Pratt & Whitney is doing its part to reduce the human impact on climate change by providing our customers with the most environmentally-responsible products, services and operations, and reducing greenhouse gas (GHG) emissions globally." (http://www.pw.utc.com/Environmental_Leadership)

SCSU's program will also provide well-educated graduates to help the state, its people, and its businesses to cope with the impacts of climate change (including severe weather events), pollution (historical as well as current), ecosystem stresses (loss of pollinators) and changes in disease vectors.

The need for people with sophisticated environmental problem solving skills encompasses many sectors of society and requires many types of expertise. This is why there are three concentrations in the proposed major. As a coastal state, for example, Connecticut has a real need to become more resilient in the face of rising sea levels, larger and more frequent storms, and coastal pollution including saltwater intrusion, thus the need for a coastal marine systems track. While also science based, the environmental systems track involves a different set of challenges. Water and air quality are both issues for Connecticut as is terrestrial ecosystem health. Connecticut, for example, is experiencing a steep pollinator decline including bees, butterflies, and bats. This is a real and present challenge for the people of Connecticut, very directly to the agricultural sector, thus a need for the more general environmental systems concentration. Finally, there is a need for people who may not be as science oriented but prefer the policy and management aspects of sustainability. The city of Bridgeport has reached out to Southern and other universities in the region with the aim of making Bridgeport a more sustainable city. Students from our policy and management track have potential opportunities to be part of this initiative and to contribute to making Bridgeport or even New Haven centers for sustainability.

*** 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?**

One of the strengths of the program is that it makes maximum use of existing curriculum, faculty and resources at Southern. No new faculty lines are required. SCSU's proposed program is built on two existing minors, is composed entirely of currently

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existing courses, will be taught by the faculty who are already teaching them and takes advantage of existing resources such as the laboratories and equipment of the Werth Center for Coastal and Marine Studies, the Center for Environmental Literacy and Sustainability Education, and Southern's Office of Sustainability. SCSU's program will also maximize the use of the new Academic Science and Laboratory building. The building has facilities such as a mudroom and shower to facilitate field studies, an aquarium and water quality lab, and coastal processes and analytical labs with state of the art instrumentation. There is also Southern's educational programming at Outer Island in Branford. Southern's proximity to Long Island Sound, designated by Congress as an Estuary of National Significance, is ideal for the coastal marine systems concentration. In partnerships already established with the Sound School in New Haven, UCONN at Groton and the Norwalk Aquarium, our students have access to research vessel time supported by the Werth Center boat budget. Also, proximity to two of Connecticut's major urban centers, New Haven and Bridgeport, provides opportunities for exploring solutions for sustainable cities. The coordinator of the Office of Sustainability has established working a working relationship with the director of the Bridgeport's Office of Planning and Economic Development. Nascent collaborations include increasing the city's resilience to future storms in terms of flooding and wave damage. New projects in New Haven include work around the topics of food deserts and urban pollinators.

*** Please describe any transfer agreements with other institutions under the BOR 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).**

Several CSCU Community Colleges offer an Associate Degree in Environmental Science (Manchester, Middlesex, Housatonic, Naugatuck Valley, and Northwestern), Environmental Science and Toxicology (Gateway) or Environmental Health and Safety (Three Rivers). Norwalk Community College is in the process of developing a proposal for an environmental science transfer degree. Faculty from SCSU's Department of Environmental and Marine Studies will examine pathways with appropriate Community College program coordinators to determine how best to advise those students at Community Colleges to facilitate their integration into the Environmental Systems and Sustainability Bachelor of Science program. The flexibility provided by the three areas of concentration will allow transfer students to build on their own particular preparation and interests. The department has reached out to a number of potential community college partners and we plan to hold an orientation and information meeting in the fall should approval be granted. Parties we have heard back from to date include Housatonic Community College (Dr. Pappantiou and Denise Bukovan), Norwalk Community College (Elizabeth McCance), Naugatuck Valley Community College (Del Cummings), and Gateway (Lauren Doninger). Interest in the proposed fall meeting appears to be strong. The CSCU TAP agreement and the Transfer Agreement between SCSU and Gateway Community College allows for a seamless transfer of credits between the two institutions. At present, community college students can transfer to Southern as a Junior with 60 credits. With the proposed program requiring 43/44 credits to complete (including cognate), this leaves students with 16/17 credits of free electives to explore other areas of interest.

• Please indicate what similar programs exist in other institutions within your constituent unit ², and how unnecessary duplication is being avoided.

The main distinction between SCSU's program and those at other CSU institutions is the highly interdisciplinary nature of the proposed program. This includes the strong marine focus and a management focus that incorporates business and political science. CCSU has an undergraduate degree in Environmental Geography as one of its concentrations. This concentration consists largely of physical geography with cartography and GIS. SCSU's program is different in the sense that it incorporates offerings from sustainable business practices and policy, for example. SCSU's program has an explicit systems approach in the curriculum and, while there is a class on soils and vegetation sustainability in the CCSU program, sustainability has a central role in SCSU's program. The scope of the environmental systems track is very broad and there is a major emphasis on developing sustainable solutions to a wide range of environmental problems. To our knowledge, WCSU does not have a similar curriculum. ECSU has an undergraduate Environmental Earth Science program with a B.S. in Environmental Earth Science and a unique B.S. in Sustainable Energy Science. The Environmental Earth Science program contains fairly traditional Earth Science curricula covering earth history, tectonics, surface processes with an emphasis on geomorphology

² Constituent units are: the Connecticut Community College System, the Connecticut State University System, Charter Oak State College, and the University of Connecticut

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and hydrology. SCSU's program covers ecosystems (biotic) as well as physical (abiotic) aspects of the natural environment, and places a large emphasis on the interactions of human systems with natural systems. For example, the proposed core curriculum features a general course in environmental systems and addresses issues such as biodiversity, agriculture and land use, forests and deforestation, population, and the economic drivers of environmental change. While energy is an important topic in any environmental curriculum due to its relationship to climate change, SCSU's does not focus on energy and does not duplicate the sustainable energy science program at ECSU. Unlike other programs, SCSU's program has a marine systems concentration as well as a policy and management track. To our knowledge, no other CSU offers either of these concentrations. The marine systems track involves issues of coastal pollution, sustainable aquaculture, and resilience to sea level rise and changes in storm intensity and frequency. Connecticut's coast is currently vulnerable to all of these issues, including landfall of another hurricane. The policy and management track includes required courses in the school of business and the political science departments in subjects such as sustainable business practices and public policy formulation and implementation. This is unique to SCSU's program. At the same time, future policy makers are schooled in the underlying systems science. This is also unique to SCSU's program. The overall emphasis of SCSU's program is environmental problem solving for a broad range of environmental issues. This entails a detailed understanding of the linkages between human and natural systems.

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

The proposed program makes employment prospects a central theme. The program has a high level of skills-based learning. This includes analytical laboratory work, field water quality testing, topographic surveying using laser based technology, global positioning systems, geographic information systems, marine research operations, and sediment analysis and database management. SCSU's program emphasizes communications skills and culminates in a professional level presentation of a viable solution to a current environmental problem. The program also has an experiential requirement that places students into contact with the outside world, often in the form of internships. The department has already established pipelines with a number of partners. These include the Connecticut Bureau of Aquaculture Milford Lab where our students have the potential to work with shellfish regulation, water quality and shellfish pathologies. Program faculty members are currently in negotiations with Norwalk Aquarium to have the Aquarium maintain the Werth Center's two new 2200-gallon aquaria. Under the proposed arrangement, Norwalk Aquarium would assume management of the aquaria and train the program's students to do routine maintenance. This would mean the program's students would gain entry-level professional aquarist skills. Norwalk Aquarium also has positions available as education interns at the Norwalk location. Other opportunities are leveraged through our close relationship with SCSU's Office of Sustainability. The Office has funds for internships that would involve many sustainability projects on the SCSU campus. Under the guidance of the Sustainability Office coordinator, students will have opportunities to undertake campus-level environmental problem solving. Currently, the office has more potential projects than people to work on them. Students in SCSU's new environmental systems major would provide the Office of Sustainability with a more substantial workforce. The Office of Sustainability is also SCSU's official representative to the community for sustainability projects. Groundwork that would allow students to be involved with efforts to increase sustainability for the City of Bridgeport and the City of New Haven have already been established. SCSU's program coordinators seek to establish similar partnerships with the D.E.E.P., regional non-profit environmental organizations (e.g., Audubon Society) and with private sector entities. We have, for example, a former graduate from our MS in Environmental Education working at United Illuminating as an environmental analyst. Lastly, there are a quite a number of environmental consulting firms in the state that could provide entry-level employment opportunities for the program's students. The business internet connectivity company Manta lists 183 environmental consulting companies in Connecticut their website (http://www.manta.com/mb_45_A62EC7N5_07/environmental_consultant/connecticut).

Cost Effectiveness and Availability of Adequate Resources

(Please provide a one-paragraph narrative on the attached MSEXcel Pro-Forma Budget)

The Department currently offers 18-credit minors in environmental and marine studies. At present, students complete these minors as either "stand alone" minors with a major or as minors packaged together in the Interdisciplinary Studies Program. The Department has been asked repeatedly by students to provide an undergraduate major in these related fields. A number of students have started their careers in courses environmental studies or marine studies at SCSU and then have transferred to other colleges who offer these programs as a major. SCSU's program would provide that major and the program would

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have a ready-made cohort of students who would transfer into the major as soon as it is approved. It is estimated that this cohort would consist of 10 to 15 students drawn from the Interdisciplinary Studies major and from the Environmental and Marine Studies minors. Students have a preference for earning a diploma that identifies them as graduating from an *Environmental* major as opposed to an *Interdisciplinary* major. This change alone will draw students into the major.

Two environmental programs similar to the one proposed each show high student engagement and demand. Southern Oregon University, who we have studied in developing our policy and management concentration, is a small state university of 6,000 undergraduate and 1,000 graduate students. The environmental studies program there has 400 undergraduate majors. Similarly, the University of Southern Maine with 9,500 students has environmental science and policy programs with over 130 majors. The Department believes that student retention will be positively affected by providing a popular program for students who have been requesting an environmental studies major. The department believes that growth will be strong and steady over the next 5 years. Estimates of how many majors the program would have in any given year is difficult, but we expect that the program would have at least 60 majors within the first three years with a graduation rate of about 10 to 15 students per year. Currently we enroll about 40-45 students per year in ENV 100 (Introduction to Environmental Studies I) and about 15-20 students per year in ENV 200 (Introduction to Environmental Studies II). MAR 140 (The World Ocean) typically has 15-20 students per year. These three courses serve as part of the minors or as free electives. They are not part of the general education program (LEP). Courses in the LEP include ENV 220 (Global Climate Change) and MAR 210 (Coastal Marine Studies). We typically offer four sections of ENV 220 per year and two sections of MAR 210. The sections of ENV 220 fill to capacity (30) immediately each semester. The sections of MAR were each short of the cap of 22 by one student each. Students enrolled currently in the undergraduate minors (environmental studies and marine studies) number approximately 15 to 20.. The Department has no way of knowing this number precisely as the school does not keep track of students in minors. Consequently, the department believes that the interest in these related fields is strong and thinks that reaching 60 majors within the first three years is a reasonable estimate.

In terms of resources and expenses, the proposed program has intentionally kept this to a minimum by using only existing courses and the faculty that teach them. Resources such as the Werth Center for Coastal and Marine Studies, the Center for Environmental Literacy and Sustainability Education, and Southern's Office of Sustainability will also support the program. Along with these campus based resources, the department has *existing* working relations with Norwalk Aquarium, the CT Bureau of Aquaculture, the Sound School in New Haven, Schooner Inc., the City of Bridgeport's Office of Planning and Economic Development and will be expanding our network to include the Connecticut Department of Energy and Environmental Protection as well as non-profits and corporate entities. All of these partnerships bring valuable resources to the program at no additional cost to SCSU.

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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. Students will demonstrate an understanding of the complexities and interrelatedness of environmental issues, and the need to invoke elements of science, economics, law, politics, and ethics when formulating solutions.
Outcomes will be assessed using problem solving papers in which students research a particular problem and pose workable solutions to it. This assessment will be applied as well to student work in ENV/MAR 491, the capstone course. (Note: ENV/MAR 491 is an LEP course required of all students in the program; as an LEP course it is not included in the program core courses list in the following pages.)
2. Students will build an understanding of the theoretical and historical events that underpin the multidisciplinary field of environmental sustainability.
Outcomes will be assessed via written examinations in a variety of courses.
3. Students will be able to demonstrate abilities in geospatial technologies and apply those technologies to geographic and/or environmental analyses.
Outcomes will be assessed in exercises and final projects in GEO 360 and GEO 460, the two GIS courses in the program.
4. Develop oral and written communication skills that demonstrate knowledge of the objectives of management strategies in a broad range of issues and for a diverse group of stakeholders.
Outcomes will be assessed in written problem solving papers and in oral presentations of problem and solutions.
5. Students will demonstrate knowledge gained from first-hand experience in addressing the practical aspects of making environmental decisions through internships (e.g., Norwalk Aquarium), research experiences (e.g., Werth Center for Coastal and Marine Studies or with TransAtlantic Alliance partners at Liverpool John Moores University in the U.K.), exposure to professional outside lecturers, and/or attendance of local wetland or zoning board committee meetings.
Students are required to have an experiential part of the program. They will be asked to write critically and reflectively about their experiences.

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)*
Drs. Vincent Breslin (department co-chair) and James Tait will serve as program administrators.

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? 0

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? 0

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program 0

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 Cost Analysis Projection sheet for BOR review)*

Resources include the Werth Center for Coastal and Marine Studies, The SCSU Office of Sustainability and the Center for Environmental Literacy and Sustainability Education, all presently existing entities. The program will not require alteration of budgeting or staffing. Laboratory instrumentation includes an analytical lab with spectrophotometry capabilities, a sediment lab with the ability to do laser diffraction grain size analysis, a GIS lab and two 2200-gallon salt water aquaria. Other instrumentation includes laser-based surveying capabilities and hand-held GPS units. Finally, access to a research vessel is required. All of the above already exist including a boat budget that is part of the Werth Center budget.

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Curriculum – Environmental Systems Concentration

Course Number and Name	L.O. # ³	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Program Core Courses				Other Related/Special Requirements		
ENV 200 Environmental Studies II	1,2		3	ENV/MAR 498-499 Experiential Requirement	1,5	3
GEO 303 Principles of Sustainability	1,2		3	Cognate: MAT 107 Elem. Statistics		3
GEO 290 Research Methods in Geo.			3			
GEO 360 Introduction to GIS	3		4			
ENV 100 Environmental Studies I	1		3			
ENV 350 Environmental/Earth Systems Inquiry	1		3			
ENV 400 Social Science Perspectives on the Environment	1,2		3	*Learning Outcome 4 is addressed in ENV/MAR 491 (Environmental Problem Solving) which is an LEP Course		
ENV 401 Pollution Prevention and Control			3			
Core Course Prerequisites				Elective Courses in the Field		
NONE				Select 3 Courses (Science)		
				GEO 460 GIS for Environmental and Spatial Sciences	3	4
				GEO 403 Applied Sustainability	1,2	3
				ESC 200 Principles of Geology		4
				ESC 201 Historical Geology		4
				BIO 202 Ecology		3
				BIO 210 Environmental Biology and Conservation		3
				MAR 398 Special Topics - Bermuda		3
				BIO 327 Field Natural History		3
				PCH 441 Water Supply and Waster Water Treatment		3
				Select 1 Course (Social Science/Humanities)		
				HIS 359 American Env. History	1,2	3
				LIT 303 Literature of the Sea		3
				PHI 321 Philosophy of Science		3
				SOC 235 Environmental Sociology	1	3
				GEO 405 Environmental Justice		3
Total Other Credits Required to Issue Credential (e.g. GenEd/Liberal Arts Core/Liberal Ed Program)						
40 Credits in Major; 3 Credits in Cognate; 48 Credits in LEP; 29 Credits in Free Electives						

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

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Curriculum – Coastal Marine Systems Concentration

Course Number and Name	L.O. # ⁴	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Program Core Courses				Other Related/Special Requirements		
MAR 140 The World Ocean	1,2		3	ENV/MAR 498-499 Experiential Requirement	1	3
GEO 303 Principles of Sustainability	1,2		3	Cognate: MAT 107 Elem. Statistics		3
GEO 290 Research Methods in Geography			3			
GEO 360 Introduction to GIS	3		4			
MAR 250 Coastal and Marine Pollution	1		3			
MAR 340 Coastal Processes	1		3			
MAR 460 Field/Laboratory Techniques			4	* Learning Outcome 4 is addressed in ENV/MAR 491 (Environmental Problem Solving) which is an LEP course.		
GEO 357 Coastal and Marine Geography	1,2		3			
Core Course Prerequisites				Elective Courses in the Field		
NONE				Select 3 Courses (Science)		
				GEO 460 GIS for Environmental and Spatial Sciences	3	4
				ESC 106 General Oceanography or MAR 140 The World Ocean	1,2	3
				ESC 220 Physical and Chemical Oceanography		3
				BIO 430 Marine Biology		4
				ENV 350 Environmental/Earth Systems Inquiry	1	3
				MAR 398 Special Topics - Bermuda	1	3
				BIO 327 Field Natural History-Belize		3
				PCH 441 Water Supply and Waste Water Treatment		3
				Select 1 Course (Social Science/Humanities)		
				LIT 303 Literature of the Sea		3
				HIS 359 American Environmental History	1,2	3
				PHI 321 Philosophy of Science		3
				SOC 235 Environmental Sociology		3
				GEO 405 Environmental Justice		3
Total Other Credits Required to Issue Credential (e.g. GenEd/Liberal Arts Core/Liberal Ed Program)						
41 Credits in Major; 3 Credits in Cognate; 48 Credits in LEP; 28 in Free Electives						

⁴ From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application

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Curriculum – Environmental Policy and Management Concentration

Course Number and Name	L.O. # ⁵	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Program Core Courses				Other Related/Special Requirements		
ENV 200 Environmental Studies II OR MAR 140 The World Ocean	1,2		3	ENV/MAR 498-499 Experiential Requirement	1	3
GEO 303 Principles of Sustainability	1,2		3	Cognate: MAT 107 Elem. Statistics		3
GEO 290 Research Methods in Geography			3			
GEO 360 Introduction to GIS			4			
ENV 100 Environmental Studies I	1		3			
MGT 425 Mgt. for People, Planet & Profit	1		3			
PSC 351 Analysis of Public Policy			3	* Learning Outcome 4 is addressed in ENV/MAR 491 (Environmental Problem Solving) which is an LEP course.		
PSC 310 Comparative Public Policy			3			
				Elective Courses in the Field		
NONE				Select 3 Courses (Policy /Mgt.)		
				GEO 273 Land Use Planning		3
				MGT 400 Business and Society		3
				GEO 305 Environmental Economic Geography		3
				MGT 418 Negotiation and Conflict Resolution		3
				PSC 325 U.S. Politics and Economic Policy		3
				PSC 314 Urban Politics		3
				Select 1 Course (Social Science/Humanities)		
				LIT 303 Literature of the Sea		3
				HIS 359 American Environmental History	1,2	3
				PHI 321 Philosophy of Science		3
				SOC 235 Environmental Sociology		3
				GEO 405 Environmental Justice		3
Total Other Credits Required to Issue Credential (e.g. GenEd/Liberal Arts Core/Liberal Ed Program)						
40 Credits in Major; 3 Credits in Cognate; 48 Credits in LEP; 29 Credits in Free Electives						

⁵ From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application

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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.*

SCSU's Department of the Environment, Geography and Marine Sciences proposes an undergraduate major (120 credits) that utilizes the existing courses in Environmental Studies (ENV) and Marine Studies (MAR), and integrates established courses in Geography, Political Science, Business Management, natural sciences, humanities and social sciences. All courses in the proposed major are existing, UCF approved courses at SCSU. We have designed this new major to have three concentrations: Coastal and Marine Systems (41 credits), Environmental Systems (40 credits), and Environmental Policy and Management (40 credits). The philosophical underpinning of the program is two-fold. 1) A systems approach to solving environmental problems and 2) developing sustainable solutions. Systems thinking is emphasized throughout the program. Sustainability is a theme in every environmental course. Sustainability represents solutions to complex environmental problems and diffused throughout the curriculum. For example, our current agricultural system pollutes the soil and waterways with pesticides and fertilizers. It also promotes soil erosion via tillage. Sustainable solutions include integrated pest management, real time monitoring of soil nutrients and moisture, and non-tillage approaches to planting. In addition, there are dedicated courses that address sustainability (Principles of Sustainability and Applied Sustainability).

All students will complete a required 16 credits of foundational coursework consisting of an introduction to environmental and marine studies and an introduction to the principles of sustainability and a research methods course. All students will also complete an experiential component in the major. Possible outcomes include: an internship, research experience, experience abroad, civic engagement, volunteer experience, or seminar participation. This requirement assures that students will have an experience that bridges their academic studies with the outside world. This requirement prepares students to integrate academic understanding of sustainability with applied participation, experience, and leadership.

Students will also be required to complete a four course (12 credits for Environmental Systems and Environmental Policy and Management or 13 credits for Coastal Marine Systems) sequence within one of the three areas of concentration. The remaining 12 credits will include the selection of three relevant environmental, marine, or policy and management elective courses (9 credits) and one elective course in the social sciences or humanities (3 credits).

The proposed program leverages Environmental and Marine Studies participation in the Liberal Education Program and would require students to complete the following ENV/MAR LEP courses as part of this program: Tier II Explorations (MAR 210 Coastal Marine Studies, Natural World II and ENV 220 Climate Change, Global Awareness). All students will also be required to complete either CSC 200 Information Management or COM 205 Fundamentals of Professional Presentations as part of their LEP Tier I Tech Fluency requirement.

Finally, all students will be required to complete the Tier III Connections capstone course ENV 491 Environmental Problem Solving (3 credits). This course focuses on devising solutions to complex, capacious, environmental problems while training students to be effective writers and communicators.

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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. Vincent Breslin – Environment, Geography and Marine Sciences (EGMS)	Florida Institute of Technology	Marine Environmental Chemistry/Marine Biology	Department Co-Chair, Co-coordinator - Werth Center for Coastal and Marine Studies
Dr. Scott Graves - EGMS	University of Idaho	Science Education/Earth Science	Coordinator – M.S. Science Education
Dr. James Tait - EGMS	University of California, Santa Cruz	Coastal Oceanography/ Environmental Earth Science	Co-coordinator – Werth Center for Coastal and Marine Studies
Dr. Susan Cusato - EGMS	University of Connecticut	Biochemistry/Pollinators/Education	Coordinator – M.S. Environmental Education, ISIS Coordinator
Dr. Cathi Koehler - EGMS	University of Connecticut	Science Education/Earth Science	Coordinator for Certification
Dr. Patrick Heidkamp - EGMS	University of Connecticut	Economic and Environmental Geography	Department Co-Chair
Dr. Elyse Zavar - EGMS	Texas State University	Hazard Planning and Mitigation	
Dr. Eric West - EGMS	San Diego State University	Geographic Information Systems	GIS Lab Director
Dr. Gregory Robbins - Management	Columbia University	Management and Sustainability	
Dr. Jonathan Wharton – Political Science (PSC)	Howard University	Urban Redevelopment and New Urbanism/State and Local Politics	
Dr. Costel Calin - PSC	University of Tennessee-Knoxville	Comparative Policy including Health and the Environment	

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RESOLUTION

concerning

Approval of a New Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the licensure of a new program in Public Utilities Management leading to an Associate of Science (AS) degree at Gateway Community College and a Bachelor of Science (BS) degree at Southern Connecticut State University for a period of three years until December 30, 2018.

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM: Licensure of a Public Utility Management pathway provided by Gateway Community College and Southern Connecticut State University. The pathway includes an Associate's degree in Public Utility Management (Gateway) and a Bachelor of Science degree in Business Administration with a specialization in Public Utility Management (Southern).

BACKGROUND

Summary

The proposal for a new Public Utility Management pathway, as submitted by Southern Connecticut State University and Gateway Community College, was developed collaboratively in direct response to currently unmet educational and employment needs within the State of Connecticut. The regional utility companies are anticipating that within the next five years, nearly one-third ($1/3^{\text{rd}}$) or more of their workforce will be eligible to retire, thus creating a pressing need for qualified new employees. The retirement statistics for utility company executives are even more alarming, with nearly two-thirds ($2/3^{\text{rds}}$) of currently employed managers approaching eligibility within the same timeframe.

Both institutions collaborated with the Regional Water Authority to assemble an advisory committee of industry representatives to gather feedback on their most pressing hiring needs, priority skills for new employees, and a list of departments facing the greatest impact from these retirements. Shortly following the first meeting, faculty and staff at Gateway and Southern began meeting regularly to develop unique and complementary program curricula to address the workforce needs identified by the advisory board members.

Students will begin their educational track at Gateway where they will obtain an Associate's Degree in Public Utility Management and finish their education at Southern with a Bachelor's of Science (B.S.) in Business Administration with a specialization in Public Utility Management. Conversations within the advisory committee spurred both institutions to create a series of specialized certificates as potential on-ramps for participants to either continue their degree progression or transition directly into the workforce. Both Gateway and Southern have designed unique certificate programs that address technical and managerial skill development respectively. When combined, the program curriculum focuses equal attention on the need for prospective employees to possess solid technical expertise, as well as formal business education, as part of a collaborative talent management effort to fill the void of impending retirements.

Need for the Program

The nature of public utility operations is rapidly changing in the New England region as the industry faces the common challenges of an aging workforce, looming retirements, aging infrastructure, additional regulations, and heightened financial burdens. These are shared concerns across all public utilities and represent national challenges. According to the Water Research Foundation (WRF), a national, non-profit water utility research organization, the water industry will face the following challenges – which align with those of all other utilities –

- 1) The average age of the water utility worker is higher than those working in manufacturing.
- 2) A large percentage of utility workers are within ten (10) years of retirement.
- 3) Increasing plant automation requires that replacement hires be more technically competent.
- 4) The pool of desirable and competent workers is shallow, making it difficult to find replacements.
- 5) Retirement of senior personnel is likely to result in the loss of valuable institutional knowledge.

The proposed Public Utility Management pathway helps to address the challenges listed above on several levels. First and foremost, it raises the visibility of this career pathway within the New England region. Both Gateway and Southern plan to work very closely with industry representatives on an outreach plan that includes current employers, high schools, guidance counselors, and community members throughout the region. Secondly, the educational on-ramps (certificates, associate's and bachelor's degrees) are flexible enough to serve the needs of current employees seeking career advancement, as well as younger students interested in learning more about the industry and entering a field with a wide array of career options. Industry research, combined with feedback from advisory committee representatives, clearly indicates that this new educational degree program must be crafted with the intent of developing a pool of qualified employees with both management and technical knowledge. The 2+2 format will allow prospective students to explore the more technical classes while at Gateway before transitioning to Southern for their business education classes. This will open up a variety of career pathways and unique options depending upon the desires of the student.

Curriculum

Please see *Appendix A*, which includes detailed information on courses, prerequisites, and learning outcomes with the Associate and Bachelor's degree programs.

Students

The Public Utility Management pathway is intended to provide prospective students, including high school graduates, community college students, transfer students, currently matriculated students at Southern, and those currently employed in the utility industry, with a wide variety of career options in the field. The utility industry offers an array of career tracks for those with a strong technical background combined with an aptitude in business, marketing, accounting, information technology, data analysis, and/or office administration.

Southern and Gateway conducted an industry survey of advisory committee members to gather feedback on the types of career opportunities for which graduates of this program would be well qualified. The departments facing the most pressing hiring needs include: customer service, field operations, employee relations, information technology, purchasing and finance, and quality assurance. Average salaries range between \$55,600 - \$75,833 depending upon an applicant's level of experience and educational background.

Gateway Community College based their enrollment projections on the current headcount within their certificate programs, prospective new students from high school, and feedback from advisory committee members on the number of current employees who would be interested in additional education. Southern Connecticut State University planned their enrollment projections on the number of anticipated transfer students from Gateway, current university students who may be interested in switching to the new public utility specialization, and a small number of industry employees who are able to begin at the junior level.

Faculty

The collaborative Public Utility Management pathway builds upon the programmatic, human resource, and geographic strengths of both institutions. Gateway faculty members have a long-standing history of developing credit-bearing professional certificates for public utility companies throughout the state of Connecticut. In many cases, Gateway will utilize industry professionals as faculty experts. This new pathway builds upon the institution's strong track record of customizing programs to meet the needs of regional employers and attracting talented faculty with both teaching and professional experience. As a

natural feeder to Southern, this program aligns perfectly with the core business administration curriculum in the university's School of Business.

The vast majority of faculty members within SCSU's School of Business have terminal degrees and extensive curriculum design and development experience, which is often driven through collaboration with a professional advisory board to align the learning outcomes with industry needs. Faculty members at Gateway and Southern have a natural kinship given their close geographic proximity and ongoing work to develop student-friendly transfer articulation agreements. The lead faculty members at Gateway Community College and Southern Connecticut State University will be Richard Reese, Department Chairperson for Business and Rick Bassett, Department Chairperson for Management/Management Information Systems (MIS).

Learning Resources

Students in the collaborative program will benefit from the expertise and resources provided by the Industry Advisory Board members. These resources include funding for course development and materials, tuition reimbursement, opportunities for professional development experiences, and internship placements. Additionally, faculty at both institutions can provide academic and professional experiences utilizing the vast resources of the utilities organizations throughout the state.

Facilities

Both Gateway and Southern can provide classroom, laboratory and meeting space that is sufficient to meet the needs of their respective programs. Faculty and students will utilize the existing space and take advantage of off-site trips to utilities organizations who partner in the program development.

Fiscal Note

Southern Connecticut State University and Gateway Community College have each developed their own individual budget for this pathway program to best illustrate the unique resource needs of each institution, parities in tuition rates, and distinctive enrollment trends. With that said, this program has been built as a pathway for multiple student audiences with corresponding on-ramps, so each budget is intrinsically linked to the other.

While this program will primarily be supported with current resources, each institution will provide a modest investment to support the development of new curricula. Southern will also hire one new faculty member to manage the increased course load. Both Southern and Gateway anticipate a marginal loss in the first year of operation due to these up-front program investments. Both programs will be profitable in the second year of operation with an even stronger profit margin in the third year of the program.

Review of Documents:

- a) Campus Review
- b) Campus Budget and Finance
- c) Campus President
- d) Academic Council
- e) System Office

Accreditation:

Both GWCC and SCSU hold regional accreditation through NEASC. No additional accreditation is provided to this program.

APPENDIX A: Program Curriculum

Associate's Degree in Public Utility Management - GWCC				
Course Number	Course Title	Learning Outcomes	Prerequisite Courses	Course Hours
GENERAL EDUCATION COURSES				
ENG 101	Composition	2		3
ENG 102/ENG 200	Literature and Composition/ Advanced Composition	2		3
MAT 172 or MAT 186	College Algebra & Trig / Pre-Calculus	5		3
ECN 101	Macroeconomics	5, 6		3
EVS 114	(Natural Science) Env. Science and Lab	5, 7		4
ECN 102	Principles of Microeconomics	3, 4		3
IDS 106	Critical Thinking-Business	3, 4		3
BBG 240/ PHL 111	(Social Science) Business Ethics/Ethics	1, 2		3
BBG 115/CSA 135	Spreadsheets & Databases	4		<u>3</u>
TOTAL:				28
PROGRAM MAJOR COURSES				
BMG 202	Principles of Management	2, 3		3
BBG 231	Business Law	1, 2, 3, 5		3
ACC 113	Principles of Financial Accounting	6		3
ACC 117	Principles of Managerial Accounting	6	ACC 113	3
CWM 106	Introduction to Utility Management	1		3
BBG 200/MAT 167	Business Statistics/Principles of Stats	4, 6		3
ENV 110	Environmental Regulations	1, 5		3
TBD	Rates and Revenues	1, 6		3
TBD	Customer Relations	1, 5		<u>3</u>
TOTAL:				27
Public Utility Management Track Electives (CHOOSE 2)				
BMK 201	Principles of Marketing	2		3
BBG 294	Business Internship (Elective)	3, 6	(BBG294) 15 crs of bus., ENG 101 and min. GPA	3
QUA 114	Principles of Quality Control	7		3
TBD	Asset and Infrastructure Management	4		3
BBG 210	Business Communication	2		<u>3</u>
TOTAL:				6
TOTAL CREDITS				61

APPENDIX A: Program Curriculum

Bachelor of Science (B.S.) in Business Administration with a specialization in Public Utility Management - SCSU

SCSU Courses	Learning Outcomes	Credits	GWCC Course Equivalents
Tier 1 (15 credits)			
			* Courses prescribed within A.S. Public Utility Management degree
INQ 101 - First Year Experience	3	0	Transfer student waiver*
Critical Thinking	2	3	IDS 106*
Multilingual Comm. - 200 - Level World Language	3	3	FRE/ITA/SPA 201 or 202
MAT 120 or 122 - Quantitative Reasoning	5	3	MAT 172 or 186*
CSC 200 - Technological Fluency	5	3	BBG 115*
ENG 112 - Written Communication	3	3	ENG 102* or 200*
Tier 2 (28 credits)		15	Subtotal
American Experience	6	3	HIS 201 or 202, POL 111 (Soc. Sci. Elect*)
Creative Drive	6	3	ENG 281, ART 111
Cultural Expression	6	3	ART 101 or 102, MUS 101
ECO 101 -Global Awareness	4	3	ECN 102*
Mind and Body	6	3	PSY 111, PHL 111
Natural World I: Physical Realm	5	3	EVS 114*
Natural World II: Life and Environment	5	4	BIO, CHE, EAS, PHY w/ lab
ECO 100 - Social Structure, Conflict and Consensus	6	3	ECN 101*
Time and Place	6	3	GEO 101, HIS 101 or 102
Tier 3 (3 credits)		43	Subtotal
MGT 460 - International Business	4	3	
Business Administration - Common Core (27 credits)			
ACC 200 - Principles of Accounting	5	3	ACC 101, 102, 113*
ACC 210 - Managerial Accounting	5	3	ACC 110, 117*, 204, 231, 232
ECO 221 - Business Statistics	5	3	BUS 168, 200*
FIN 300 - Corporation Finance	5	3	
MGT 240 - Legal Environment of Business	1, 2, 3	3	BBG 231* Business Law I
MGT 305 - Organizational Behavior	1, 2, 3, 4	3	
MGT 450 - Business Policy & Strategy	1, 2, 3, 5	3	
MIS 370 - Business Information Systems	1, 2, 3, 5	3	
MKT 200 - Principles of Marketing	3	3	BMK 201* Principles of Mktg.
Management - Utilities Specialization (30 credits)		73	Subtotal
MGT 200 - Business Communications	3	3	BBG 210* Bus. Comm.
MGT 300 - Management and Organization	1,2	3	BMG 202* Principles of Mgmt.
MGT 385 - Human Resource Management	1,2	3	BMG 220 Human Resources
MGT 400 - Values & Conflicts in Managerial Decision Making	1,2	3	

STAFF REPORT**ACADEMIC AND STUDENT AFFAIRS COMMITTEE**

SCSU Courses	Learning Outcomes	Credits	
<i>Electives: Select 6 courses from the list below</i>		85	Subtotal
ACC 401 - Pub. Utility Accounting/ Government Accounting	5	ELE 1	
GEO 381 or 460 - GIS	5	ELE 2	
MGT 335 - Business Law	1	ELE 3	
MGT 398 - Energy MGT and Renew. Energy/ Green MGT	4,5	ELE 4	
MGT 415 - Developing Team Managerial Skills	1,2	ELE 5	
MGT 498 - Collect. Bargaining & Labor Rel./Negotiations	1,2	ELE 6	
MIS 398 - Bus. Continuity Planning / MIS Special Topics	1,2	ELE 7	ENV 110* Env. Regulations
MIS 430 - Introduction to Project Management	1,2	ELE 8	
MGT or MIS 497 - Internship	1, 2, 3, 4, 5, 6	ELE 9	
Writing Intensive Courses (W) 3 Required		0	Only 2 required; if transferring 60-90 credits
General Electives (17 credits) Average credits needed to achieve 120 total Any courses not listed above I.E. ENG 101* QUA 114*		103	Subtotal
TBD XXX - Crisis Management / Risk Management	1	3	<i>These courses were suggested by the Industry Advisory Committee.</i>
TBD XXX - Green Energy and Environmental Sustainability	4, 5	3	
TBD XXX - Workforce Safety and Industry Regulatory Codes (ie: OSHA)	3,5	3	
		120	Total Credits

November 11, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - **01/20/12**

SECTION 1: GENERAL INFORMATION

Institution(s): Southern Connecticut State University and Gateway Community College	Date of Submission to BOR Office: November 11, 2015	
Most Recent NEASC Institutional Accreditation Action and Date: Southern Connecticut State University – Reaccreditation approved on: April 19, 2012 Gateway Community College – March 2006		
Program Characteristics Name of Program: Public Utility Management Pathway Degree: Title of Award (e.g. Master of Arts) <ul style="list-style-type: none"> Bachelor of Science (B.S.) in Business Administration with a specialization in Public Utility Management Associate's Degree in Public Utility Management Certificates (please see Appendix D for titles) Certificate: (specify type and level) Anticipated Program Initiation Date: January 2016 Anticipated Date of First Graduation: December 2017 (AS) and December 2019 (BS) Modality of Program: <input checked="" type="checkbox"/> On ground <input type="checkbox"/> Online <input type="checkbox"/> Combined If "Combined", % of hybrid or online courses? Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 61 for AS, 120 for BS	Program Credit Distribution # Cr in Program Core Courses: 55 (AS) 27 (BS) # Cr of Electives in the Field: 6 (AS) 15 (BS) # Cr of Free (general) Electives: 0 (AS) 17 (BS) # Cr Special Requirements (include internship, etc.): 0 (AS) <u>Total # Cr in the Program</u> (sum of all #Cr above): 61 (AS) 120 (BS) From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 24 (A.S.) 120 (B.S. in Business Administration)	
Type of Approval Action Being Sought: Licensure OR <input checked="" type="checkbox"/> Licensure and Accreditation Suggested CIP Code No. (optional) Title of CIP Code		
If establishment of the new program is concurrent with discontinuation of related program(s), please list for each program: Program Discontinued: CIP: DHE# (if available): Phase Out Period Date of Program Termination		
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: Southern Connecticut State University's - School of Business (Main Campus) Gateway Community College's Business Department		
Other Program Accreditation: <ul style="list-style-type: none"> 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 address the standards of the identified accrediting body or licensing agency)		
Institutional Contact(s) for this Proposal:	Name: Ellen Durnin Title: Dean, SCSU Tel.: 203 392-5631 Email: durnine1@southernct.edu	Name: Janet Hayes Title: Curriculum Innovator, GWCC Tel.: 203.285.2431 Email: jhayes@gatewayct.edu

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BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):

Approved 2010 CIP Code No. ¹ Title of CIP Code

Log of BOR Steps Towards Program Approval:

Nature and Resolution number for BOR Approval:

Date of Approval:

Conditions for Approval (if any)

¹ Final CIP assignment will be done by BOR staff in consideration of suggested number (if provided) and in consultation with administrative offices at the institution and system proposing the program. For the final assignment, the 2010 CIP definitions will be used.

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APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

SECTION 2: PROGRAM PLANNING ASSESSMENT (To be used in BOR Review Only)

Alignment of Program with Institutional Mission, Role and Scope

(Please provide objective and concise statements)

The following proposal for a new Public Utility Management pathway, as submitted by Southern Connecticut State University (SCSU) and Gateway Community College (GWCC), was developed collaboratively in direct response to currently unmet educational and employment needs within the State of Connecticut. The regional utility companies are anticipating that within the next five years, nearly one-third (1/3rd) or more of their workforce will be eligible to retire, thus creating a pressing need for qualified new employees. According to a December 2013 PricewaterhouseCoopers research study, the retirement statistics for utility company executives are even more alarming, with nearly two-thirds (2/3rds) of currently employed managers approaching eligibility within the same timeframe.² The Regional Water Authority (RWA) of Connecticut has worked closely with both institutions on this proposal as this challenge can only be solved through a combination of strong educational partnerships and industry succession planning.

As a starting point, SCSU and GWCC collaborated with the RWA to assemble an advisory committee of industry representatives to gather feedback on their most pressing hiring needs, priority skills for new employees, and a list of departments facing the greatest impact from these retirements. This proposal includes a list of participating members at the conclusion of this document (**Appendix A**) who worked together with faculty and administration at each institution to develop a flexible educational ladder from associates through bachelor's degree. Students will begin their educational track at GWCC where they will obtain an Associate's Degree in Public Utility Management and finish their degree at SCSU with a Bachelor's of Science (B.S.) in Business Administration with a specialization in Public Utility Management.

Discussions within the initial industry advisory committee meeting spurred both institutions to create a series of specialized certificates (**Appendix D**) as potential on-ramps for participants to either continue their degree progression or transition directly into the workforce. Both GWCC and SCSU have designed unique certificate programs that address technical and managerial skill development respectively. GWCC's certificate programs focus on technical expertise and skills applicable to the water, gas, and electric utilities. SCSU's certificates provide managerial and leadership content, as well as experiential learning opportunities, to enhance a student's career development. When combined, the program curricula focuses equal attention on the need for prospective employees to possess solid technical expertise, as well as formal business education, as part of a collaborative talent management effort to fill the void of impending retirements.

Mission Alignment

Gateway Community College

GWCC in New Haven, Connecticut is committed to offering "high-quality instruction and comprehensive services in an environment conducive to learning, while responding to the changing academic, occupational, technological, and cultural needs of a diverse population." To realize this mission, "Gateway offers a broad range of credit and credit-free liberal arts and sciences, technical, and career associate degree and certificate programs. The institution provides courses leading to transfer, employment, and lifelong learning. This encourages student success and inclusion through stimulating learning opportunities, innovative teaching, support services, and co-curricular activities. Gateway supports economic development through partnerships with business, industry, government, and the greater community by providing workforce development, business development, and technology transfer."

² PricewaterhouseCoopers, ["Power and Utilities Changing Workforce - Keeping the Lights On"](#), Dec. 2013.

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GWCC has forged long-standing professional connections with the regional utility companies through a combination of industry-focused professional development certificates and closely connected associate degree programs. GWCC regularly provides professional development training for utility company employees and was one of the first community colleges to develop several certificate programs for this industry. Gateway currently provides three (3) certificates that allow direct specialization in – Clean Water Management, Water Management, and Electronics Technician (**Appendix D**). These certificate programs served as a starting point for the technical and applied learning elements of the current Public Utility Management pathway. GWCC's mission explicitly states their commitment to supporting economic development through industry partnerships, which has been the primary driving force behind the development of this program. It has always been the combined efforts of our state's community colleges and state universities, working in close collaboration with industry partners, which provide the most impactful solution to pressing employment needs.

Southern Connecticut State University

SCSU is “an intentionally diverse and comprehensive university committed to academic excellence, access, social justice, and service for the public good. The university regards student success as its highest priority and seeks to instill in all of its students the value of the liberal arts and sciences as a foundation for professional development and life-long learning. Through tradition and innovation, Southern strives to empower every undergraduate and graduate student with the knowledge, skills and perspectives essential for active participation and impassioned, ethical leadership in our rapidly changing, global society.”

SCSU was specifically chosen to participate in the development of this program based upon its programmatic alignment with GWCC, strong reputation in business education, commitment to community engagement, and track record of retaining talent within the state of Connecticut. The university mission states that, “Southern Connecticut State University provides exemplary graduate and undergraduate education in the liberal arts and professional disciplines.”

Additionally, Southern's Business School mission statement notes that:

“The School of Business prepares a diverse group of undergraduate and graduate students for careers in for-profit and not-for-profit organizations by linking knowledge and practice.

- We offer our students a learning environment characterized by small classes, accessible faculty, and teamwork.
- We affirm our commitment to faculty scholarship that contributes to the literature and enhances our teaching.
- We encourage our students and faculty to engage in service and learning activities that address workforce needs in Connecticut and beyond.”

Southern's School of Business is guided by a Business Advisory Council, whose members provide support, advocacy, and opportunities for faculty and students to interact with business community leaders. The jointly sponsored Public Utility Management pathway will be assisted by a similarly qualified industry advisory committee whose employees will serve as potential students in the program. Additionally, these employers will provide internship opportunities for students as they progress in their academic work.

The final two years of this program at SCSU will provide the management capstone necessary for graduates to enter a variety of different career tracks within the utility industry. It also provides an intentional alternative to an engineering degree and associated professional tracks at other regional universities. The coursework is squarely rooted in business and provides management training that is flexible enough to allow movement across individual departments for current and prospective

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employees alike. The certificate programs provide an on-ramp for working professionals in the industry who are interested in obtaining a formal credential before pursuing their degree.

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Addressing Identified Needs

- 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)

The nature of public utility operations is rapidly changing in the New England region as the industry faces the common challenges of an aging workforce, looming retirements, aging infrastructure, additional regulations, and heightened financial burdens. These are shared concerns across all public utilities and represent national challenges. According to the Water Research Foundation (WRF), a national, non-profit water utility research organization, the water industry will face the following challenges – which align with those of all other utilities –

- 1) The average age of the water utility worker is higher than those working in manufacturing.
- 2) A large percentage of utility workers are within ten (10) years of retirement.
- 3) Increasing plant automation requires that replacement hires be more technically competent.
- 4) The pool of desirable and competent workers is shallow, making it difficult to find replacements.
- 5) Retirement of senior personnel is likely to result in the loss of valuable institutional knowledge.

The American Water Works Association (AWWA) 2008 State of the Water Industry Survey (SOTWI) report³ predicted the industry would experience the following retirements by position within five years:

- 33% - Water Utility Executives
- 30% - Management & Supervisors
- 21% - Operators
- 14% - Engineers
- 13% - Purchasing Managers
- 7% - Scientists

According to a PricewaterhouseCoopers research study, national trends across all utility companies reflect these same concerns. The report indicates that 38.9% of current utility employees will be eligible to retire within the next five years and nearly 68.3% of executives will be able to retire in this same timeframe.⁴ While the current recession has delayed the retirement plans for many public utility employees, “the recession has [also] helped perpetuate the conservative, consensus-driven culture that has challenged innovation in the industry.”⁵ So while the industry is struggling to attract new talent, they are also retaining employees who are “resistant to innovation, improved controls and governance”⁶.

On a local level, the Regional Water Authority (RWA) of New Haven notes that approximately 125 of its 270 employees (47%) will be eligible to retire with full benefits in the next five years. The Water Research Foundation reported that only 21% of water utilities have a plan for dealing with the coming employee turnover, while nearly half report difficulty in replacing employees. The most frequently cited plan for succession of retiring employees involved training; however, the median training level was only 20 hours per employee per year. More than 80% of useful operating knowledge is tacit and susceptible to loss through retirements, yet utilities are still relying primarily on operation and maintenance (O&M) manuals to document important knowledge.

³ American Water Works Association, ["State of the Industry Report 2008: Charting the Course Ahead"](#), Oct. 2008.

⁴ Price Waterhouse Cooper, ["Power and Utilities Changing Workforce - Keeping the Lights On"](#), Dec. 2013, pp. 3.

⁵ PriceWaterhouseCooper, ["Power and Utilities Changing Workforce - Keeping the Lights On"](#), Dec. 2013, pp. 6.

⁶ Ibid.

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Members of the industry advisory committee have reported that they are beginning to see increased retirements and that succession planning is a critical workforce issue for them. It was ranked as the fifth (5th) most important issue according to the recently released AWWA SOTWI 2013 report. Although many retirements were deferred by the recent economic downturn, a large number of water industry employees are eligible to retire and represent a significant amount of institutional knowledge that could be lost without proper succession planning and process documentation. Many utility participants in the 2013 SOTWI survey reported that they face difficulty in recruiting, training, and retaining skilled employees, especially smaller systems (those serving populations less than 10,000) that have even more limited resources than larger water utilities.

As the economy improves, the industry anticipates that those eligible to retire will take advantage of this opportunity and the younger generations will review all of their available options. Even now, the report shows a sharp increase in the rate of voluntary separations from 5.7% in 2011 to 6.8% in 2012.⁷ The confluence of these looming issues will require a strong external promotional effort to highlight career opportunities within the industry, internal succession planning to advance high potential employees, and collaboration with academic partners to provide formal academic credentials and training.

The proposed Public Utility Management pathway helps to address the challenges listed above on several levels. First and foremost, it raises the visibility of this career pathway within the New England region. Both GWCC and SCSU plan to work very closely with industry representatives on an outreach plan that includes current employers, high schools, guidance counselors, and community members throughout the region. Secondly, the educational on-ramps (certificates, associate's and bachelor's degrees) are flexible enough such that current employees can advance their skills and improve their upward mobility while younger generations have an opportunity to learn about the industry and enter the field with a wide array of career options. Industry research, combined with feedback from advisory committee representatives, clearly indicates that this new educational degree program must be crafted with the intent of developing a pool of qualified employees with both management and technical knowledge. The 2+2 format will allow prospective students to explore the more technical classes while at GWCC before transitioning to SCSU for their business education classes. This will open up a variety of career pathways and unique options depending upon the desires of the student.

- **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 collaborative Public Utility Management pathway builds upon the programmatic and geographic strengths of both institutions. GWCC has a long-standing history of developing credit-bearing professional certificates for public utility companies throughout the state of Connecticut. This includes the creation of such varied technical certificates in: water management, clean water (wastewater) management, and electronics technician. The new Public Utility Management program builds upon the institution's strong track record of customizing programs to meet the needs of regional employers and attracting talented faculty with both teaching and professional experience. As a natural feeder to SCSU, this program aligns perfectly with the core business administration curriculum in the university's School of Business.

The vast majority of faculty members within SCSU's School of Business have terminal degrees and extensive curriculum design and development experience, which is often driven through collaboration with a professional advisory board to align the learning outcomes with industry needs. Faculty members at GWCC and SCSU have a natural kinship and close working relationship given their institutions' geographic proximity and transfer articulation agreements.

⁷ PriceWaterhouseCooper, ["Power and Utilities Changing Workforce - Keeping the Lights On"](#), Dec. 2013, pp. 3.

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Strategically located in the city of New Haven, both institutions serve community members and regional businesses in the southeastern corridor of the state through a combination of professionally-oriented certificates and degree programs. GWCC and SCSU were chosen by our local utility companies based upon our close working relationships, educational alignment with their professional needs, and close proximity to their company headquarters. Geographically, the primary utility companies for which this program was created reside in the triangle between Stamford, New Britain and Norwich. This allows for close collaboration with these companies for program review and the coordination of student internships to provide a direct connection between theory and practical hands-on application.

- **Please describe any transfer agreements with other institutions under the BOR 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)*

On March 15, 2012, the Board of Regents for Connecticut State Colleges & Universities approved a seamless transfer and articulation agreement which will enable students to more easily transfer across the seventeen (17) institutions. Among the key elements of this policy initiative are

1. The development of a common, competency-based general education core and
2. The development of common lower division pre-major pathways that include thirty credits of transferable general education credits that address the core competencies.

The new Public Utility Management pathway will adhere to all policy requirements within the Transfer and Articulation Pathway (TAP) implementation plan, such as the inclusion of transferrable general education/Liberal Education program courses, and Junior status for all GWCC Associate's degree recipients who transfer to SCSU.

The School of Business at SCSU and the Business Department at GWCC have worked closely to align general education, major courses, and elective requirements for seamless transfer between the institutions. Faculty members have worked together to build the attached curriculum, which outlines the flow of classes and transition between certificate, associate's, and bachelor's degree requirements. No additional transfer agreements will be instituted as a result of the approval of this program.

- **Please indicate what similar programs exist in other institutions within your constituent unit⁸, and how unnecessary duplication is being avoided**

In a similar approach to Gateway's statewide Next Generation of Manufacturing initiative, the new Public Utility Management pathway is being developed to serve a currently unmet educational need in the New England region. Gateway, Southern, and the Regional Water Authority have all conducted extensive regional and national research to ensure that no duplicative programs exist in the tristate area (CT, MA, and RI). Our organizations were unable to find a single associate or bachelor's degree program focusing on the utility industry along the East Coast. The new Public Utility Management pathway provides participants with a viable alternative to a public administration or civil engineering degree. While some institutions provide concentrations in public utilities that connect to their engineering degree, or cognates that connect to their MBA and MPA programs, they are not located in the New England region, nor do we consider these to be direct competition for this program. The

⁸ Constituent units are: the Connecticut Community College System, the Connecticut State University System, Charter Oak State College, and the University of Connecticut

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vast majority of offerings are located in the midwest and western states where water utility management has reached a critical level of importance. Please see (**Appendix B**) for a list of programs nationwide that specifically serve the utility industry.

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

The Public Utility Management pathway is intended to provide prospective students, including high school graduates, community college students, transfer students, currently matriculated students at SCSU, and those currently employed in the utility industry, with a wide variety of career options in the field. The utility industry offers an array of career tracks for those with a strong technical background, as well as graduates with an aptitude in business, marketing, accounting, information technology, data analysis, and office administration.

SCSU and GWCC conducted an industry survey of advisory committee members to gather feedback on the types of career opportunities for which graduates of this program would be well qualified. The chart in (**Appendix C**) includes a list of job titles, descriptions, and salary ranges for in-demand hiring areas. The departments facing the most pressing hiring needs include: customer service, field operations, employee relations, information technology, purchasing and finance, and quality assurance. Average salaries range between \$55,600 - \$75,833 depending upon an applicant's level of experience and educational background.

Cost Effectiveness and Availability of Adequate Resources

(Please provide a one-paragraph narrative on the attached MS Excel Pro-Forma Budget)

Southern Connecticut State University and Gateway Community College have each developed their own individual budget for this pathway program to best illustrate the unique resource needs of each institution, parities in tuition rates, and distinctive enrollment trends. With that said, this program has been built as a pathway for multiple student audiences with corresponding on-ramps, so each budget is intrinsically linked to the other. Both budgets are included within this proposal as **Appendix E**.

GWCC based their enrollment projections on the current headcount within their certificate programs, prospective new students from high school, and feedback from advisory committee members on the number of current employees who would be interested in additional education. SCSU planned their enrollment projections on the number of anticipated transfer students from GWCC, current university students who may be interested in switching to the new public utility specialization, and a small number of industry employees who are able to begin at the junior level. The Regional Water Authority also conducted a brief survey of their employees who expressed interest in this pathway program. Their results are as follows:

- 7 employees would be interested in a certificate program
- 10 employees would be interested in an Associate's Degree program
- 14 employees would be interested in a Bachelor's Degree program.
- 30 total employees would recommend this program to a colleague, friend or family member.

Each institution has used this information to support their enrollment projections and calculated a modest attrition rate for those students who choose to stop-out of the program or accelerate their graduation date.

While this program will primarily be supported with current resources, each institution will provide a modest investment to support the development of new curricula. SCSU will also hire one new faculty member to manage the increased course load. Both SCSU and GWCC anticipate a marginal loss in the first year of operation due to these up-front program investments. Both programs will be

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profitable in the second year of operation with an even stronger profit margin in the third year of the program.

SECTION 3: PROGRAM QUALITY ASSESSMENT

Overall Learning Goal/Principal Learning Outcome for the Program:

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)

Associate's Degree (GWCC)

1. Describe and apply the operations of public utility management.
2. Apply effective written and oral communication skills to articulate opportunities, ideas, and problems identified, as well as appropriate strategic responses across the economic, social, environmental, public, and political spheres.
3. Formulate team dynamics and working in groups, particularly in relation to the functioning of critical incident response teams.
4. Devise and translate ideas into logical steps that utilize resources and establish best practices with colleagues for customers and suppliers/vendors.
5. Employ and make use of written documents such as Environmental Protection Agency methods of analysis, internal standard operating procedures, safety rules, policy manuals, and professional journals.
6. Analyze and interpret the legal and/or regulatory implications of business and utility management.
7. Perform laboratory testing and analyses required for operational control and regulatory compliance

Assessments - The assessments that will be used in this degree include a variety of quizzes, exams, labs, discussion boards, and written assignments. Students will demonstrate proficiency via:

- Work in teams or/and individually to prepare projects that incorporate job-related documentation, such as proposals, product descriptions with instructions, troubleshooting guides or letters (for example, responding to a customer complaint).
- Written assignment documenting a students' ability to analyze or apply material and concepts covered in current and former courses.
- Student directed discussion of ideas, analysis of data, and debate results of labs or exams.

Bachelor's Degree (SCSU)

1. Students will build an interdisciplinary approach to analyzing and criticizing complex business problems in public utility management.
2. Students will think critically in public utility management.
3. Students will be effective communicators in public utility management.
4. Students will apply their knowledge of globalization and diversity to making business decisions in public utility management.
5. Students will be quantitatively and technologically competent in public utility management.
6. Students will be able to articulate/evaluate multiple perspectives on an issue, acknowledging the potential for complexity and ambiguity.

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Assessments - The assessments that will be used in both degree programs include a variety of quizzes, exams, labs, discussion boards, and written assignments. Students will demonstrate proficiency via:

- Application of concepts and demonstration of increasing skill with progression through courses.
- Simulations and projects that build upon concepts covered in the courses.
- Case studies/portfolio that include concepts and skills from all courses.

Assessments will be linked to learning outcomes in both the Associate's and Bachelor's degree programs, with feedback loops that allow for curricular revisions as needed.

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)*

The program will be offered jointly by Gateway Community College and Southern Connecticut State University. The persons responsible for the day-to-day operations of the program are:

1. **Richard Rees** - Gateway's Business Department Chair, is the 2014 recipient of Education Excellence and Distinguished Service Award conferred by the Board of Regents for Higher Education. Professor Rees will be supported Mark Kosinski, Academic Dean at Gateway Community College.
2. **Richard Bassett** - chair of SCSU's department of Management/MIS, will oversee the BSBA portion of the program. Dr. Bassett will be supported by Ellen Durnin, dean of the School of Business at SCSU.

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?

One in total at SCSU

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

80%; other credits will be taught in each institution's General Education and Liberal Education Programs.

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

Due to our unique contractual and accreditation limits, these standards will be different for Gateway Community College and Southern Connecticut State University

- Adjunct faculty will teach up to 40% of the program credits at GWCC
- Adjunct faculty will teach up to 20% of the program credits at SCSU.

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

Gateway requires faculty members to hold at least a master's degree. The majority of faculty at SCSU will be required to have obtained a terminal degree in discipline (Ph.D. or Ed.D.).

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 Cost Analysis Projection sheet for BOR review)*

This program is supported by an industry advisory board that is committed to assisting with special resources, equipment, and library collections as needed to enhance those at GWCC and SCSU. Additionally, there will need to be funds provided for course development in areas where the institutions do not have the required courses or need to revise existing courses.

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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)

Associate's Degree in Public Utility Management - GWCC				
Course Number	Course Title	Learning Outcomes ⁹	Prerequisite Courses	Course Hours
GENERAL EDUCATION COURSES				
ENG 101	Composition	2		3
ENG 102/ENG 200	Literature and Composition/ Advanced Composition	2		3
MAT 172 or MAT 186	College Algebra & Trig / Pre-Calculus	5		3
ECN 101	Macroeconomics	5, 6		3
EVS 114	(Natural Science) Env. Science and Lab	5, 7		4
ECN 102	Principles of Microeconomics	3, 4		3
IDS 106	Critical Thinking-Business	3, 4		3
BBG 240/ PHL 111	(Social Science) Business Ethics/Ethics	1, 2		3
BBG 115/CSA 135	Spreadsheets & Databases	4		<u>3</u>
TOTAL:				28
PROGRAM MAJOR COURSES				
BMG 202	Principles of Management	2, 3		3
BBG 231	Business Law	1, 2, 3, 5		3
ACC 113	Principles of Financial Accounting	6		3
ACC 117	Principles of Managerial Accounting	6	ACC 113	3
CWM 106	Introduction to Utility Management	1		3
BBG 200/MAT 167	Business Statistics/Principles of Stats	4, 6		3
ENV 110	Environmental Regulations	1, 5		3
TBD	Rates and Revenues	1, 6		3
TBD	Customer Relations	1, 5		<u>3</u>
TOTAL:				27
Public Utility Management Track Electives (CHOOSE 2)				
BMK 201	Principles of Marketing	2		3
BBG 294	Business Internship (Elective)	3, 6	(BBG294) 15 crs of bus., ENG 101 and min. GPA	3
QUA 114	Principles of Quality Control	7		3
TBD	Asset and Infrastructure Management	4		3
BBG 210	Business Communication	2		<u>3</u>
TOTAL:				6
TOTAL CREDITS				61

⁹ From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application.

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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. Example: "The Finance Major entails 18 credits of Related Course requirements from a range of disciplines (6 credits of which apply to the Liberal Arts Core (LAC), or institution's GenEd program), 24 credits of courses in Business (3 credits of which apply to the LAC/GenEd), 18 credits of coursework in Finance (including a 6-credit internship), and 9 elective credits from a list that includes courses in Economics, Finance, and Business. Students must take a minimum of 24 credits of coursework for the major at the institution and must maintain a GPA of 2.5.")

The **61-credit** Associate Degree in Public Utility Management is designed to meet the needs of students planning to transition directly into the workforce upon graduation, or as preparation for the Bachelor's Degree program at Southern Connecticut State University. After completing the general education requirements, emphasis is placed on courses providing students to gain theoretical and practical knowledge necessary for working in public utilities or more advanced study. Students also have the opportunity to participate in a business internship at a regional company for direct, hands-on experience. The program includes 28 credits of General Education coursework, 27 credits of business coursework in the major, and 6 credits of public utility management electives.

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**Bachelor of Science (B.S.) in Business Administration with a
specialization in Public Utility Management - SCSU**

SCSU Courses	Learning Outcomes ¹⁰	Credits	GWCC Course Equivalents
Tier 1 (15 credits)			
			* Courses prescribed within A.S. Public Utility Management degree
INQ 101 - First Year Experience	3	0	Transfer student waiver*
Critical Thinking	2	3	IDS 106*
Multilingual Comm. - 200 - Level World Language	3	3	FRE/ITA/SPA 201 or 202
MAT 120 or 122 - Quantitative Reasoning	5	3	MAT 172 or 186*
CSC 200 - Technological Fluency	5	3	BBG 115*
ENG 112 - Written Communication	3	3	ENG 102* or 200*
Tier 2 (28 credits)		15	Subtotal
American Experience	6	3	HIS 201 or 202, POL 111 (Soc. Sci. Elect*)
Creative Drive	6	3	ENG 281, ART 111
Cultural Expression	6	3	ART 101 or 102, MUS 101
ECO 101 -Global Awareness	4	3	ECN 102*
Mind and Body	6	3	PSY 111, PHL 111
Natural World I: Physical Realm	5	3	EVS 114*
Natural World II: Life and Environment	5	4	BIO, CHE, EAS, PHY w/ lab
ECO 100 - Social Structure, Conflict and Consensus	6	3	ECN 101*
Time and Place	6	3	GEO 101, HIS 101 or 102
Tier 3 (3 credits)		43	Subtotal
MGT 460 - International Business	4	3	
Business Administration - Common Core (27 credits)			
ACC 200 - Principles of Accounting	5	3	ACC 101, 102, 113*
ACC 210 - Managerial Accounting	5	3	ACC 110, 117*, 204, 231, 232
ECO 221 - Business Statistics	5	3	BUS 168, 200*
FIN 300 - Corporation Finance	5	3	
MGT 240 - Legal Environment of Business	1, 2, 3	3	BBG 231* Business Law I
MGT 305 - Organizational Behavior	1, 2, 3, 4	3	
MGT 450 - Business Policy & Strategy	1, 2, 3, 5	3	
MIS 370 - Business Information Systems	1, 2, 3, 5	3	
MKT 200 - Principles of Marketing	3	3	BMK 201* Principles of Mktg.
Management - Utilities Specialization (30 credits)		73	Subtotal
MGT 200 - Business Communications	3	3	BBG 210* Bus. Comm.
MGT 300 - Management and Organization	1,2	3	BMG 202* Principles of Mgmt.
MGT 385 - Human Resource Management	1,2	3	BMG 220 Human Resources
MGT 400 - Values & Conflicts in Managerial Decision Making	1,2	3	

¹⁰. The SCSU Learning Outcomes were selected from The School of Business and may be adjusted as the Management Department identifies specific learning outcomes by course.

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SCSU Courses	Learning Outcomes ¹¹	Credits	
Electives: Select 6 courses from the list below		85	Subtotal
ACC 401 - Pub. Utility Accounting/ Government Accounting	5	ELE 1	
GEO 381 or 460 - GIS	5	ELE 2	
MGT 335 - Business Law	1	ELE 3	
MGT 398 - Energy MGT and Renew. Energy/ Green MGT	4,5	ELE 4	
MGT 415 - Developing Team Managerial Skills	1,2	ELE 5	
MGT 498 - Collect. Bargaining & Labor Rel./Negotiations	1,2	ELE 6	
MIS 398 - Bus. Continuity Planning / MIS Special Topics	1,2	ELE 7	ENV 110* Env. Regulations
MIS 430 - Introduction to Project Management	1,2	ELE 8	
MGT or MIS 497 - Internship	1, 2, 3, 4, 5, 6	ELE 9	
Writing Intensive Courses (W) 3 Required		0	Only 2 required; if transferring 60-90 credits
General Electives (17 credits) Average credits needed to achieve 120 total Any courses not listed above I.E. ENG 101* QUA 114*		103	Subtotal
TBD XXX - Crisis Management / Risk Management	1	3	These courses were suggested by the Industry Advisory Committee.
TBD XXX - Green Energy and Environmental Sustainability	4, 5	3	
TBD XXX - Workforce Safety and Industry Regulatory Codes (ie: OSHA)	3,5	3	
		120	Total 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. Example: "The Finance Major entails 18 credits of Related Course requirements from a range of disciplines (6 credits of which apply to the Liberal Arts Core (LAC), or institution's GenEd program), 24 credits of courses in Business (3 credits of which apply to the LAC/GenEd), 18 credits of coursework in Finance (including a 6-credit internship), and 9 elective credits from a list that includes courses in Economics, Finance, and Business. Students must take a minimum of 24 credits of coursework for the major at the institution and must maintain a GPA of 2.5.")			

¹¹ From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application. The SCSU Learning Outcomes were selected from The School of Business and may be adjusted as the Management Department identifies specific learning outcomes by course.

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The **120-credit** Bachelor of Science in Business Administration with a specialization in Public Utility Management is designed to give undergraduates a solid management base coupled with an industry-specific concentration that will enable them to fill dynamic managerial roles in public utilities. Experience plays a role in the curriculum, through fieldwork conducted under the supervision of an outside agency and the course instructor. During this internship, students directly apply the concepts, knowledge, and skills they've learned through their course of study. The program includes 46 credits of General Education coursework, 27 credits in the School of Business Common Core, 30 credits specifically geared to specialization in Utilities Management, and 17 credits of electives. Students interested in this program will receive intentional advising and guidance on course selection and by faculty members within the School of Business and professionally-oriented advisors in the Enrollment Management division.

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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)

[illegible]

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APPENDIX: A – Advisory Board Participants

Richard Bassett

Department Chair of Business,
Southern Connecticut State University

John W. Betkoski III,

Vice Chairman
Public Utilities Regulatory Authority

Larry Bingaman,

President and CEO,
Regional Water Authority

Ian M. Canning,

Director of Special Academic Programs & Sessions
Southern Connecticut State University

Brian Csizmadia,

Director of Human Resources
Aquarion Water Company

Ellen Durnin,

Dean, School of Business
Southern Connecticut State University

Charles Firlotte,

President and CEO,
Aquarion Water Company

Robert Forbus,

Assistant Dean, School of Business
Southern Connecticut State University

Janet Hayes

Special Projects,
Gateway Community College

Scott W. Jellison, P.E.

Chief Operating Officer
The Metropolitan District

Kristen Johnson,

VP-Human Resources and Corporate Secretary
Connecticut Water Company

Mark Kosinski

Academic Dean
Gateway Community College

Karen Maines, PHR

Human Resources
Connecticut Water

Tom McGrath,

Professor, Engineering & Applied Technologies
Gateway Community College

Lori Mathieu,

Public Health Services Manager
State of Connecticut
Department of Public Health

Susan Negrelli,

Director of Engineering
The Metropolitan District

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APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

APPENDIX: A – Advisory Board Participants (Continued)

Richard Rees

Program Chair of Business
Gateway Community College

Ronald Robert,

Manager of Organizational Talent
UIL Holdings Corporation

Bill Sullivan,

Sanitary Engineer 3
CT Department of Public Health

Eric W. Thornburg,

President & CEO
Connecticut Water Company

Susan Winkel,

Manager, Workforce Development
UIL Holdings Corporation

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APPENDIX: B – Competitive Research

Public Utility Management Program: Competitive Research					
School	Location (State)	Program Type: Certificate, Associates, Bachelor's, Masters	Program Title:	Program Delivery: On-Campus, Online, Hybrid	Website Link
Goodwin College	CT	Certificate	Water Distribution; Water Treatment	On-Campus	Goodwin College
Hamline University	MN	Certificate (Non-Credit Institute)	Midwest Regional Water Utility Management Institute	On-Campus	Hamline University
Palomar College	CA	Certificate (Level I and II)	Public Works Management (collaboration with Santiago Canyon College)	On-Campus	Palomar College
Sacramento State University	CA	Certificates and Courses	Various Water Programs	On-Campus	Sacramento State University
Santiago Canyon College	CA	Certificate/Associates	Water Utility Science	On-Campus	Santiago Canyon College
University of North Carolina	NC	Masters	Public Administration (Concentration in Utilities)	Online	MPA @ UNC
Western Kentucky University	KY	Associates	Water Resource Management; Water Utilities Management	On-Campus	Western Kentucky University
Willamette University	OR	Certificate (Non-Credit or 4-GR Credits)	Utility Management	On-Campus	Willamette University

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Appendix C: Job Titles and Career Prospects

<u>Department</u>	<u>Job Title</u>	<u>Description</u>	<u>Salary Range</u>
Asset Management	Capital Budget Coordinator	Coordinates functions related to capital improvements budget. Oversees and administers amendments to the capital budget and assists with the managing of asset management data.	\$58,015 - \$75,800
Communication and Outreach	Program Specialist	Supervises the recreation staff and maintenance of recreation areas and equipment. Assists all departments within the Water Quality Division as needed. Tasks range from technical and field oriented functions to administrative functions.	\$63,900 - \$82,600
Customer Service	Customer Service Representative	Receive and respond to all types of customer water and no-water inquiries with regards to billing and service related matters. Process and update customer records.	\$46,800 - \$60,600
Customer Service	Customer Service Coordinator	Plans, organizes and directs all daily functions of the Customer Service Call Center operations to maintain benchmarks, optimize resources and ensure timely completion of responsibilities.	\$47,800 - \$62,505
Customer Service	Lead Customer Service Representative	Leads a team of customer service reps to effectively respond to customers in a professional and efficient manner. Works under the Customer Service Supervisor to assist in the coordination and planning of the daily activities of call center staff.	\$47,923 - \$67,100
Distribution	Distribution Coordinator	Responsible for the coordination of activities related to the daily operation of the Distribution System. Provides technical and administrative support for the Distribution & Treatment Departments.	\$63,900 - \$82,600
Employee Relations	Payroll Analyst	Responsible for maintaining employee records and overseeing the processing of payroll and pension payments.	\$58,015 - \$75,800
Employee Relations	Human Resource Generalist	Performs a broad range of activities related to recruiting, onboarding, performance management, and data analysis within employee relations. Additional areas of oversight include: administration of benefits, pension, employment law, training & education, and recruitment & hiring.	\$61,200 - \$94,861
Environmental Planning	Watershed Protection Specialist	Conducts public water supply watershed and aquifer inspections of industrial, commercial, residential, and development sites to identify and report existing or potential sources of contamination that could affect water supply sources.	\$58,015 - \$75,800
Environmental Planning	Natural Resources Analyst	Performs functions related to: land management, reservoir system management, and providing general assistance to the Real Estate Manager on a variety of land use issues.	\$63,900 - \$82,600
Field Operations	Service Delivery Coordinator	Provides diversified administrative and technical support to the VP of Service delivery, engineering, and water quality personnel.	\$51,637 - \$77,456
Field Operations	Scheduling Coordinator	Responsible for planning work activities of multi-skilled work teams to provide cost effective improvements and/or maintenance of water systems. Employee ensures availability of required human resources, equipment and materials, using knowledge of principles, practices, and equipment used in the construction, installation, maintenance, and repair of water systems.	\$63,900 - \$82,600
Finance	Accounting Clerk	Performs daily activities related to supporting accounts payable functions and general clerical duties to support the accounting department.	\$36,850 - \$44,100
Finance	Accounting Assistant	Provides the department with transactional support and performs routine tasks to support department activities. Completes standard journal entries, account analysis, and reconciliations. Assists accountants with accurate and efficient data entry, report production, and data extraction from our accounting systems.	\$43,804 - \$61,318
Finance	Rates and Revenue Analyst	Manages rates and revenue functions including: budgeting, monitoring and controlling water production, billed consumption and revenues.	\$58,015 - \$75,800
Information Technology	Engineering Technician	Manages and operates the GIS to properly maintain and store electronic records. Collects data through coordination with engineering staff, superintendents and field service representatives. Distributes system mapping using Arc GIS software of water utility assets and their characteristics. Establishes GIS as the internal data tracking and spatial data warehouse. Plays a key role in establishing format and work processes to ensure integrity of data and accurate data capture.	\$51,500 - \$74,672

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Appendix C: Job Titles and Career Prospects

<u>Department</u>	<u>Job Title</u>	<u>Description</u>	<u>Salary Range</u>
Information Technology	Communication Specialist	Responsible for the planning and coordination of functions relative to communications facilities including the telephone system, radio, cellular, paging, and call center.	\$63,900 - \$82,600
Information Technology	GIS Analyst	Assists in the various activities associated with the operation, updates, development, storage, maintenance, creation, analysis, data displayed and/or support of GIS technology for the RWA GIS user community.	\$63,900 - \$82,600
Information Technology	IT Change and Project Analyst	Creates and implements change management strategies and plans that maximize employee adoption and usage and minimize resistance. Drives faster adoption, higher ultimate utilization, and greater proficiency of the changes to increase benefit realization, value creation, ROI and the achievement of results.	\$69,848 - \$108,264
Meter Reading	Technical Analyst	Responsible for the technical analysis, support, and coordination of the meter reading, meter shop, and field services departmental functions. Researches, diagnoses, and resolves procedural problems and works with IT on the identification, testing, and resolution of software-related system problems.	\$58,015 - \$75,800
New Services	Contract Records Technician	Maintains facility records and map reference systems including responsibility for research and response to "Call-Before-You-Dig" inquiries. Provides technical, billing, and administrative assistance for all projects.	\$58,015 - \$75,800
New Services	Contracts Administrator	Responds to all internal or external customer requests for information pertaining to water services and main extensions, from initial customer contact to installation of the facilities. Prepares contracts and processes all documents associated with water services and main extension inquiries.	\$58,015 - \$75,800
Procurement	Strategic Sourcing Specialist	Collaborates with internal customers to identify sourcing needs; develops capital sourcing strategies, executes sourcing RFPs, and facilitates contract negotiations and implementation plans. Performs procurement transactions related to strategic and capital sourcing initiatives. Monitors industry trends and applicable commodity/ labor indices.	\$61,200 - \$94,861
Purchasing	Purchasing Assistant	Receives, reviews, and processes requisitions including the following: ascertain purchasing approval limits, accuracy of budget account numbers, and compliance with the Authority's purchasing procedures; also, obtain pricing if required.	\$47,800 - \$62,505
Regulatory	Regulatory & Environmental Compliance Officer	Ensures compliance with applicable federal and state regulations and the requirements of any regulatory permits or decisions. Provides support for regulatory compliance team to establish and maintain appropriate tracking and monitoring systems for permit conditions and regulatory compliance obligations.	\$56,800 - \$85,200
Risk Management	Risk Management Specialist	Responsible for initial claim entry, investigation, follow-up and ongoing claim adjudication.	\$47,800 - \$62,505
Water Quality	Water Quality Records Assistant	Performs regulatory compliance data collection and entry for all of the Company's systems into the Operational Data Management System (ODMS). Responsible for generating reports for department use, providing administrative office support to the department as needed, and maintaining files and accounts payable for laboratory invoices.	\$44,241 - \$61,942
Water Quality	Water Quality Technician	Coordinates the collection of water samples required to ensure high quality drinking water is delivered to our customers. Transports water samples to the central laboratory or to sub-contracting laboratories for analytical testing. Assists the Water Quality Manager with the resolution of customer water quality complaints through site visits and subsequent investigation.	\$47,800 - \$62,505
Water Quality	Senior Water Quality Analyst	Performs regulatory compliance data collection and electronic reporting for the region's systems. Acts as a laboratory co-director for an individual lab, performs lab proficiency testing, analyzes customer complaints, and participates in water quality and reservoir management studies.	\$48,401 - \$67,766
Water Quality	Water Quality Support Specialist	Assists the Water Quality Manager in responding to and investigating consumer water quality complaints and inquiries. Participates in the collection of various regulatory compliance and non-compliance sampling efforts.	\$67,300 - \$95,152

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APPENDIX: D – Gateway Community College's Certificates (utility specialization in Water Management)
 Clean (Waste) Water Management, and Electrical Technician)

<u>Gateway Community College - Certificate in Water Management</u>			
Course Number	Course Title	Prerequisite Courses	Course Hours
GENERAL EDUCATION COURSES			
WMT 106	Introduction to Utility Management		3
WMT 101	Water Treatment & Distribution		6
ENV 110	Environmental Regulations		3
WMT 102/103	Special Topics in Water Treatment OR Special Topics in Water Distribution		3
		Total	15
<u>Program Outline:</u>			
This 15-credit Water Management Certificate covers the operation of water treatment plants from both ground and surface water sources, as well as the water distribution systems that deliver the treated water to customers. It assures an adequate supply of water for domestic, commercial, industrial, and public use. This sequence of courses provides incoming students with a bridge after an Associate's degree in Public Utility Management. It also provides qualified practitioners with the knowledge necessary to take the Connecticut Department of Health's highest class water industry license examinations (Class IV Water Treatment and Class III Distribution).			

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

APPENDIX: D – Gateway Community College's Certificates (Continued) - (utility specialization in Electrical Technician)

<u>Gateway Community College - Certificate in Electronics Technician</u>			
Course Number	Course Title	Prerequisite Courses	Course Hours
GENERAL EDUCATION COURSES			
CET* 116	Computer Applications for Technology		3
CAD* 126	Electronics Graphics CAD		3
EET* 110	Electric Circuits I		4
EET 136	Electronics I		4
EET 252	Digital Electronics		4
Elective	Technical		4
		Total	22
<u>Program Outline:</u>			
<p>The 22-credit Electronics Technician Certificate program is designed for students who are interested in pursuing employment in the electronics industry, while allowing for advanced educational opportunities. Students will acquire a solid electrical and electronics background along with industrial skills to work with hand tools and electronic instrumentation in conjunction with electrical, electronic, and digital circuits. They will also use the latest CAD software to design and simulate electronic circuits. This sequence of courses provides incoming students with a bridge after an Associate's degree in Public Utility Management.</p>			

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

APPENDIX: D – Gateway Community College's Certificates (Continued) - (utility specialization in Clean (Waste) Water Management)

<u>Gateway Community College - Certificate in Clean Water (Wastewater) Management</u>			
Course Number	Course Title	Prerequisite Courses	Course Hours
GENERAL EDUCATION COURSES			
CWM 110	Clean Water I		3
CWM 112	Clean Water II		3
CWM 114	Clean Water III		3
WMT 102	Special Topics in Water Treatment		3
		Total	12
<u>Program Outline:</u>			
<p>This 12-credit Clean Water Management Certificate trains students to meet the skill and knowledge specifications required by higher level water pollution control facility operators in one of the more than 100 public and private plants in the state following the guidelines of the CT Department of Environmental Protection (DEP). The sequence of courses provides incoming students with a bridge after an Associate's degree in Public Utility Management.</p>			

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

APPENDIX: D – Southern Connecticut State University's Certificates

<u>SCSU Public Utilities Management Certificate I</u>			
Course Number	Course Title	Prerequisite Courses	Course Hours
MKT 200	Principles of Marketing		3
ACC 200	Principles of Financial Accounting		3
MGT 105	Managerial Communication		3
MGT 240	Legal Environment of Business		3
MGT 398	Special Topics in Management		3
<u>Program Description:</u>			
<p>This 15-credit Public Utility Management Certificate will provide participants with a strong foundation in business skills required for job preparation or career advancement. Each course has been tailored to the employment needs of public utility companies and will focus on the specific operations of this industry. Whether participants are planning to pursue a bachelor's degree, add new skills for professional development, or build a foundation for graduate study, this certificate program will help participants work towards their individual goals.</p>			

<u>SCSU Public Utilities Management Certificate II</u>			
Course Number	Course Title	Prerequisite Courses	Course Hours
MIS 230	Introduction to Project Management		3
ACC 401	Not-For-Profit and Governmental Accounting	ACC 200	3
MGT 415 OR MGT 398	Developing Team Managerial Skills OR Negotiations		3
MGT 450	Business Policy and Strategy Seminar		3
MGT 497 OR MGT 498 OR MGT 425	Internship OR Advanced Special Topics in Management OR People, Planet & Profits		3
<u>Program Description:</u>			
<p>This advanced 15-credit Public Utility Management Certificate builds upon the foundation of the introductory certificate with a focus on business strategy, project management and team leadership. Each course has been tailored to the employment needs of public utility companies and will focus on the specific operations of this industry. Successful completion of this certificate program will provide participants with a bridge to degree completion and a solid foundation in the business management skills needed within the field of public utilities.</p>			

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

APPENDIX: E – Pro Forma Budgets (Gateway Community College)

Connecticut Board of Regents for Higher Education						
APPLICATION FOR NEW PROGRAM APPROVAL PRO FORMA ¹ BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS						
Institution	Gateway Community College				Date:	9/23/2015
Proposed Program	Public Utility Management					
PROJECTED Enrollment	First Term Year 1 (Spring 2016-one term)		First Term Year 2		First Term Year 3	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Internal Transfer (from other programs)	4	2	4	2	4	2
New Students (first time matriculating)	3	3	3	3	3	3
Continuing (students progressing to credential)	0	0	7	5	14	10
Headcount Enrollment	7	5	14	10	21	15
Total Estimated FTE per Year						
PROJECTED Program Review	Year 1 (2016 Spring-one term)		Year 2 (2016-2017)		Year 3 (2017-18)	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Tuition* (Do not include internal transfer)	\$6,048	\$2,280	\$40,320	\$12,160	\$68,544	\$19,760
Program-Specific Fees					\$630	
Other Rev. (Annotated in text box below)						
Total Annual Program Revenue	\$8,328		\$52,480		\$88,934	
<p>*Tuition is calculated using 2015-16 rates as follows. Full time: in-state, \$2016 /semester (\$1800 tuition + \$216 service fee); \$4,032/year (two semesters \$3,600 + \$432 service fee); Part time: in-state, 9 credits, \$1,520/year (\$1,350 tuition + \$170 service fee) for two semesters; + Program specific fees are the one-time soft skills application fee for on line tutorial access paid by individual student \$45</p>						
PROJECTED Expenditures	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)						
Faculty (Full-time, total for program)	0		0		0	
Faculty (Part-time, total for program***)	0**	\$0	3 course (2 PTLs)	\$19,197	4 courses (3 PTLs)	\$26,364
Support Staff	No Additional	\$0		\$0		\$0
Library Resources Program		\$500		\$515		\$530
Equipment (List as needed)						
Other (e.g. curriculum development and supplies)	Curriculum Dev. ****	\$15,000	Consumable supplies	\$250	Consumable supplies	\$500
Estimated Indirect Cost (e.g. student services, operators, maintenance)	calculated at \$100 per FTE per year	\$0		\$0		\$0
Total ESTIMATED Expenditures		\$15,500		\$19,962		\$27,394
<p>Please provide any necessary annotations: **** Curriculum development is a one time cost in the first year of the program. Rates and Revenues, Customer Relations, and Asset and Infrastructure Management are three new courses that have to be developed. We will hire an industry expert and pair them with an instructor to develop each course at the cost of \$5,000 per course. *** PTL \$1546/ credit hour plus 68% fringe for a total cost of \$2133/credit hour. The annual inflation adjustment is 3% for salary for total of \$2,197 for Year 3. ** Part-time faculty already teach these courses for existing programs</p>						
<p>¹ This PRO FORMA budget provides reasonable assurance that the program can be established and is sustainable. Some assumption and/or formulaic methodology may be used and annotated in the text box.</p>						

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

APPENDIX: E – Pro Forma Budgets (Southern Connecticut State University)

Connecticut Board of Regents for Higher Education						
<i>APPLICATION FOR NEW PROGRAM APPROVAL PRO FORMA ¹ BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS</i>						
<i>Institution</i>	Southern Connecticut State University				<i>Date</i>	11/11/2015
<i>Proposed Program</i>	B.S. in Business Administration with a Specialization in Public Utility Management					
PROJECTED Enrollment	First Term Year 1		First Term Year 2		First Term Year 3	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Internal Transfers (from other programs)	2	3	4	6	4	6
New Students (first time matriculating)	3	3	7	6	11	10
Continuing (students progressing to credential)			5	6	14	16
Headcount Enrollment	5	6	16	18	29	32
Total Estimated FTE per Year						
PROJECTED Program Revenue	Year 1		Year 2		Year 3	
	Full Time	Part Time*	Full Time	Part Time*	Full Time	Part Time*
Tuition (Do not include internal transfers)**	\$49,680	\$35,568	\$158,976	\$106,704	\$288,144	\$162,432
Program-Specific Fees	\$550		\$1,760		\$3,190	
Other Rev. (Annotate in text box below)						
Total Annual Program Revenue	\$85,798		\$267,440		\$453,766	
PROJECTED Expenditures*	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)						
Faculty (Full-time, total for program)***	1	\$120,000	1	\$126,000	1	\$132,300
Faculty (Part-time-total for program)#			2	\$10,870	2	\$11,414
Support Staff						
Library Resources Program		\$1,000		\$1,000		\$1,000
Equipment (List as needed)						
Other (e.g. Curriculum Development)##		\$30,358				
Estimated Indirect Cost (e.g. student services, operations, maintenance)						
Total ESTIMATED Expenditures		\$151,358		\$137,870		\$144,714
<p><small>* Note: Capital outlay costs, institutional spending for research and service, etc. can be excluded.</small></p>						
<p><i>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."</i></p> <p>Please provide any necessary annotations:</p> <p>* PT Tuition is based on \$494 per Credit</p> <p>** Tuition is based on current rate for in-state student (\$4,968)</p> <p>*** FT Position estimated at \$75,000 plus 40% Benefits, increase of 5% assumed for Yr 2 and Yr 3</p> <p># 2 Adjuncts teaching 3 credits each @ \$1,647/credit, plus 10% Fringe</p> <p>## 3 Faculty, 2 credit pay @ \$1,668/credit and 7 Faculty, 1 credit pay @ \$1,668/credit plus 40% Fringe</p> <p>Assumptions:</p> <p>One new FT Faculty Position will be required to teach new classes in the program.</p> <p>Two additional Adjunct will be needed starting Year 2.</p> <p>This proposed program is expected to positively impact FULL TIME Enrollment at SCSU.</p> <p>For purposes of simple comparison, tuition rates HAVE NOT been increased after FY2016.</p>						

Connecticut Board of Regents for Higher Education

APPLICATION FOR NEW PROGRAM APPROVAL PRO FORMA ¹ BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

Institution Gateway Community College

Date: 9/23/2015

Proposed Program Public Utility Management

PROJECTED Enrollment	First Term Year 1 (Spring 2016-one term)		First Term Year 2		First Term Year 3	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Internal Transfer (from other programs)	4	2	4	2	4	2
New Students (first time matriculating)	3	3	3	3	3	3
Continuing (students progressing to credential)	0	0	7	5	14	10
Headcount Enrollment	7	5	14	10	21	15
Total Estimated FTE per Year						

PROJECTED Program Review	Year 1 (2016 Spring-one term)		Year 2 (2016-2017)		Year 3 (2017-18)	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Tuition* (Do not include internal transfer)	\$6,048	\$2,280	\$40,320	\$12,160	\$68,544	\$19,760
Program-Specific Fees					\$630	
Other Rev. (Annotated in text box below)						
Total Annual Program Revenue	\$8,328		\$52,480		\$88,934	

* Tuition is calculated using 2015-16 rates as follows. Full time: in-state, \$2016 /semester (\$1800 tuition + \$216 service fee); \$4,032/year (two semesters \$3,600 + \$432 service fee); Part time: in-state, 9 credits, \$1,520/year (\$1,350 tuition + \$170 service fee) for two semesters; + Program specific fees are the one-time soft skills application fee for on line tutorial access paid by individual student \$45

PROJECTED Expenditures	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)						
Faculty (Full-time, total for program)	0		0		0	
Faculty (Part-time, total for program**)	0**	\$0	3 course (2 PTLs)	\$19,197	4 courses (3 PTLs)	\$26,364
Support Staff	No Additional	\$0		\$0		\$0
Library Resources Program		\$500		\$515		\$530
Equipment (List as needed)						
Other (e.g. curriculum development and supplies)	Curriculum Dev. ****	\$15,000	Consumable supplies	\$250	Consumable supplies	\$500
Estimated Indirect Cost (e.g. student services, operators, maintenance)	calculated at \$100 per FTE per year	\$0		\$0		\$0
Total ESTIMATED Expenditures		\$15,500		\$19,962		\$27,394

Please provide any necessary annotations:

**** Curriculum development is a one time cost in the first year of the program. Rates and Revenues, Customer Relations, and Asset and Infrastructure Management are three new courses that have to be developed. We will hire an industry expert and pair them with an instructor to develop each course at the cost of \$5,000 per course.

*** PTL \$1546/ credit hour plus 68% fringe for a total cost of \$2133/credit hour. The annual inflation adjustment is 3% for salary for total of \$2,197 for Year 3.

** Part-time faculty already teach these courses for existing programs

¹ This PRO FORMA budget provides reasonable assurance that the program can be established and is sustainable. Some assumption and/or formulaic methodology may be used and annotated in the text box.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Approval of a New Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the licensure and accreditation of a new program in Precision Sheet Metal Manufacturing leading to a Certificate at Three Rivers Community College.

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

New Program: Three Rivers Community College (TRCC) Precision Sheet Metal Manufacturing Certificate

BACKGROUND**Summary**

The mission of TRCC states that “Three Rivers is an accessible, affordable, and culturally diverse community college that meets varied educational needs by creating an environment that stimulates learning.” To accomplish its mission, TRCC provides a well-rounded and rewarding educational experience with an emphasis on critical thinking, effective communication, fosters an appreciation of technology, helps students achieve their goals, serves as a community resource for people and institutions within its service areas, and contributes to the economic development of the region and the state. Manufacturing is making a resurgence in eastern Connecticut. Industry members of the Eastern Advanced Manufacturing Alliance (EAMA) have identified the growing need to develop a skilled manufacturing workforce. Electric Boat, a member of EAMA, has earned the largest contract in its history. The demand for skilled precision sheet metal fabricators is particularly high in the eastern region of the state. Currently, there are no training programs available to develop the knowledge necessary to support the needs of Electric Boat and the large sheet metal industry in eastern Connecticut. The development of a precision sheet metal fabrication certificate program will not only meet the growing demands of local industry, but also supports TRCC commitments to serve as a community resource and contribute to the economic development of the region and state. This program will emphasize the development of critical thinking and effective communication, both a commitment to TRCC students as well as an industry demand.

Need for the Program

According to the U.S. Bureau of Economic Analysis, Connecticut ranks as the 18th most intensive manufacturing state, producing a gross state product (GSP) of \$25 billion. The manufacturing sector employs 159,200 people, representing nearly 10% of all workers. Electric Boat and United Technologies both received unprecedented long-term contracts that will require the hiring of hundreds of skilled precision sheet metal fabricators and welders each year for the next decade or longer. Electric Boat and United Technologies anchor a vast manufacturing supply chain in Connecticut. Electric Boat spent nearly \$300 million across 362 Connecticut suppliers over the past five years. Nationally, skilled trade employers report high levels of difficulty finding qualified workers. Connecticut maintains the highest percentage of skilled-trades workers over 45 (64%) and over 55 (27%), placing it as the state with the most severe skilled-trades shortage in the nation. The Precision Sheet Metal Manufacturing Certificate will prepare graduates to work in these areas of manufacturing.

The Connecticut Business and Industry Association (CBIA) has also identified a large increase in demand for skilled manufacturing workers, while at the same time reported on a large skills gap. The skills gap identified is not only in technical skills, but also in interpersonal/teamwork skills, leadership, math, and writing. Most importantly, 98% of the survey respondents stated critical thinking and problem solving were the most important skills needed in their workforce to ensure competitiveness. The Precision Sheet Metal Fabrication certificate program will address these soft skill gaps by not only addressing some of them specifically in the curriculum, but by embedding the development of them in the problem based learning pedagogy of the courses.

Curriculum

The Precision Sheet Metal Fabrication certificate will be unique to TRCC. Currently, there is no formal training program that can be found nationwide for precision sheet metal fabrication other than related programs in HVAC (heating, ventilation, air conditioning), which utilizes some of the same equipment and similar concepts, but is not otherwise transferable. Other Connecticut community college manufacturing certificate programs served as a template for this proposed certificate program. The Precision Sheet Metal Manufacturing curriculum will utilize existing manufacturing curricula that is not specific to any one manufacturing skill set, such as manufacturing math, blueprint reading, metrology, quality control, and lean concepts. Curriculum has already been developed and implemented at the Connecticut Advanced Manufacturing Centers at Asnuntuck Community College, Housatonic Community College, Naugatuck Valley Community College, and Quinebaug Valley Community College for machining and other manufacturing-related disciplines. TRCC will utilize the foundational concepts in the existing curriculum with modifications to be specific to the needs of precision sheet metal instruction.

The Precision Sheet Metal Manufacturing program will consist of a 50-hour non-credit introductory pre-manufacturing program designed to provide remedial math and foundational concepts, including introduction to precision sheet metal fabrication careers, blueprint reading, metrology, and lean manufacturing. Upon completion of the pre-manufacturing program, or if students are coming out of a strong vocational or technical education program, they will begin the 30-credit two-semester credit certificate program. Upon completion of the 30-credit Precision Sheet Metal Manufacturing Certificate, students may enroll in an optional third semester certificate program in either Advanced Precision Sheet Metal Fabrication (12 credits) or Advanced Welding (12 credits). Students will be strongly encouraged to complete all three semesters, however they can return at a later time to complete the optional third semester.

Students

TRCC plans to admit a minimum of two cohorts (approximately 20 students per cohort) per year into the program for a total of 40+ students each year.

The Precision Sheet Metal Manufacturing credit certificate program will provide students with access to financial aid and a clearer pathway to additional academic credentials. In addition, the depth and breadth of the laboratories at TRCC provides students with the opportunity to explore basic manufacturing processes while concentrating in precision sheet metal fabrication.

Completion of the 30-credit certificate (and optional advanced certificate, if applicable) will lead students to employment and/or additional educational pathways such as the College of Technology - Technology Studies applied science associate degree. Students in the certificate program will be able to apply their certificate courses to the associate degree program.

Graduates of this program will not only have the technical skills necessary to meet workforce demand, but the soft skills necessary to build a long-term career in manufacturing. The success of the four Advanced Manufacturing Centers in Connecticut (launched in 2012), verifies the effectiveness of the certificate program model with an overall 88% job placement rate achieved across the four Centers in 2013.

Faculty

One full-time faculty member will be required to teach the Precision Sheet Metal Manufacturing courses as well as administer the program, including the recruitment of adjunct faculty. For the three year Connecticut Advanced Manufacturing Initiative (CAMI) grant period, this position will be funded by the grant. In addition, part-time Educational Assistants will be hired to ensure compliance with the grant requirement of a 2-to-1 faculty/student ratio.

Learning Resources

TRCC received approximately \$1.2M in funding from the US Department of Labor Round 4 Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant for the establishment of the CT Advanced Manufacturing Initiative (CAMI). Funding from this initiative will provide resources for personnel, equipment, supplies, marketing/advertising, and lab renovations at the college. CAMI funding is provided through September 30, 2017.

TRCC maintains a strong partnership with the EAMA, a non-profit organization comprised of 47 manufacturers in eastern Connecticut, south central Massachusetts, and northwestern Rhode Island, including Electric Boat. EAMA promotes manufacturing careers, developments and advances in manufacturing education, and works with its education partners (TRCC and Quinebaug Valley Community College) to improve the regional manufacturing workforce. EAMA companies represent more than 12,000 workers. TRCC is working closely with EAMA companies to define the precision sheet metal fabrication curriculum.

TRCC Academic Affairs, Workforce and Community Education, and EAMA have a close working relationship, resulting in the utilization of each of their specific resources and knowledge to develop a certificate program that benefits both students and industry. With funding provided by the CAMI grant, TRCC will hire two part-time program coordinators to recruit students into the precision sheet metal fabrication program and collect required data.

In addition, TRCC will leverage existing resources including lab and classroom space, faculty expertise, library resources, tutoring resources, and staff support utilized by the cadre of engineering technology courses/programs currently available at the college.

Facilities

TRCC is in the process of renovating several existing laboratories to install sheet metal fabrication equipment procured under the auspices of the CAMI grant. Substantial completion of the renovations is expected in mid-January 2016. The equipment purchased for this certificate program has been vetted by industry partners from EAMA.

Fiscal Note

As noted above, TRCC received funding from the US Department of Labor Round for CAMI, which will fund the renovation of existing laboratory space to accommodate the funded purchase of precision sheet metal fabrication equipment (punches, press brakes, shear, rollers, and other hand tools) and develop curriculum that will meet industry needs, benefiting students with skills that are in demand.

Review of Documents

- a) Concept Paper affirmed by CSCU Academic Council August 5, 2015
- b) Program Proposal approved by TRCC Engineering Technologies Department October 21, 2015
- c) Program Proposal approved by TRCC Curriculum Committee November 6, 2015
- d) Program Proposal approved by CSCU Academic Council November 11, 2015

Accreditation

Not applicable

November 11, 2015 – Academic Council

November 20, 2015 – BOR-Academic and Student Affairs Committee

December 3, 2015 – Board of Regents

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - **01/20/12**

SECTION 1: GENERAL INFORMATION

Institution: Three Rivers Community College	Date of Submission to BOR Office: 11-04-15
Most Recent NEASC Institutional Accreditation Action and Date:	
Program Characteristics Name of Program: Precision Sheet Metal Manufacturing Certificate Degree: Title of Award (e.g. Master of Arts) Certificate: (specify type and level) Credit Certificate Anticipated Program Initiation Date: 01/2016 Anticipated Date of First Graduation: 12/2016 Modality of Program: X On ground Online Combined If "Combined", % of fully online courses? Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 30 Credit Certificate; 2 optional advanced certificates consisting of 12 credits each	Program Credit Distribution # Cr in Program Core Courses: 30 # Cr of Electives in the Field: 12 # Cr of Free Electives: 0 # Cr Special Requirements (include internship, etc.): 0 Total # Cr in the Program (sum of all #Cr above): 42 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 6
Type of Approval Action Being Sought: Licensure OR Licensure and Accreditation Suggested CIP Code No. (optional): _____ Title of CIP Code _____ CIP Year: 2000 _____ or 2010 _____	
If establishment of the new program is concurrent with discontinuation of related program(s), please list for each program: Program Discontinued: CIP: _____ DHE# (if available): _____ Accreditation Date: _____ Phase Out Period Date of Program Termination	
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: Technologies	
Program Accreditation: <ul style="list-style-type: none"> 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: Ann Branchini	Title: Academic Dean Tel.: 860-215-9004 e-mail: abbranchini@threerivers.edu

BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):	
Approved 2010 CIP Code No. ¹	Title of CIP Code
Log of BOR Steps Towards Program Approval:	
Nature and Resolution number for BOR Approval:	Date of Approval:
Conditions for Approval (if any)	

¹ Final CIP assignment will be done by BOR staff in consideration of suggested number (if provided) and in consultation with administrative offices at the institution and system proposing the program. For the final assignment, the 2010 CIP definitions will be used.

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION
APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

SECTION 2: PROGRAM PLANNING ASSESSMENT *(To be Used for BOR Review Only)*

Alignment of Program with Institutional Mission, Role and Scope

(Please provide objective and concise statements)

The mission of Three Rivers Community College (TRCC) states that "Three Rivers is an accessible, affordable, and culturally diverse community college that meets varied educational needs by creating an environment that stimulates learning." To accomplish its mission, TRCC provides a well-rounded and rewarding educational experience with an emphasis on critical thinking, effective communication, fosters an appreciation of technology, helps students achieve their goals, serves as a community resource for people and institutions within its service areas, and contributes to the economic development of this region and the state. Manufacturing is making a resurgence in Eastern CT. Members of the Eastern Advanced Manufacturing Alliance (EAMA) have identified the growing need to develop a skilled manufacturing workforce. Electric Boat, a member of EAMA, has earned the largest contract in its history. The demand for skilled precision sheet metal fabricators is large with no training programs available to develop the knowledge necessary to support the needs of Electric Boat and the large sheet metal industry in Eastern CT. The development of a precision sheet metal fabrication certificate program will not only meet the growing demands of the local industry, but also supports TRCC commitments to serve as a community resource and contribute to the economic development of the region and state. This program will emphasize the development of critical thinking and effective communication, both a commitment to TRCC students as well as an industry demand.

Addressing Identified Needs

- 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) According to the U.S. Bureau of Economic Analysis, Connecticut ranks as the 18th most intensive manufacturing state, producing a gross state product (GSP) of \$25 billion. The manufacturing sector employs 159,200 people, representing nearly 10% of all workers. Electric Boat and United Technologies both received unprecedented long-term contracts that will require the hiring of hundreds of skilled precision sheet metal fabricators and welders each year for the next decade or longer. Electric Boat and United Technologies anchor a vast manufacturing supply chain in CT. Electric Boat spent nearly \$300 million across 362 Connecticut suppliers over the past five years. Nationally, skilled trade employers report high levels of difficulty finding qualified workers. Connecticut maintains the highest percentage of skilled-trades workers over 45 (64%) and over 55 (27%), placing it as the state with the most severe skilled-trades shortage in the nation. The Precision Sheet Metal Certificate will prepare graduates to work in these areas of manufacturing. The Connecticut Business and Industry Association (CBIA) has also identified a large increase in demand for skilled manufacturing workers, while at the same time reported on a large skills gap. The skills gap identified is not only in technical skills, but also in interpersonal/teamwork skills, leadership, math, and writing. Most importantly, 98% of the survey respondents stated critical thinking and problem solving were the most important skills needed in their workforce to ensure competitiveness. The Precision Sheet Metal Fabrication certificate program will address these soft skill gaps by not only addressing some of them specifically in the curriculum, but by embedding the development of them in the problem based learning pedagogy of the courses.
- 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? TRCC received funding from the US Department of Labor Round 4 Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant for the establishment of the CT Advanced Manufacturing Initiative (CAMI), which will fund the renovation of existing laboratory space to accommodate the funded purchase of precision sheet metal fabrication equipment (punches, press brakes, shear, rollers, and other hand tools) and develop curriculum that will meet industry needs, benefiting students with skills that are in demand. TRCC has a partnership with the EAMA, a non-profit organization comprised of 47 manufacturers in eastern CT, south central MA, and

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

northwestern RI, including Electric Boat. EAMA promotes manufacturing careers, developments and advances in manufacturing education, and works with its education partners (TRCC and Quinebaug Valley Community College) to improve the regional manufacturing workforce. EAMA companies represent more than 12,000 workers. TRCC is working closely with EAMA companies to define the precision sheet metal fabrication curriculum. TRCC Academic Affairs, Workforce and Community Education, and EAMA have a close working relationship, resulting in the utilization of each of their specific resources and knowledge to develop a certificate program that benefits both students and industry. With funding provided by the CAMI grant, TRCC will hire two part-time program coordinators to recruit students into the precision sheet metal fabrication program and collect required data. The credit certificate program will provide students with access to financial aid and a clearer pathway to additional academic credentials. In addition, the depth and breadth of the laboratories at TRCC provides students with the opportunity to explore basic manufacturing processes while concentrating in precision sheet metal fabrication.

- Please describe any transfer agreements with other institutions under the BOR 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*) The Precision Sheet Metal Fabrication credit courses will be utilized in the dual-credit College Career Pathways (CCP) program and as the directed elective courses in a College of Technology (COT) – Technology Studies applied science associate degree. Students in the certificate program will be able to apply their courses to the associate degree program. The COT associate degree is a BOR/CSCU approved Transfer and Articulation Policy (TAP) program. Completion of a transfer associate degree provides a) guaranteed admission and junior status to the receiving university without “course by course” transfer; b) a guarantee that at least 30 credits of general education requirements at the four-year institution will be considered completed; and c) articulation of remaining credits following a major pathway determined by the faculty of the 17 institutions. Students have multiple pathways to enter the workforce, complete an associate degree, or transfer an associate degree to a Bachelor’s degree program. The certificate program will also expand the role of Connecticut’s technical high school program as feeders to the colleges, and will strengthen the relationship between TRCC and Ella Grasso Technical High School. Ella Grasso Technical High School will potentially help to support the welding course work with a welding laboratory housed at the high school.

Please indicate what similar programs exist in other institutions within your constituent unit ², and how unnecessary duplication is being avoided. The Precision Sheet Metal Fabrication certificate will be unique to TRCC. Currently, there is no formal training program that can be found for precision sheet metal fabrication other than related programs in HVAC (heating, ventilation, air conditioning), which utilizes some of the same equipment and similar concepts, but is not otherwise transferable. Other CT community college manufacturing certificate programs served as a template for this proposed certificate program. The Precision Sheet Metal Fabrication curriculum will utilize some existing manufacturing curriculum that is not specific to any one manufacturing skill set, such as manufacturing math, blueprint reading, metrology, quality control, and lean concepts. Curriculum has already been developed and implemented at the CT Advanced Manufacturing Centers at Asnuntuck Community College (ACC), Housatonic Community College (HCC), Naugatuck Valley Community College (NVCC) and Quinebaug Valley Community College (QVCC) for machining and other manufacturing curriculum. TRCC will utilize the foundational concepts in the existing curriculum with modifications to be specific to the needs of precision sheet metal instruction.

² Constituent units are: the Connecticut Community College System, the Connecticut State University System, Charter Oak State College, and the University of Connecticut

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- Provide a description/analysis of employment prospects for graduates of this proposed program. The EAMA membership companies, including Electric Boat and Whitcraft, LLC; a major aerospace component manufacturer, identified the lack of skilled precision sheet metal fabricators as a major issue that will adversely affect companies' ability to keep and meet the demand for existing orders and the large long-term backlog at Electric Boat and United Technologies. Currently, precision sheet metal fabricators have to develop internal training programs, which are not only costly, but delay the pipeline of skilled workers necessary to meet increased demand. The CBIA also identified a large increase in demand for skilled manufacturing workers and at the same time reported on the large skills gap in many of the areas that will be addressed in the Precision Sheet Metal Fabrication program, including, quality, blueprint reading, geometric dimensioning & tolerance (GD&T), measurement, CNC programming, critical thinking, and problem solving. Graduates of this program will not only have the technical skills necessary to meet workforce demand, but the soft skills necessary to build a long-term career in manufacturing. The success of the four Advanced Manufacturing Centers in CT (launched in 2012), verifies the effectiveness of the certificate program model with an overall 88% job placement rate achieved across the four Centers in 2013.

Cost Effectiveness and Availability of Adequate Resources

(Please provide a short narrative that generally considers projections of program enrollment and graduation, revenues and expenses, existing and needed resources, including faculty and administrative cost, and any major cost implications) The development of the Precision Sheet Metal Manufacturing certificate program is being funded by the TAACCCT CAMI grant funds. TRCC received approximately 1.2 million in funding to develop the certificate program, the curriculum, renovate existing lab space, purchase equipment, hire instructors, and pay administrative costs. TRCC plans to admit a minimum of two cohorts (approximately 20 students per cohort) per year into the program for a total of 40-50 students each year. Students will begin the Precision Sheet Metal Fabrication course with a 50-hour non-credit introductory boot camp designed to provide remedial math and foundational concepts, including introduction to precision sheet metal fabrication careers, blueprint reading, metrology, and lean manufacturing. The introductory boot camp will begin in October 2015, with the next boot camp starting in Summer 2016. Upon completion of the introductory boot camp, or if students are coming out of a strong vocational or technical education program, they will begin the 2 to 3 semester credit certificate program. The certificate program is designed to provide students with the option of completing either a two semester Precision Sheet Metal Certificate or completing an optional third semester with the option of an Advanced Precision Sheet Metal Fabrication Certificate or an Advanced Welding Certificate. Students will be strongly encouraged to complete all three semesters, however they can return at a later time to complete the third semester.

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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. Develop and demonstrate an understanding of manufacturing processes applicable to precision sheet metal fabrication. This includes material handling, manual sheet metal fabrication, CNC machining, welding, manual tool use and machine tool use.
2. Develop and demonstrate the ability to use standard industrial measurement techniques and tools to ensure manufactured components meet stated quality requirements.
3. Develop and demonstrate the ability to read and understand sheet metal drawings and use standard mathematical tools to translate these drawings to construct, layout and cut sheet metal components.
4. Develop and demonstrate necessary occupational skills to allow the student to transition from a school environment to a work environment. This will include communication skills and working in teams.
5. Develop and demonstrate the ability to understand and use the concepts of lean manufacturing.
6. Develop and demonstrate the ability to think critically and identify, evaluate, and solve technical and non-technical problems.
7. Develop and demonstrate the ability to be life-long learners.

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)

Initial program oversight will be maintained by Ms. Jodi Calvert, Director of Learning Initiatives at TRCC. Curriculum review assistance will be provided by the Engineering Technologies Department.

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?

One full time faculty member will be required to teach precision sheet metal fabrication courses as well as administer the program including recruitment of adjunct faculty. For the three year CAMI grant period, this position will be funded by the grant. In addition, part time Educational Assistants will be hired to ensure compliance with the grant requirement of a 2-to-1 faculty/student ratio.

What percentage of the credits in the program will they teach? 40-50

What percent of credits in the program will be taught by adjunct faculty? 60

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program. A Master's degree in engineering, manufacturing or a technology-related field. Additionally, if an individual has a Bachelor's degree in a related field and holds certification to teach technical education in either a technical school or traditional high school, he/she will meet these qualifications.

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 Cost Analysis Projection sheet for BOR review)

TRCC is in the process of remodeling several laboratories to install sheet metal fabrication equipment procured under the auspices of the CAMI TAACCCT grant.

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Curriculum

Non-credit Pre-Manufacturing: Not required of all entering students, but highly encouraged.		Credits	With Lab	Lab Hours
MFG XXX	Intro to Sheet Metal Fabrication Careers	0		
MFG 051	Manufacturing Math I	0		
MFG 071	Intro To Blueprint Reading	0		
Total Credits				
Semester 1		Credits		
MFG XXX	Sheet Metal Blueprint Reading I	2		
MFG XXX	Manufacturing Math II	3		
MFG XXX	Work Occupational Skills	3		
MFG XXX	Sheet Metal Processes and Tool Use	3	Lab	60
MFG XXX	Intro to Sheet Metal Fabrication	4	Lab	90
Total Credits		15		150
Semester 2		Credits		
MFG XXX	Quality Control / Metrology	3		
MFG 171	Intro to Lean Manufacturing	3		
MFG XXX	Sheet Metal Layout	2		
MFG XXX	Advanced Sheet Metal Fabrication	4	Lab	90
MFG 157	Welding I	3	Lab	150
Total Credits		15		240
Precision Sheet Metal Certificate: Total Credits & Lab Hours		30	-	390
Semester 3 (optional)	Advanced Sheet Metal Fabrication Certificate			
MFG XXX	Manufacturing Machinery - CNC I	3	Lab	60
MFG XXX	Sheet Metal: Press Brake	3	Lab	60
MFG XXX	Sheet Metal: Cutting	3	Lab	60
	Capstone Project / Internship	3	Lab	60
Total Credits & Lab Hours		12		240
Semester 3 (optional)	Advanced Welding Certificate	Credits		
MFG 128	Blueprint Reading for Welders	3		
MFG 257	Welding II	3	Lab	60
MFG 265	Welding III	3	Lab	60
	Capstone Project / Internship	3	Lab	60
Total Credits & Lab Hours		12		180

Total Other Credits Required to Issue Credential None

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Program Outline: The Precision Sheet Metal Manufacturing Certificate includes 30 credits of college-level courses designed to provide the student with the ability to perform a variety of work in the field of precision sheet metal. The students will be able to layout and build sheet metal structures and components using manual methods and CNC machines. They will also develop the ability to work in teams and solve industry level problems. The optional advanced certificates will allow the students to specialize in either advanced sheet metal techniques or advanced welding techniques.

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[illegible]

Connecticut Board of Regents for Higher Education

APPLICATION FOR NEW PROGRAM APPROVAL PRO FORMA ¹ BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

Institution

Date

Proposed Program

PROJECTED Enrollment	First Term Year 1		First Term Year 2		First Term Year 3	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Internal Transfers <i>(from other programs)</i>						
New Students <i>(first time matriculating)</i>	25		25		25	
Continuing <i>(students progressing to credential)</i>			20		20	
Headcount Enrollment	25	0	45	0	45	0
Total Estimated FTE per Year						

PROJECTED Program Revenue	Year 1		Year 2		Year 3	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Tuition <i>(Do not include internal transfers)</i>	\$126,900		\$228,420		\$228,420	
Program-Specific Fees						
Other Rev. <i>(Annotate in text box below)</i>						
Total Annual Program Revenue	\$126,900		\$228,420		\$228,420	

PROJECTED Expenditures*	Year 1		Year 2		Year 3	
	Number <i>(as applicable)</i>	Expenditure	Number	Expenditure	Number	Expenditure
Administration <i>(Chair or Coordinator)</i>	1	\$4,989	1	\$4,989		\$4,989
Faculty <i>(Full-time, total for program)</i>	1	\$56,298	1	\$56,298		\$56,298
Faculty <i>(Part-time -total for program)</i>	40 credits	\$66,520	40credits	\$66,520	40 credits	\$66,520
Support Staff 2 EA admin lab support <i>(part time)</i>	2	\$26,187	2	\$26,187	2	\$26,187
Non credit staff for remedial training		\$4,000		\$4,000		\$4,000
Library Resources Program						
Equipment <i>(List as needed)</i>						
Books		\$30,000		\$3,000		\$3,000
Material		\$10,000		\$10,000		\$10,000
Other <i>(e.g. student services)</i>						
Estimated Indirect Cost <i>(e.g. student services, operations, maintainance)</i>						
Total ESTIMATED Expenditures		\$197,994		\$170,994		\$170,994

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

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."

Please provide any necessary annotations: This assumes that two cohorts are started per year totaling 40-50 students.

Administration for a separate PC rate for three hours AR

Faculty teaches 50% of class hours (30 per year); the rest will be taught by adjuncts

Two cohorts will require two sets of courses per semester

Non-credit program is 40 hours at \$50/hour 2 cohorts per year

Book estimate \$30000 first year and estimated 10% replacement per year.

¹ This PRO FORMA budget provides reasonable assurance that the program can be established and is sustainable. Some assumptions and/or formulaic methodology may be used and annotated in the text box.

CT BOARD OF REGENTS FOR HIGHER EDUCATION

RESOLUTION

concerning

Approval of a New Program

December 3, 2015

RESOLVED: That the Board of Regents for Higher Education approve the licensure of a Doctorate in Nurse Anesthesia Practice (DNAP) degree at Central Connecticut State University for a period of three years until December 30, 2018.

A True Copy:

Erin A. Fitzgerald, Secretary of the
CT Board of Regents for Higher Education

ITEM

Licensure of a Doctorate in Nurse Anesthesia Practice at Central Connecticut State University

RECOMMENDED MOTION FOR FULL BOARD

RESOLVED: That the Board of Regents for Higher Education license a Doctorate in Nurse Anesthesia Practice (DNAP) at Central Connecticut State University for a period of three years until December 30, 2018.

BACKGROUND

The Board of Regents is authorized by state statute (Public Act 15-37) to approve non-research, practice-based, applied, professional doctoral degree academic programs, through a proposal examination that considers:

1. The effect of the proposed program on institutional budgets,
2. Whether expertise in the proposed program subject matter exists at the offering institutions,
3. Current and projected accreditation standards governing the proposed program, and
4. Current and projected professional standards in the occupational fields for which students completing the proposed program may qualify for employment.

These considerations have been incorporated into the System's Protocol for the Submission, Review and Assessment of Proposals to Establish New Academic Programs.

RATIONALE

Per the Protocol, upon submission of a Concept Paper by Central Connecticut State University to establish the referenced program, the System Office of Provost and Senior Vice President for Academic and Student Affairs conducted a Planning Assessment to determine the merits of the proposal. This assessment resulted in positive findings and subsequently the Provost submitted the Concept Paper to the Academic Council for its deliberative, critical review process – a component of the Quality Assessment, the second stage of the new academic program review procedure. Following the input and stamp of approval by the Academic Council, the Provost arranged for the second component of the Quality Assessment – an evaluative site visit to the applicant by two experienced, competent educators from out-of-state institutions with similar doctoral programs. The reviewers were:

Dr. Michael Kremer, Professor & Director
Rush Center for Clinical Skills & Simulation

Dr. Nancy Shedlick, Program Administrator
Raleigh School of Nurse Anesthesia

Their Site Visit Evaluation Report is attached to this Staff Report and summarized below:

The reviewers identified the following **areas of strength**:

- There appear to be ample clinical resources to support student learning in the current master's program.
- CCSU administration and faculty members have long-standing relationships with the three affiliated nurse anesthesia programs and support movement of the exit degree from the master's to the practice doctorate.

- The nurse anesthesia program administrators with whom the reviewers met are dedicated to their students and maintain didactic and clinical excellence.
- Students and recent graduates from the Hartford and Yale-New Haven Nurse Anesthesia Programs are very positive regarding their didactic and clinical learning experiences.
- Many of the students and recent graduates express enthusiasm for the proposed DNAP program. Several expressed interest in returning for the DNAP completion program in the near future.
- The current and planned curriculum has a strong science core.

The reviewers identified the following **areas in need of improvement** to be addressed by the institution as it implements the program:

- Doctorally prepared CRNA faculty members will need to be recruited at market-competitive rates to support teaching of the fifteen 700 level doctoral courses in the proposed DNAP curriculum.
- Strategies to achieve market-competitive salaries for CRNA faculty members need to be explored, which may include extramural funding, support from clinical partners and opportunities for CRNAs to engage in clinical practice.
- The affiliated nurse anesthesia programs will need to ensure that doctorally prepared program administrators are in place by 2018. These programs will also need to ensure their ability to meet or exceed COA requirements for general and specialty cases, clinical hours and certification examination pass rates.
- Pending approval of the DNAP entry and completion degrees by the Board of Regents, each affiliated nurse anesthesia program will need to work closely with University administration and their COA Accreditation Specialist to develop these documents: the Application for Approval of a Practice-Oriented Doctoral Degree for Entry into Nurse Anesthesia Practice; Application for Approval of Graduate Degrees for CRNAs (Completion Degree Programs); the COA distance education application; the COA Faculty Resources Template and the COA Course Content Map template.

In conclusion, the reviewers found that the proposed Doctorate in Nurse Anesthesia Practice to be in compliance with each of the Board of Regents' academic program approval standards; i.e. the state's statutes – Regulations for the Licensure and Accreditation of Institutions and Programs in Higher Education.

RESOURCES

A full depiction of the resources to be brought to bear in the implementation of the proposed program is presented in the institution's Full Proposal to Establish a New Academic Program which is attached.

CRNA – Certified Registered Nurse Anesthetist

COA – Council on Accreditation of Nurse Anesthesia Educational Programs

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SECTION 1: GENERAL INFORMATION

Institution: Central Connecticut State University	Date of Submission to BOR Office:
Most Recent NEASC Institutional Accreditation Action and Date: Accreditation Continued March 6, 2009	
Program Characteristics Name of Program: Doctorate of Nurse Anesthesia Practice (DNAP) Degree: Title of Award (e.g. Master of Arts) Doctorate of Nurse Anesthesia Practice (DNAP) with two specializations: Entry-level Specialization (81-87 credits) and Advanced Specialization (33-42 credits) Certificate: (specify type and level) Anticipated Program Initiation Date: Summer 2015 Anticipated Date of First Graduation: Spring 2018 Modality of Program: <input checked="" type="checkbox"/> On ground <input type="checkbox"/> Online <input type="checkbox"/> Combined If "Combined", % of fully online courses? Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other):	Program Credit Distribution # Cr in Program Core Courses: DNAP Entry-level Specialization (63 core + 6 capstone credits) and DNAP Advanced Specialization (18-21 core + 6 capstone credits) # Cr of Electives in the Field: 0 credits # Cr of Free Electives: 0 credits # Cr Special Requirements (include internship, etc.): Anesthesia clinical practicum: DNAP Entry-level Specialization (12 credits); Advanced Specialization (9 credits) Total # Cr in the Program (sum of all #Cr above): DNAP Entry-level Specialization (81-87 credits) and DNAP Advanced Specialization (33-42 credits) From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 30 credits
Type of Approval Action Being Sought: <input checked="" type="checkbox"/> Licensure OR <input type="checkbox"/> Licensure and Accreditation Suggested CIP Code No. (optional) Title of CIP Code CIP Year: 2000 or 2010	
If establishment of the new program is concurrent with discontinuation of related program(s), please list for each program: Program Discontinued: MS Biological Sciences: Anesthesia CIP: 511604 DHE# (if available): 03033 Accreditation Date: April, 1996 Phase Out Period Anticipated Summer 2015 when DNAP starts Date of Program Termination Anticipated May 2017	
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: Central Connecticut State University, School of Arts and Sciences, Department of Biological Sciences; main campus with affiliated hospitals providing clinical sites	
Other Program Accreditation: If seeking specialized/professional/other accreditation, name of agency and intended year of review: Council on Accreditation (COA) of Nurse Anesthesia Educational Programs If program prepares graduates eligibility to state/professional license, please identify: Advanced Practice Registered Nurse (APRN) license to work as certified nurse anesthetists (As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)	
Institutional Contact for this Proposal: Dr. Carl Lovitt	Title: Vice President/Provost of Academic Affairs Tel.: 860-832-2230 e-mail: lovittcar@ccsu.edu

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BOR REVIEW STATUS (For Office Use Only - please leave blank)

BOR Sequence Number (to be assigned):

Approved 2010 CIP Code No. ¹ Title of CIP Code

Log of BOR Steps Towards Program Approval:

Nature and Resolution number for BOR Approval:

Date of Approval:

Conditions for Approval (if any)

¹ Final CIP assignment will be done by BOR staff in consideration of suggested number (if provided) and in consultation with administrative offices at the institution and system proposing the program. For the final assignment, the 2010 CIP definitions will be used.

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SECTION 2: PROGRAM PLANNING ASSESSMENT (To be Used for BOR Review Only)

Alignment of Program with Institutional Mission, Role and Scope

(Please provide objective and concise statements)

Objectives of Proposed Program

The Doctor of Nurse Anesthesia Practice (DNAP) program is a practice doctoral degree, which has two specializations. The first specialization is the Entry-level DNAP, designed for bachelor's prepared licensed registered nurses to become certified registered nurse anesthetists (CRNAs) and provide discipline specific preparation in biology and anesthesia; the second specialization is the Advanced DNAP for master's level practicing certified registered nurse anesthetists to become DNAP-prepared practitioners, and which allows these individuals to expand their background in areas of biology and anesthesia specific to their discipline.

The DNAP has a focus on clinical practice and providing additional opportunities for clinical leadership and clinical faculty positions. Historically, practice doctorates (also called clinical doctorates) included human medicine (M.D. and D.O.), veterinary medicine (D.V.M.), and law (J.D.). In recent years more professional groups have developed practice/clinical doctorates, including pharmacy (PharmD) and physical therapy (D.P.T.).

CCSU currently offers another applied doctoral program: the Ed.D. in Educational Leadership. Like the Ed.D., the proposed doctorate degree in nurse anesthesia is a practice-based and applied degree, not a research degree.

This proposed professional doctoral program provides a strong science background for those students wishing to emphasize the sciences. The program focuses on the use of critical thinking skills and analyses to evaluate clinical practice, health care, and patient safety; it builds on scientific and clinical skills from licensed registered nurse training and on experience as a critical care nurse. The DNAP prepares CRNAs for positions of leadership and management, patient care, and nurse anesthesia education. CCSU is well positioned to develop and implement a DNAP Program due to its successful history with the Master of Science in Biological Sciences: Anesthesia.

This program will be run as a cohort model. The DNAP: Entry-level Specialization students will start in the summer and are anticipated to complete in the spring semester of their third year (approximately three years, including summer sessions); the DNAP: Advanced Specialization students will start in the fall and are anticipated to complete in spring semester of their 2nd year (approximately two years).

Addressing Identified Needs

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)*

Need for Doctorate of Nurse Anesthesia Practice Program

CCSU currently collaborates with three hospital schools of nurse anesthesia (two in Connecticut and one in Rhode Island) to offer a Master of Science in Biological Sciences: Anesthesia (collaborations began in 1982, 1987, and 1993). Each affiliated hospital school of nurse anesthesia must maintain its program accreditation through the Council on Accreditation (COA) of Nurse Anesthesia Education. However, the COA recently enacted a new requirement that entry-level nurse anesthetists must hold the doctoral degree by 2025. Due to the requirement by the COA for entry-level nurse anesthetists to hold doctoral degrees, CCSU will no longer be able to offer the MS in Anesthesia and needs to offer the DNAP to continue educating nurse anesthetists. As of 2025, individuals must have a doctoral degree in order to become Board certified to practice as nurse anesthetists.

The director and assistant director of nurse anesthesia at one of our affiliated hospitals, Yale Hospital of New Haven- Saint Raphael Campus (previously Hospital of Saint Raphael) in New Haven, CT) already have their DNAP and, as a result, this hospital is eligible to offer the DNAP in conjunction with CCSU starting in 2015. CCSU proposes to start its first cohort of the DNAP program in the summer semester of 2015 for the Entry Level specialization and, then, in fall semester for the Advanced specialization. The Advanced specialization will enable the directors and assistant directors of the two other affiliated hospital schools of nurse anesthesia to earn their DNAP by 2017. These hospitals would then apply for accreditation from the Council on Accreditation of

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Nurse Anesthesia Educational Programs to offer the DNAP, thus making them eligible to work with CCSU to start the first DNAP cohorts by 2018 or 2019 and graduate the DNAP candidates by 2020 or 2021.

The proposed practice or professional doctorate will help to address the critical demand for nurse anesthetists in Connecticut and across the country. Nurse anesthetists practice in traditional hospital surgical and obstetrical settings; ambulatory surgical centers; offices of dentists, ophthalmologists, plastic surgeons, and pain management specialists; U.S. military; and Department of Veterans Affairs healthcare facilities. Nurse anesthetists are the sole anesthesia providers in two-thirds of rural hospitals in the United States.

In Connecticut, there are three nurse anesthesia programs and two of them have been affiliated with CCSU. The Connecticut Department of Labor Statistics shows that the supply of nurse anesthetists (2009-2010) from these three programs was 42 graduates. CCSU supplied 76% of those 42 graduates in 2010; therefore, CCSU is the major supplier of nurse anesthetists in Connecticut.

Over the last 10 years CCSU's Master of Science in Biological Sciences: Anesthesia has produced 23-32 graduates each year. In the last five years, approximately 49% of the students graduating from our program have been CT residents. Annually the percentage representation of Connecticut residents in our program ranges from 46 to 53%.

Graduates	Total	CT residence	Other states
2011	26	13	AZ, CA, KY, MA, NH, NY, PA, RI, TX
2010	32	17	CA, MA, NY, OR, RI, UT, WA
2009	28	13	AZ, CA, ID, IL, KS, MA, NM, NJ, NY, OR
2008	32	14	AZ, CA, GA, HI, ID, KY, MA, NY, RI, SD, WA
2007	30	15	FL, GA, HI, ID, MA, NM, NY, OK, RI, UT

Nurse anesthetists are needed in the state of Connecticut to staff 30 acute care hospitals, one Veterans Administration Hospital, and multiple non-hospital surgical-centers. While some of the 30 critical care hospitals employ just a few nurse anesthetists, at least five of the larger hospitals employ 20 or more nurse anesthetists (Hartford Hospital, St. Francis in Hartford, Hospital of Central Connecticut in New Britain, Yale Hospital of New Haven- Saint Raphael Campus (previously Hospital of Saint Raphael) in New Haven, and Bridgeport Hospital). Some hospitals, like Hartford Hospital, employ about 30, and these same large hospitals employ nurse anesthetists on a per diem basis in addition to their regular employees in order to properly staff their operating rooms. In fact, many of our graduates report that in addition to their full-time anesthetist positions, they also work per diem at other hospitals. Most large hospitals in Connecticut continue to have openings for nurse anesthetists, and the directors of CCSU's affiliated hospital schools of nurse anesthesia constantly receive inquiries from employment agencies with lists of employment openings for nurse anesthetists in Connecticut, New England, and across the country.

In addition to the current shortage of nurse anesthetists, data published by the American Association of Nurse Anesthetists show that 7.60% of current nurse anesthetists in the U.S. anticipate retiring between 2010 and 2022; of the 387 nurse anesthetists registered in Connecticut, 7.00% anticipate retiring during that time period.

A study titled "Cost Effectiveness Analysis of Anesthesia Providers," published in *The Journal of Nursing Economics* (May/June issue), found that CRNAs acting as the sole anesthesia provider cost 25 percent less than the second lowest cost model while the model in which one anesthesiologist supervises one CRNA was the most expensive model. Given these findings, as well as those on CT employment and retirement, it is expected that there will be an increased demand for nurse anesthetists as more states and hospitals move towards allowing CRNAs to take on more responsibilities in surgical settings.

To prevent or minimize the loss of experienced, high-quality nurses and nurse anesthetists who will seek doctoral programs in other parts of the country and to prevent the loss of partnerships with affiliated hospital schools of

CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

nurse anesthesia, CCSU must start its first cohort in the DNAP program in the summer of 2015.

- 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?

As stated above, CCSU currently collaborates with three hospital schools of nurse anesthesia to offer its Master of Science in Biological Sciences: Anesthesia (collaborations began in 1982, 1987, and 1993). Currently there are four faculty in the Biology Department and one faculty in the Chemistry and Biochemistry Department that teach in the existing Master of Science in Biological Sciences: Anesthesia; in addition three courses are team-taught by certified registered nurse anesthetists (part-time).

Please describe any transfer agreements with other institutions under the BOR 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) There are no transfer agreements.

-
- Please indicate what similar programs exist in other institutions within your constituent unit ², and how unnecessary duplication is being avoided

The Doctorate of Nurse Anesthesia Program (DNAP) will be a professional degree doctoral program, specifically designed for educating nurse anesthetists. There are just a few DNAP programs across the United States, but none is in New England. (DNAP programs currently are offered through the Virginia Commonwealth University, Richmond, VA; Texas Wesleyan University, Fort Worth, TX; Wolford College, Naples, FL.)

Doctorate of nurse practice (DNP) programs have been developed for advanced practice nurses (nurse anesthetists are advanced practice nurses); however, most of these DNP programs are not specific to nurse anesthesia. For example, the University of Connecticut at Storrs recently implemented a DNP program, but does not have a nurse anesthesia program. Fairfield University has a DNP program that they use for their nurse practitioner programs (psychiatric nurse practitioner and family nurse practitioner), including their nurse anesthesia program. Further, Quinnipiac University has a DNP program with tracks in adult-gerontology nurse practitioner, family nurse practitioner, care of populations, and has indicated interest in expanding the program to include a fourth track in nurse anesthesia. Because of the high demand for nurse anesthetists, all of these programs will no doubt continue enrollments even if CCSU adds the DNAP program.

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

As stated above, nurse anesthetists are needed in the state of Connecticut to staff 30 acute care hospitals, one Veterans Administration Hospital, and multiple non-hospital surgical-centers. At least five of the larger hospitals employ 20 or more nurse anesthetists (Hartford Hospital, St. Francis in Hartford, Hospital of Central Connecticut in New Britain, Yale Hospital of New Haven- Saint Raphael Campus (previously Hospital of Saint Raphael) in New Haven, and Bridgeport Hospital), and some of these hospitals employ nurse anesthetists on a per diem basis in addition to their regular employees in order to properly staff their operating rooms.

All of CCSU's graduates find employment; most students in our program make employment commitments prior to graduating and the remaining graduates make employment commitments within a month of graduation. Further evidence of the increased demand for qualified nurse anesthetists includes generous health benefits, tuition reimbursement, as well as signing bonuses. In 2009 students received signing bonuses between \$10,000-\$35,000 in New England and as high as \$40,000.00 (Yale) for a two-year contract.

The demand for nurse anesthetists has also been found to increase as the number of surgeries increase in inpatient- and hospital-based outpatient facilities, and that these surgeries are related to both an increase in urbanization and higher median household incomes (AANA Journal 74:287-293, 2006). Given that the state of Connecticut has seen an increase in urbanization and has one of the highest median household incomes in the country (U.S. Census Bureau), these data suggest that there will continue to be a demand for nurse anesthetists in the state of

² Constituent units are: the Connecticut Community College System, the Connecticut State University System, Charter Oak State College, and the University of Connecticut

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Cost Effectiveness and Availability of Adequate Resources

(Please provide a one-paragraph narrative on the attached MExcel Pro-Forma Budget)

We expect the DNAP: Entry-level Specialization at CCSU to draw students from Connecticut, all of New England, as well as nationally, as it has done for the last 28 years. The DNAP: Advanced Specialization will draw practicing certified registered nurse anesthetists (CRNA) from alumni of the CCSU's nurse anesthesia program; other nurse anesthetists in Connecticut, New England; and nationally.

Initially, Yale Hospital of New Haven- Saint Raphael Campus (previously Hospital of Saint Raphael), one of CCSU's three hospital schools of nurse anesthesia programs associated with CCSU, will change the master's program to the doctorate in nurse anesthesia practice (recruiting 16-23* students a year), hopefully, by 2015.

We anticipate that the other two CCSU-affiliated hospital schools of nurse anesthesia will convert the master's programs to the DNAP by 2018 (adding an additional total of 18-20 students). We expect to enroll an approximate total of forty students once all of the affiliated hospitals are accredited by the Council on Accreditation (COA) of Nurse Anesthesia Education Programs.

Revenue and Expenses

	Revenue	Expenses	Net Revenue
First Term Year 1* (average of 20 Entry and 5 for Advanced)	\$504,789	\$181,000	+\$323,789
First Term Year 2	\$864,079	\$181,000	+\$683,079
First Term Year 3	\$1,153,479	\$214,000	+\$939,479

The Revenue is based upon admission of 20 DNAP: Entry-level Specialization students (10 in state; 10 out-of-state) and 5 DNAP: Advanced Specialization students (4 in state; 1 out-of-state). It uses the 2012-2013 Ed.D. doctoral tuition for didactic courses, clinical courses and clinical practica. (CCSU Ed.D. program students are charged using a part-time tuition and fees rate.) Since DNAP students may be full time, state university fees, general fees, and student activity fees are based on costs to full-time master's students. A cohort of DNAP: Entry-level students starts every summer and a cohort of DNAP: Advanced Specialization students starts every fall. Therefore, Year 2 shows resources and expenditures for 2 cohorts of Entry-level students and 2 cohorts of Advanced Specialization and Year 3 shows 3 cohorts of Entry-level students and 2 cohorts of Advanced Specialization students. In the Pro Forma Budget, the Entry-level students are shown in the column labeled "Full-time" and the Advanced Specialization students are shown in the column labeled "Part-time".

The Expenses are based upon (1) salary and fringe benefits for one new full-time faculty who is a certified nurse anesthetist to teach courses in the DNAP program; (2) salary for part-time instructors to teach three courses in the program (courses currently taught in master's anesthesia program); (3) part-time faculty to cover courses when full-time faculty have over-load due to serving on doctoral capstone committees; (4) salary for part-time nurse anesthetists or physicians to serve on doctoral capstone committees.

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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. Analyzes best-practice models for nurse anesthesia patient care management through integration of knowledge acquired from arts and sciences within the context of the scope and standards of nurse anesthesia practice.
2. Undertakes complex leadership role and integrates critical and reflective thinking to facilitate intraprofessional and interprofessional collaboration.
3. Uses evidence-based practice in clinical decision making, develops and assesses strategies to improve patient outcomes and quality of care.
4. Evaluates the impact of public processes on financing and delivery of healthcare.
5. Assesses and evaluates health outcomes in a variety of populations, clinical settings, and systems.
6. Completes and disseminates scholarly work, demonstrating knowledge within an area of academic focus.
7. Uses information systems/technology and evaluates clinical and research databases to support and improve patient care and healthcare systems.
8. Demonstrates ability to advocate for health policy change to improve patient care and advance the specialty of nurse anesthesia.
9. Analyzes healthcare delivery systems, organizations, and risk management plans to improve outcomes for the patient, organization, and community.
10. Demonstrates ethical decision-making; and ability to communicate and represent themselves in accordance with the Code of Ethics for CRNAs.

Program Learning Outcomes:

The DNAP Program Learning Outcomes are based upon the competencies required by Council on Accreditation for Nurse Anesthesia Education Programs for the CRNA Practitioner at the Clinical Doctorate Level.

Assessment Methodology

DNAP Program Assessment Points

1. Advanced Topics in Nurse Anesthesia course - Portfolio
2. Doctoral Comprehensive Exam
3. Advanced Anesthesia Clinical Practicum I, II, III – Portfolio
4. Doctoral Capstone Project Completion and Dissemination
5. Leadership in Nurse Anesthesia Education course

Learning Outcome	Point of Assessment				
	Advanced Topics in Nurse Anesthesia (BIO 742)	Comprehensive Exam	Advanced Anesthesia Clinical Practicum I, II, III Portfolio	Doctoral Capstone Project Completion and Dissemination	Leadership in Nurse Anesthesia Education Course (BIO 740)
1	X	X	X	X	
2	X		X	X	X
3	X		X	X	X
4	X		X	X	X
5	X		X	X	

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	Advanced Topics in Nurse Anesthesia (BIO 742)	Comprehensive Exam	Advanced Anesthesia Clinical Practicum I, II, III Portfolio	Doctoral Capstone Project Completion and Dissemination	Leadership in Nurse Anesthesia Education Course (BIO 740)
6	X		X	X	
7	X		X	X	
8	X		X	X	X
9	X		X	X	X
10	X		X	X	X

SEE:

APPENDIX A: Competencies Required by Council on Accreditation of Nurse Anesthesia Education Programs for the CRNA Practitioner at the Clinical Doctorate Level and Correlation with DNAP Program Learning Outcomes

APPENDIX B: Competencies Required by Council on Accreditation for Nurse Anesthesia Education Programs for the CRNA Practitioner at the Clinical Doctorate Level and CCSU DNAP Courses Meeting Those Competencies

APPENDIX C: Evaluation Rubric Criteria for Comprehensive Exam, Capstone Project, Portfolio and Leadership in Anesthesia Course

APPENDIX D: Advanced Practice Registered Nurse Licensure Overview and Requirements for Connecticut

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)*

Ruth Rollin currently coordinates the MS Biological Sciences: Anesthesia program for two load credits each fall and spring semesters. She collaborates with the program directors of the affiliated hospital schools of nurse anesthesia to run the program. It is anticipated that Dr. Rollin will continue the program administration for the DNAP program.

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? two

What percentage of the credits in the program will they teach? 50%

What percent of credits in the program will be taught by adjunct faculty? 15%

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program: Initially, practicing CNRAs with master's degrees and receiving justification to meet CCSU's standards; by 2018, practicing nurse anesthetists would be required to have a doctoral degree.

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 Cost Analysis Projection sheet for BOR review)*

Library

1. Anesthesiology – Obtain subscription; print \$1193
2. Journal of Anesthesia – Obtain subscription; online \$323; print \$175.25
3. Anesthesia and Analgesia – Obtain subscription; print \$969
4. Journal of the American Association of Nurse Anesthetists – access available from their homepage without cost to university

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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. # ³	Pre- Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Program Core Courses				Other Related/Special Requirements		
APPENDIX E: Program Curriculum						
APPENDIX F: Course Sequence						
APPENDIX G: Course Descriptions						
APPENDIX H Admissions Requirements for DNAP Program						
Core Course Prerequisites				Elective Courses in the Field		
Total Other Credits Required to Issue Credential (e.g. GenEd/Liberal Arts Core/Liberal Ed Program)						
<p>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. Example: "The Finance Major entails 18 credits of Related Course requirements from a range of disciplines (6 credits of which apply to the Liberal Arts Core (LAC), or institution's GenEd program), 24 credits of courses in Business (3 credits of which apply to the LAC/GenEd), 18 credits of coursework in Finance (including a 6-credit internship), and 9 elective credits from a list that includes courses in Economics, Finance, and Business. Students must take a minimum of 24 credits of coursework for the major at the institution and must maintain a GPA of 2.5.")</p> <p>APPENDIX E: Program Curriculum</p> <p>APPENDIX F: Course Sequence</p> <p>APPENDIX G: Course Descriptions</p> <p>APPENDIX H Admissions Requirements for DNAP Program</p> <p><u>Requirements and Arrangements for clinical affiliations</u></p> <p>CCSU currently collaborates with three hospital schools of nurse anesthesia (two in Connecticut and one in Rhode Island) to offer a Master of Science in Biological Sciences with a specialization in Anesthesia (collaborations began in 1982, 1987, and 1993).</p> <p><u>Facilities</u></p> <p>No additional facilities required. Affiliated hospital schools of nurse anesthesia have clinical facilities currently being used for students in the M.S. Biological Sciences: Anesthesia Program and these facilities can also be used for the DNAP: Entry-level Specialization Program. These affiliated hospital schools of nurse anesthesia also send students to additional facilities to meet required patient cases or for use as enrichment sites.</p>						

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

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Special equipment

No additional equipment required. Affiliated hospital schools of nurse anesthesia have clinical equipment currently being used for students in the M.S. Biological Sciences: Anesthesia Program and this equipment can also be used for the DNAP: Entry-level Specialization Program.

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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
See: APPENDIX I Full-time, part-time, and clinical faculty; experience and courses taught			

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Appendices

APPENDIX A: Competencies Required by Council on Accreditation of Nurse Anesthesia Education Programs for the CRNA Practitioner at the Clinical Doctorate Level and Correlation with DNAP Program Learning Outcomes

Competency	Learning Outcomes
I. Competency Area: Biological Systems, Homeostasis and Pathogenesis a. Analyzes best-practice models for nurse anesthesia patient care management through integration of knowledge acquired from arts and sciences within the context of the scope and standards of nurse anesthesia practice. b. Uses a systematic outcomes analysis approach in the translation of research evidence and data in the arts and sciences to demonstrate they will have the expected effects on nurse anesthesia practice.	LEARNING OUTCOME 1 Analyzes best-practice models for nurse anesthesia patient care management through integration of knowledge acquired from arts and sciences within the context of the scope and standards of nurse anesthesia practice.
II. Competency Area: Professional Role a. Demonstrates ability to undertake complex leadership roles in nurse anesthesia. b. Demonstrates ability to provide leadership that facilitates intraprofessional and interprofessional collaboration. c. Integrates critical and reflective thinking in leadership style.	LEARNING OUTCOME 2 Undertakes complex leadership role and integrates critical and reflective thinking to facilitate intraprofessional and interprofessional collaboration.
III. Competency Area: Healthcare Improvement a. Uses evidence based practice to inform clinical decision making in nurse anesthesia. b. Evaluates how public processes impact the financing and delivery of healthcare. c. Develops and assesses strategies to improve patient outcomes and quality of care.	LEARNING OUTCOME 3 Uses evidence-based practice in clinical decision making, develops and assesses strategies to improve patient outcomes and quality of care. LEARNING OUTCOME 4 Evaluates the impact of public processes on financing and delivery of healthcare.
IV. Competency Area: Practice Inquiry a. Demonstrates the ability to assess and evaluate health outcomes in a variety of populations, clinical settings, and systems. b. Demonstrates ability to disseminate research evidence. c. Completes a scholarly work that demonstrates knowledge within the area of academic focus.	LEARNING OUTCOME 5 Assesses and evaluates health outcomes in a variety of populations, clinical settings, and systems. LEARNING OUTCOME 6 Completes and disseminates scholarly work demonstrating knowledge within an area of academic focus.

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<p>V. Competency Area: Technology and Informatics</p> <p>a. Uses information systems/technology to support and improve patient care and healthcare systems.</p> <p>b. Critically evaluates clinical and research databases used as clinical decision support resources.</p>	<p>LEARNING OUTCOME 7</p> <p>Uses information systems/technology and evaluates clinical and research databases to support and improve patient care and healthcare systems.</p>
<p>VI. Competency Area: Public and Social Policy</p> <p>a. Advocates for health policy change to improve patient care and advance the specialty of nurse anesthesia.</p>	<p>LEARNING OUTCOME 8</p> <p>Demonstrates ability to advocate for health policy change to improve patient care and advance the specialty of nurse anesthesia.</p>
<p>VII. Competency Area: Health Systems Management</p> <p>a. Analyzes the structure, function and outcomes of healthcare delivery systems and organizations.</p> <p>b. Analyzes business practices typically encountered in nurse anesthesia delivery settings.</p> <p>c. Analyzes risk management plans based on information systems to promote outcome improvement for the patient, organization and community</p>	<p>LEARNING OUTCOME 9</p> <p>Analyzes healthcare delivery systems, organizations, and risk management plans to improve outcomes for the patient, organization, and community.</p>
<p>VIII. Competency Area: Ethics</p> <p>a. Applies ethically sound decision- making.</p> <p>b. Informs the public of the role and practice of the doctoral-prepared CRNA and represents themselves in accordance with the Code of Ethics for CRNAs.</p> <p>c. Fulfills the obligation as a doctoral-educated professional to uphold the Code of Ethics for CRNAs.</p>	<p>LEARNING OUTCOME 10</p> <p>Demonstrates ethical decision-making; and ability to communicate and represent themselves in accordance with the Code of Ethics for CRNAs.</p>

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APPENDIX B: Competencies Required by Council on Accreditation for Nurse Anesthesia Education Programs for the CRNA Practitioner at the Clinical Doctorate Level and CCSU DNAP Courses Meeting Those Competencies

Competency	DNAP course
I. Competency Area: Biological Systems, Homeostasis and Pathogenesis a. Analyzes best-practice models for nurse anesthesia patient care management through integration of knowledge acquired from arts and sciences within the context of the scope and standards of nurse anesthesia practice. b. Uses a systematic outcomes analysis approach in the translation of research evidence and data in the arts and sciences to demonstrate they will have the expected effects on nurse anesthesia practice.	CHEM 550 Basic Organic and Biological Chemistry BIO 500 Seminar in Biology BIO 517 Human Anatomy, Physiology, and Pathophysiology BIO 518 Pathophysiology and Applied Physiology BIO 519 Advanced Neuroscience BIO 525 Advanced Physical Health Assessment for Nurse Anesthetists BIO 528 Pharmacology BIO 530 Immunology BIO 598 Research in Biology BIO 730 Human Factors and Patient Safety for Nurse Anesthetists BIO 736 Evidence-based Practice and Biostatistics BIO 739 Advanced Topics in Pharmacology BIO 742 Advanced Topics in Nurse Anesthesia BIO 745 Doctoral Capstone Project I BIO 746 Doctoral Capstone Project II BIO 747 Doctoral Capstone Project III ANES 500 Basic Principles of Nurse Anesthesia Practice ANES 501 Advanced Principles of Nurse Anesthesia Practice I ANES 502 Advanced Principles of Nurse Anesthesia Practice II ANES 510 Physics in Anesthesia ANES 515 Professional Aspects of Nurse Anesthesia Practice ANES 528 Anesthesia Pharmacology ANES 590 Clinical Correlation Conference ACP 730 Anesthesia Clinical Practicum I ACP 731 Anesthesia Clinical Practicum II ACP 732 Anesthesia Clinical Practicum III ACP 733 Advanced Anesthesia Clinical Practicum I ACP 734 Advanced Anesthesia Clinical Practicum I ACP 735 Advanced Anesthesia Clinical Practicum III
II. Competency Area: Professional Role a. Demonstrates ability to undertake complex leadership roles in nurse anesthesia. b. Demonstrates ability to provide leadership that facilitates	BIO 725 Bioethics and Nurse Anesthesia BIO 730 Human Factors and Patient Safety for Nurse Anesthetists BIO 740 Leadership in Nurse Anesthesia Education BIO 742 Advanced Topics in Nurse Anesthesia BIO 745 Doctoral Capstone Project I

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<p>intraprofessional and interprofessional collaboration.</p> <p>c. Integrates critical and reflective thinking in leadership style.</p> <p>d. Demonstrates ability to utilize a variety of leadership principles in the management of situations.</p>	<p>BIO 746 Doctoral Capstone Project II</p> <p>BIO 747 Doctoral Capstone Project III</p> <p>ANES 500 Basic Principles of Nurse Anesthesia Practice</p> <p>ANES 501 Advanced Principles of Nurse Anesthesia Practice I</p> <p>ANES 502 Advanced Principles of Nurse Anesthesia Practice II</p> <p>ANES 515 Professional Aspects of Nurse Anesthesia Practice</p> <p>ANES 528 Anesthesia Pharmacology</p> <p>ANES 590 Clinical Correlation Conference</p> <p>ACP 730 Anesthesia Clinical Practicum I</p> <p>ACP 731 Anesthesia Clinical Practicum II</p> <p>ACP 732 Anesthesia Clinical Practicum III</p> <p>ACP 733 Advanced Anesthesia Clinical Practicum I</p> <p>ACP 734 Advanced Anesthesia Clinical Practicum II</p> <p>ACP 735 Advanced Anesthesia Clinical Practicum III</p>
<p>III. Competency Area: Healthcare Improvement</p> <p>a. Uses evidence based practice to inform clinical decision making in nurse anesthesia.</p> <p>b. Evaluates how public processes impact the financing and delivery of healthcare.</p> <p>c. Develops and assesses strategies to improve patient outcomes and quality of care.</p>	<p>BIO 525 Advanced Physical Health Assessment for Nurse Anesthetists</p> <p>BIO 725 Bioethics and Nurse Anesthesia</p> <p>BIO 730 Human Factors and Patient Safety for Nurse Anesthetists</p> <p>BIO 736 Evidence-Based Practice and Biostatistics</p> <p>BIO 739 Advanced Topics in Pharmacology</p> <p>BIO 740 Leadership in Nurse Anesthesia Education</p> <p>BIO 742 Advanced Topics in Nurse Anesthesia</p> <p>BIO 745 Doctoral Capstone Project I</p> <p>BIO 746 Doctoral Capstone Project II</p> <p>BIO 747 Doctoral Capstone Project III</p> <p>ANES 500 Basic Principles of Nurse Anesthesia Practice</p> <p>ANES 501 Advanced Principles of Nurse Anesthesia Practice I</p> <p>ANES 502 Advanced Principles of Nurse Anesthesia Practice II</p> <p>ANES 515 Professional Aspects of Nurse Anesthesia Practice</p> <p>ANES 528 Anesthesia Pharmacology</p> <p>ANES 590 Clinical Correlation Conference</p> <p>ACP 730 Anesthesia Clinical Practicum I</p> <p>ACP 731 Anesthesia Clinical Practicum II</p> <p>ACP 732 Anesthesia Clinical Practicum III</p> <p>ACP 733 Advanced Anesthesia Clinical Practicum I</p> <p>ACP 734 Advanced Anesthesia Clinical Practicum II</p> <p>ACP 735 Advanced Anesthesia Clinical Practicum III</p>

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<p>IV. Competency Area: Practice Inquiry</p> <p>a. Demonstrates the ability to assess and evaluate health outcomes in a variety of populations, clinical settings, and systems.</p> <p>b. Demonstrates ability to disseminate research evidence.</p> <p>c. Completes a scholarly work that demonstrates knowledge within the area of academic focus.</p>	<p>BIO 525 Advanced physical health assessment for nurse anesthetists</p> <p>BIO 730 Human factors and patient safety for nurse anesthetists</p> <p>BIO 736 Evidence-based practice and biostatistics</p> <p>BIO 742 Advanced Topics in Nurse Anesthesia</p> <p>BIO 745 Doctoral Capstone Project I</p> <p>BIO 746 Doctoral Capstone Project II</p> <p>BIO 747 Doctoral Capstone Project III</p> <p>ANES 500 Basic Principles of Nurse Anesthesia Practice</p> <p>ANES 501 Advanced Principles of Nurse Anesthesia Practice I</p> <p>ANES 502 Advanced Principles of Nurse Anesthesia Practice II</p> <p>ANES 515 Professional Aspects of Nurse Anesthesia Practice</p> <p>ANES 528 Anesthesia Pharmacology</p> <p>ANES 590 Clinical Correlation Conference</p> <p>ACP 730 Anesthesia Clinical Practicum I</p> <p>ACP 731 Anesthesia Clinical Practicum II</p> <p>ACP 732 Anesthesia Clinical Practicum III</p> <p>ACP 733 Advanced Anesthesia Clinical Practicum I</p> <p>ACP 734 Advanced Anesthesia Clinical Practicum II</p> <p>ACP 735 Advanced Anesthesia Clinical Practicum III</p>
<p>V. Competency Area: Technology and Informatics</p> <p>a. Uses information systems/technology to support and improve patient care and healthcare systems.</p> <p>b. Critically evaluates clinical and research databases used as clinical decision support resources.</p>	<p>BIO 525 Advanced physical health assessment for nurse anesthetist</p> <p>BIO 730 Human Factors and Patient Safety for Nurse Anesthetists</p> <p>BIO 736 Evidence-Based Practice and Biostatistics</p> <p>BIO 739 Advanced Topics in Pharmacology</p> <p>BIO 742 Advanced Topics in Nurse Anesthesia</p> <p>BIO 745 Doctoral Capstone Project I</p> <p>BIO 746 Doctoral Capstone Project II</p> <p>BIO 747 Doctoral Capstone Project III</p> <p>ANES 500 Basic Principles of Nurse Anesthesia Practice</p> <p>ANES 501 Advanced Principles of Nurse Anesthesia Practice I</p> <p>ANES 502 Advanced Principles of Nurse Anesthesia Practice II</p> <p>ANES 515 Professional Aspects of Nurse Anesthesia Practice</p> <p>ANES 528 Anesthesia Pharmacology</p> <p>ANES 590 Clinical Correlation Conference</p> <p>ACP 730 Anesthesia Clinical Practicum I</p> <p>ACP 731 Anesthesia Clinical Practicum II</p>

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	<p>ACP 732 Anesthesia Clinical Practicum III</p> <p>ACP 733 Advanced Anesthesia Clinical Practicum I</p> <p>ACP 734 Advanced Anesthesia Clinical Practicum II</p> <p>ACP 735 Advanced Anesthesia Clinical Practicum III</p>
<p>VI. Competency Area: Public and Social Policy</p> <p>a. Advocates for health policy change to improve patient care and advance the specialty of nurse anesthesia.</p>	<p>BIO 725 Bioethics and Nurse Anesthesia</p> <p>BIO 730 Human Factors and Patient Safety for Nurse Anesthetists</p> <p>BIO 740 Leadership in Nurse Anesthesia Education</p> <p>BIO 742 Advanced Topics in Nurse Anesthesia</p> <p>BIO 745 Doctoral Capstone Project I</p> <p>BIO 746 Doctoral Capstone Project II</p> <p>BIO 747 Doctoral Capstone Project III</p> <p>ANES 500 Basic Principles of Nurse Anesthesia Practice</p> <p>ANES 501 Advanced Principles of Nurse Anesthesia Practice I</p> <p>ANES 502 Advanced Principles of Nurse Anesthesia Practice II</p> <p>ANES 515 Professional Aspects of Nurse Anesthesia Practice</p> <p>ANES 528 Anesthesia Pharmacology</p> <p>ANES 590 Clinical Correlation Conference</p> <p>ACP 730 Anesthesia Clinical Practicum I</p> <p>ACP 731 Anesthesia Clinical Practicum II</p> <p>ACP 732 Anesthesia Clinical Practicum III</p> <p>ACP 733 Advanced Anesthesia Clinical Practicum I</p> <p>ACP 734 Advanced Anesthesia Clinical Practicum II</p> <p>ACP735Advanced Anesthesia Clinical Practicum III</p>
<p>VII. Competency Area: Health Systems Management</p> <p>a. Analyzes the structure, function and outcomes of healthcare delivery systems and organizations.</p> <p>b. Analyzes business practices typically encountered in nurse anesthesia delivery settings.</p> <p>c. Analyzes risk management plans based on information systems to promote outcome improvement for the patient, organization and community.</p>	<p>BIO 730 Human Factors and Patient Safety for Nurse Anesthetists</p> <p>BIO 740 Leadership in Nurse Anesthesia Education</p> <p>BIO 742 Advanced Topics in Nurse Anesthesia</p> <p>BIO 745 Doctoral Capstone Project I</p> <p>BIO 746 Doctoral Capstone Project II</p> <p>BIO 747 Doctoral Capstone Project III</p> <p>ANES 500 Basic Principles of Nurse Anesthesia Practice</p> <p>ANES 501 Advanced Principles of Nurse Anesthesia Practice I</p> <p>ANES 502 Advanced Principles of Nurse Anesthesia Practice II</p> <p>ANES 515 Professional Aspects of Nurse Anesthesia Practice</p> <p>ANES 528 Anesthesia Pharmacology</p> <p>ANES 590 Clinical Correlation Conference</p> <p>ACP 730 Anesthesia Clinical Practicum I</p> <p>ACP 731 Anesthesia Clinical Practicum II</p> <p>ACP 732 Anesthesia Clinical Practicum III</p>

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	ACP 733 Advanced Anesthesia Clinical Practicum I ACP 734 Advanced Anesthesia Clinical Practicum II ACP735Advanced Anesthesia Clinical Practicum III
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VIII. Competency Area: Ethics a. Applies ethically sound decision-making. b. Informs the public of the role and practice of the doctoral-prepared CRNA and represents themselves in accordance with the Code of Ethics for CRNAs. c. Fulfills the obligation as a doctoral-educated professional to uphold the Code of Ethics for CRNAs.	BIO 725 Bioethics and Nurse Anesthesia BIO 730 Human Factors and Patient Safety for Nurse Anesthetists BIO 736 Evidence-based Practice and Biostatistics BIO 740 Leadership in Nurse Anesthesia Education BIO 742 Advanced Topics in Nurse Anesthesia BIO 745 Doctoral Capstone Project I BIO 746 Doctoral Capstone Project II BIO 747 Doctoral Capstone Project III ANES 500 Basic Principles of Nurse Anesthesia Practice ANES 501 Advanced Principles of Nurse Anesthesia Practice I ANES 502 Advanced Principles of Nurse Anesthesia Practice II ANES 510 Physics in Anesthesia ANES 515 Professional Aspects of Nurse Anesthesia Practice ANES 528 Anesthesia Pharmacology ANES 590 Clinical Correlation Conference ACP 730 Anesthesia Clinical Practicum I ACP 731 Anesthesia Clinical Practicum II ACP 732 Anesthesia Clinical Practicum III ACP 733 Advanced Anesthesia Clinical Practicum I ACP 734 Advanced Anesthesia Clinical Practicum II ACP735Advanced Anesthesia Clinical Practicum III
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APPENDIX C: Evaluation Rubric Criteria for Comprehensive Exam, Capstone Project, Portfolio and Leadership in Anesthesia Course Doctorate in Nurse Anesthesia Practice (DNAP)

	Exceeds Expectations	Meets Expectations	Does Not Meet Expectations	Not Applicable
LEARNING OUTCOME 1 – Analyzes best-practice models for nurse anesthesia patient care management through integration of knowledge acquired from arts and sciences within the context of the scope and standards of nurse anesthesia practice.	Analyzes best-practice models for nurse anesthesia practice; exceeds knowledge expectations or exceeds integration of knowledge from arts and sciences.	Analyzes best-practice models for nurse anesthesia practice; demonstrates knowledge of and integration of knowledge from arts and sciences.	Does not analyze best-practice models for nurse anesthesia practice; does not demonstrate knowledge of or integration of knowledge from arts and sciences.	
LEARNING OUTCOME 2 - Undertakes complex leadership role and integrates critical and reflective thinking to facilitate intraprofessional and interprofessional collaboration.	Demonstrates evidence of critical or reflective thinking that would facilitate intraprofessional and interprofessional collaboration needed to undertake complex leadership roles and shows evidence of taking on complex leadership roles.	Demonstrates evidence of critical or reflective thinking that would facilitate intraprofessional and interprofessional collaboration needed to undertake complex leadership roles.	Does not demonstrate evidence of critical or reflective thinking that would facilitate intraprofessional and interprofessional collaboration needed to undertake complex leadership roles.	

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LEARNING OUTCOME 3 - Uses evidence-based practice in clinical decision making, develops and assesses strategies to improve patient outcomes and quality of care.	Demonstrates multiple examples of using evidence-based practice in clinical decision making, developing and assessing strategies to improve patient outcomes and quality of care.	Demonstrates at least minimal requirements for using evidence-based practice in clinical decision making, developing and assessing strategies to improve patient outcomes and quality of care.	Does not demonstrate evidence of using evidence-based practice in clinical decision making, developing and assessing strategies to improve patient outcomes and quality of care.
LEARNING OUTCOME 4 - Evaluates the impact of public processes on financing and delivery of healthcare.	Demonstrates multiple examples of evaluating the impact of public processes on financing and delivery of healthcare.	Demonstrates at least minimal requirements for evaluating the impact of public processes on financing and delivery of healthcare.	Does not demonstrate evidence of evaluating the impact of public processes on financing and delivery of healthcare.
LEARNING OUTCOME 5 - Assesses and evaluates health outcomes in a variety of populations, clinical settings, and systems; and completes and disseminates scholarly work demonstrating knowledge within an area of academic focus.	Demonstrates evidence of assessing and evaluating health outcomes in a variety of populations, clinical settings, and systems; and completes and disseminates scholarly work demonstrating knowledge within an area of academic focus.	Demonstrates evidence of assessing and evaluating health outcomes in a variety of populations, clinical settings, and systems.	Does not demonstrate evidence of assessing and evaluating health outcomes in a variety of populations, clinical settings, and systems.

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LEARNING OUTCOME 6 - Completes and disseminates scholarly work demonstrating knowledge within an area of academic focus.	Scholarly work is relevant to improving health care, thoroughly addresses significant concepts; presentation is clear, coherent, organized, and professional quality.	Scholarly work is relevant to improving health care, addresses most significant concepts; presentation is clear, coherent and organized.	Scholarly work is not relevant to improving health care, minimally addresses concepts; presentation is not clear or coherent and is not well organized.
LEARNING OUTCOME 7 - Uses information systems/technology and evaluates clinical and research databases to support and improve patient care and healthcare systems.	Demonstrates a high degree of evidence of ability to use information systems/ technology and to evaluate clinical and research databases to support and improve patient care and healthcare systems.	Demonstrates evidence of ability to use information systems/ technology and to evaluate clinical and research databases to support and improve patient care and healthcare systems.	Does not demonstrate evidence of ability to use information systems/ technology or to evaluate clinical and research databases to support and improve patient care and healthcare systems.
LEARNING OUTCOME 8 -Demonstrates ability to advocate for health policy change to improve patient care and advance the specialty of nurse anesthesia.	Demonstrates multiple examples of ability to advocate for health policy change to improve patient care and advance the specialty of nurse anesthesia.	Demonstrates at least minimal requirements for advocating for health policy change to improve patient care and advance the specialty of nurse anesthesia.	Does not demonstrate evidence of ability to advocate for health policy change to improve patient care and advance the specialty of nurse anesthesia.

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<p>LEARNING OUTCOME 9 -Analyzes healthcare delivery systems, organizations, and risk management plans to improve outcomes for the patient, organization, and community.</p>	<p>Demonstrates evidence of ability to analyze healthcare delivery systems, organizations, and risk management plans to improve outcomes for the patient, organization, and community and demonstrates implementation of changes made as a result of their analyses.</p>	<p>Demonstrates evidence of ability to analyze healthcare delivery systems, organizations, and risk management plans to improve outcomes for the patient, organization, and community.</p>	<p>Does not demonstrate evidence of ability to analyze healthcare delivery systems, organizations, and risk management plans to improve outcomes for the patient, organization, and community.</p>
<p>LEARNING OUTCOME 10 - Demonstrates ethical decision-making; ability to communicate and represent themselves in accordance with the Code of Ethics for CRNAs.</p>	<p>Demonstrates multiple examples of ethical decision-making and ability to communicate and represent themselves in accordance with the Code of Ethics for CRNAs.</p>	<p>Demonstrates at least minimal evidence of ethical decision-making and ability to communicate and represent themselves in accordance with the Code of Ethics for CRNAs.</p>	<p>Does not demonstrate evidence of ethical decision-making or of ability to communicate and represent themselves in accordance with the Code of Ethics for CRNAs.</p>

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APPENDIX D: Advanced Practice Registered Nurse Licensure Overview and Requirements for Connecticut

CCSU graduates of the M.S. Biological Sciences: Anesthesia Program meet requirements for the Connecticut Advanced Practice Registered Nurse (APRN) Licensure. Students completing the DNAP: Entry-level Specialization will have course work similar to that of the master's programs as well as additional coursework in order to satisfy licensure requirements. Connecticut resident students entering the DNAP: Advanced Specialization will already have their APRN licensure.

Nurse Licensure - Advanced Practice Registered – Initial

License Overview

Applicable to: Individuals seeking advanced practice registered nursing licensure.
Description: To authorize an individual to engage in advanced practice nursing.
Statute: 19a-180
Transaction Type: Initial
Duration: Annual

Requirements

Prerequisites: Holds CT Registered Nurse licensure, certified by a prescribed national organization; 30 hours of pharmacology coursework for advanced nursing practice; acceptable master's degree if nationally certified after December 31, 1994.

Required Documentation: Individual review of credentials by agency staff to determine if statutory requirements have been met

- official verification of current certification by national certifying agencies (the agency can obtain verification of AANA certification -online if certification number is provided)
- [verification](#) of successful completion of at least thirty (30) hours of instruction in pharmacology for advanced nursing practice, sent by Director of the post-basic nursing educational program or, if applicable, by the director of a post-graduate program for advanced practice registered nurses in which pharmacology coursework was completed, of the issuing institution
- transcript of post basic nursing education, sent directly from the educational institution
- [verification](#) of all licenses held, current or expired, from each state in which the

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applicant is or was licensed as nurse practitioner, registered nurse or practical nurse

Due to the availability of online license verification by several states, the agency performs verification for registered nurse and licensed practical nurses from the following states' licenses directly (you need not arrange for verification of licenses issued by the following states): [Georgia](#) and [Illinois](#), you will be notified in the event that your involvement is required.

The [National Council of State Boards of Nursing's](#) NURSYS System verifies electronically licenses issued by several states. Please select this [link](#) for a list of NURSYS participating states. You may register for verifications for Nursys participating states [on-line](#).

Link for NURSYS System: <https://www.nursys.com/>

Other Information:

Applications, Forms & [Nurse Licensure - Advanced Practice Registered](#)
Other:

Related fees

Application Fee: \$200.00

Fee Exemptions: None

Agency Information

Agency: [Department of Public Health](#)

Phone: (860) 509-7603

Mailing Address: Department of Public Health, APRN Licensure, 410 Capitol Ave., MS# 12APP, P.O. Box 340308, Hartford, CT 06134-0308

Email Address: oplc.dph@ct.gov

Website: http://www.ct.gov/dph/cwp/view.asp?a=3121&q=389398&dphNav_GID=1821&dphNav=

Agency Notes: None

Last Updated: 4/26/2011

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APPENDIX E Program Curriculum

Doctorate of Nurse Anesthesia Practice (DNAP) Program:

Entry Level Specialization 81-87 credits

I. Biological Systems Core 27 credits	
CHEM 550 Basic Organic and Biological Chemistry	3 credits
BIO 500 Seminar in Biology	2 credits
BIO 517 Human Anatomy, Physiology, and Pathophysiology	6 credits
BIO 518 Pathophysiology and Applied Physiology	3 credits
BIO 519 Advanced Neuroscience	3 credits
BIO 528 Pharmacology	4 credits
BIO 530 Immunology	3 credits
BIO 598 Research in Biology	3 credits
II. Professional Core 21 credits	
BIO 525 Advanced Physical Health Assessment for Nurse Anesthetists	3 credits
BIO 725 Bioethics in Nurse Anesthesia	3 credits
BIO 730 Human Factors and Patient Safety for Nurse Anesthetists	3 credits
BIO 736 Evidence-based Practice and Biostatistics	3 credits
BIO 739 Advanced Topics in Pharmacology	3 credits
BIO 742 Advanced Topics in Nurse Anesthesia	3 credits
BIO 740 Leadership in Nurse Anesthesia Education	3 credits
III. Anesthesia Clinical Core 27 credits	
ANES 500 Basic Principles of Nurse Anesthesia Practice	3 credits
ANES 501 Advanced Principles of Nurse Anesthesia Practice I	3 credits
ANES 502 Advanced Principles of Nurse Anesthesia Practice II	1 credit
ANES 510 Physics in Anesthesia	1 credit
ANES 515 Professional Aspects of Nurse Anesthesia Practice	3 credits
ANES 528 Anesthesia Pharmacology	2 credits
ANES 590 Clinical Correlation Conference	2 credits
ACP 730 Anesthesia Clinical Practicum I	1 credit
ACP 731 Anesthesia Clinical Practicum II	1 credit
ACP 732 Anesthesia Clinical Practicum III	1 credit
ACP 733 Advanced Anesthesia Clinical Practicum I	3 credits
ACP 734 Advanced Anesthesia Clinical Practicum II	3 credits
ACP 735 Advanced Anesthesia Clinical Practicum III	3 credits
IV. Capstone 6 credits	
Doctoral Comprehensive Exam	0 credit
BIO 745 Doctoral Capstone Project I	3 credits
BIO 746 Doctoral Capstone Project II	3 credits
BIO 747 Doctoral Capstone Project III (if needed; up to 6 credits)	1 credit

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DNAP Program

Advanced Specialization 33-42 credits

- I. Biological Systems and Professional Core 18-21 credits
 - BIO 725 Bioethics in Nurse Anesthesia 3 credits
 - BIO 730 Human Factors and Patient Safety for Nurse Anesthetists 3 credits
 - BIO 736 Evidence-based Practice and Biostatistics 3 credits
 - BIO 739 Advanced Topics in Pharmacology 3 credits
 - BIO 742 Advanced Topics in Nurse Anesthesia 3 credits
 - BIO 740 Leadership in Nurse Anesthesia Education 3 credits
 - BIO 525 Advanced Physical Health Assessment
for Nurse Anesthetists (if needed) 3 credits
- II. Anesthesia Clinical Core 9 credits
 - ACP 733 Advanced Anesthesia Clinical Practicum I 3 credits
 - ACP 734 Advanced Anesthesia Clinical Practicum II 3 credits
 - ACP 735 Advanced Anesthesia Clinical Practicum III 3 credits
- III. Capstone 6 credits
 - BIO 745 Doctoral Capstone Project I 3 credits
 - BIO 746 Doctoral Capstone Project II 3 credits
 - BIO 747 Doctoral Capstone Project III (if needed; up to 6 credits) 1 credit

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Appendix F Course Sequences

DNAP: Entry Level Specialization, 81-87 credits

Summer	Fall	Spring
CHEM 550 Basic Organic and Biological Chemistry 3 credits BIO 517 Human Anatomy, Physiology and Pathophysiology 6 credits	BIO 500 Seminar in Biology 2 credits BIO 519 Advanced Neuroscience 3 credits BIO 528 Pharmacology 4 credits BIO 598 Research in Biology 3 credits BIO 725 Bioethics in Nurse Anesthesia 3 credits	BIO 530 Immunology 3 credits BIO 518 Pathophysiology and Applied Physiology 3 credits BIO 736 Evidence-based Practice and Biostatistics 3 credits BIO 525 Advanced Physical Health Assessment for Nurse Anesthetists 3 credits ANES 500 Basics Principles of Nurse Anesthesia Practice 3 credits
TOTAL 9 CREDITS	TOTAL 15 CREDITS	TOTAL 15 CREDITS
ACP 730 Anesthesia Clinical Practicum I (off campus) 1 credit ANES 501 Advanced Principles of Nurse Anesthesia Practice I 3 credits ANES 528 Anesthesia Pharmacology 2 credits ANES 510 Physics in Anesthesia 1 credit	ACP 731 Anesthesia Clinical Practicum II (off campus) 1 credit ANES 502 Advanced Principles of Nurse Anesthesia Practice II 1 credit ANES 515 Professional Aspects of Nurse Anesthesia Practice 3 credits BIO 742 Advanced Topics in Nurse Anesthesia 3 credits	ACP 732 Anesthesia Clinical Practicum III (off campus) 1 credit ANES 590 Clinical Correlation Conference 2 credits BIO 730 Human Factors and Patient Safety for Nurse Anesthetists 3 credits
TOTAL 7 CREDITS	TOTAL 8 CREDITS	TOTAL 6 CREDITS
ACP 733 Advanced Anesthesia Clinical Practicum I 3 credits Doctoral Comprehensive Exam	ACP 734 Advanced Anesthesia Clinical Practicum II 3 credits BIO 745 Doctoral Capstone Project I 3 credits BIO 739 Advanced Topics in Pharmacology 3 credits	ACP 735 Advanced Anesthesia Clinical Practicum III 3 credits BIO 746 Doctoral Capstone Project II 3 credits BIO 740 Leadership in Nurse Anesthesia Education 3 credits
TOTAL 3 CREDITS	TOTAL 9 CREDITS	TOTAL 9 CREDITS
BIO 747 Doctoral Capstone Project III 1 credit (if needed)		

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DNAP: Advanced Specialization, 33-42 credits in 2 years

Fall	Spring	Summer
ACP 733 Advanced Anesthesia Clinical Practicum I 3 credits	BIO 736 Evidence-based Practice and Biostatistics 3 credits	ACP 734 Advanced Anesthesia Clinical Practicum II 3 credits
BIO 725 Bioethics in Nurse Anesthesia 3 credits	BIO 730 Human Factors and Patient Safety for Nurse Anesthetists 3 credits	
	BIO 525 Advanced Physical Health Assessment and Monitoring for Nurse Anesthetists 3 credits (if needed)	
TOTAL 6 CREDITS	TOTAL 6-9 CREDITS	TOTAL 3 CREDITS
Fall	Spring	Summer
BIO 745 Doctoral Capstone Project I 3 credits	BIO 746 Doctoral Capstone Project II 3 credits	BIO 747 Doctoral Capstone Project III 1 credit (if needed)
BIO 739 Advanced Topics in Pharmacology 3 credits	ACP 735 Advanced Anesthesia Clinical Practicum III 3 credits	
BIO 742 Advanced Topics in Nurse Anesthesia 3 credits	BIO 740 Leadership in Nurse Anesthesia Education 3 credits	
TOTAL 9 CREDITS	TOTAL 9 CREDITS	TOTAL 0-1 CREDIT

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APPENDIX G Course Descriptions

Doctorate of Nurse Anesthesia Practice Program

Course Number and Title	Course Description	Course Credits	Prerequisite	Semester taught	New or existing course
CHEM 550 Basic Organic and Biological Chemistry	Fundamentals of organic and biological chemistry in relation to human health including chemical and physical properties of organic molecules occurring in living systems. Topics include structure-function and acid-base concepts, overview of cellular metabolism, and enzyme kinetics. For nurse anesthesia and health science specialization students only.	3 cr.		Summer	Existing course
BIO 500 Seminar in Biology	Study of contemporary topics in biology through individual readings, discussions and presentations.	1- 2 cr. (2 cr. required in DNAP)	Prerequisite: Admission to the graduate school or permission of department chair.	Fall	Existing course
BIO 517 Human Anatomy, Physiology, and Pathophysiology	Functional anatomy, physiology and pathophysiology of man. Review of cell physiology is followed by in-depth study analysis of muscular, circulatory, nervous, respiratory, excretory and endocrine systems with special applications to the health sciences.	6 cr.	Prerequisite: CHEM 311 or 550; or permission of department chair. For students in the Biological Sciences: Anesthesia (M.S.) and Biological Sciences: Health Sciences Specialization (M.S.) programs.	Summer	Existing course

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BIO 518 Pathophysiology and Applied Physiology	A continuation of BIO 517 with emphasis on organ system physiology and pathophysiology. Cardiac, renal, and respiratory systems will be stressed.	3 cr.	Prerequisite: BIO 412 or 517 or BMS 412 or permission of department chair. For students in anesthesia and health sciences; others require permission of anesthesia program coordinator.	Spring	Existing course
BIO 519 Advanced Neuroscience	Study of the function of the human nervous system, including relation of neuroanatomy, membrane biophysics, synaptic transmission, and neural systems to human cognitive function in health and disease. Neuroanatomical and neurophysiological substrates of consciousness, arousal, sleep, perception, memory, pain, and analgesia with emphasis on their relation to anesthesia.	3 cr.	Prerequisite: BIO 517 or BIO 412 or BMS 412, or permission of department chair.	Fall	Existing course
BIO 525 Advanced Physical Health Assessment for Nurse Anesthetists	Lectures, demonstrations, group discussions and simulations presenting advanced assessment of all body systems Includes principles of peri-anesthetic care of patients with emphasis on cardiovascular, pulmonary, neurologic, renal and endocrine function; interpretation	3 cr.	Admission to M.S. Biological Sciences: Anesthesia Program; or Admission to DNAP Program	Spring	Existing course

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	of lab data and selected specialty examinations such as pulmonary function studies, chest X-rays, 12-lead EKGs, and cardiology studies.				
BIO 528 Pharmacology	A comprehensive investigation into the pharmacological agents and their utilization with relevance to the health sciences. Special consideration given to pharmacodynamics.	4 cr.	Prerequisite: BIO 412 or BIO 517 or BMS 412, and CHEM 550 or permission of department chair. For students in anesthesia and health sciences; others require permission of anesthesia program coordinator.	Fall	Existing course
BIO 530 Immunology	Cells and organs of the immune system, immunoglobulin structure and genes, antigen-antibody interactions, major histocompatibility genes and molecules, complement, humoral and cell-mediated immunities, hypersensitivities, immunodeficiencies, transplants, and autoimmunity.	3 cr.	Prerequisite: Admission to Graduate Program or permission of department chair	Spring	Existing course
BIO 598 Research in Biology	Designed to familiarize student with techniques and resources associated with research in the specialization. Opportunity for practical application.	3 cr.	Prerequisite: Admission to the graduate school or permission of department chair.	Fall	Existing course

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BIO 725 Bioethics in Nurse Anesthesia	Ethical issues in biomedical research and health policy. Foundational knowledge and skills in responsible bioethical decision- making behavior to reflect upon, address and resolve the ethical and socio-cultural issues they confronted during professional practice.	3 cr	Prerequisite: Admission to DNAP Program or permission of department chair	Fall	New course
BIO 730 Human Factors and Patient Safety for Nurse Anesthetists	Explores human error and patient safety in anesthesia care. Introduces a systems approach to error investigation and analysis; use of multidisciplinary teamwork for prevention of errors and crisis management; and use of simulation and monitoring systems and other techniques in improving safety in anesthesia practice.	3 cr.	Prerequisite: ACP 501 or previous anesthesia clinical practice	Spring	New course
BIO 736 Evidence-based Practice and Biostatistics	Review of statistical techniques and their benefits and limitations for clinical research. Emphasis on reviewing medical literature. Include translation of research in practice, evaluation of practice, and improvement and reliability of nurse anesthesia practice and outcomes.	3 cr.	Prerequisite: BIO 598 Research in Biology or equivalent; and Admission to DNAP Program	Spring	New course

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BIO 739 Advanced Topics in Pharmacology	Study of current topics in pharmacology and nurse anesthesia practice. Topics will vary.	3 cr.	Prerequisite: ACP 733.	Fall	New course
BIO 740 Leadership in Nurse Anesthesia Education	Principles of teaching and learning applicable to the anesthesia didactic and clinical environment. Strategies in teacher/learner communication, presentation development and strategies, curriculum design and methods of evaluation pertinent to nurse anesthesia education.	3 cr.	Prerequisite: ACP 733 or may be taken concurrently with permission of coordinator.	Spring	New course
BIO 742 Advanced Topics in Nurse Anesthesia	Topics will vary as relevant to nurse anesthesia. Topics may include healthcare policy developments, needs of ethnically and culturally diverse populations, nutrition, simulation learning, medical and legal issues in anesthesia and health care, and leadership skills in anesthesia. Lectures, seminars, discussions, independent readings and reports as appropriate for the topic will be utilized.	3 cr.	Prerequisite: ACP 501 or previous anesthesia clinical experience.	Fall	New course
BIO 745 Doctoral Capstone Project I	Capstone project proposal, including the literature review and methodology. Capstone is expected to be relevant to clinical practice, education, or leadership, and is to use evidence-based practice to improve clinical	3 cr.	Prerequisite: ACP 733 and 3.00 cumulative GPA, and successful completion of Doctoral Comprehensive Exam	Fall: Entry- Level; Summer or Spring Advanced	New course

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	practice and patient outcomes. Students work with their dissertation advisor and committee members both individually and in small group meetings.				
BIO 746 Doctoral Capstone Project II	Doctoral capstone project research, writing, and if ready, capstone defense. Students work with their dissertation advisor and committee members both individually and in small group meetings.	3 cr.	Prerequisite: BIO 745 and 3.00 cumulative GPA	Spring	New course
BIO 747 Doctoral Capstone Project III	Required continuation of BIO 746 for students who have not completed their doctoral capstone project and defense. May be repeated for up to 6 credits over three calendar years. Students work with their dissertation advisor and committee members both individually and in small group meetings.	1 cr.	Corequisite: BIO 746 and 3.00 cumulative GPA	Fall, Spring, Summer	New course
ANES 500 Basic Principles of Nurse Anesthesia Practice	Overview of current anesthesia (45 hours). Topics include pre-anesthesia evaluation, fluid and blood therapy, monitoring the anesthesia machine, acid-base balance, pain management, post anesthesia care unit, and regional anesthesia. Conducted at affiliated hospital school of nurse anesthesia.	3 cr.	Prerequisites: Completion of 24 credits in DNAP program or 21 credits in M.S. Biological Sciences: Anesthesia Program	Spring, Summer	Existing, taught at affiliated hospital school of nurse anesthesia
ANES 501 Advanced Principles of Nurse Anesthesia Practice I	Advanced principles and techniques for anesthesia in cardiac, pulmonary, pediatric, obstetrical, neurological, vascular,	3 cr.	ANES 500; Co-requisite: ACP 730 or ACP 731.	Summer, Fall	Existing, taught at affiliated hospital school of

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	gynecologic, urological, ophthalmic, emergency, and other case management; also includes regional anesthesia theories and techniques and principles of advanced fluid and electrolyte therapy; anesthesia management of patients with altered endocrine function, obesity and specific pathophysiology in relation to anesthesia administration and management.				nurse anesthesia
ANES 502 Advanced Principles of Nurse Anesthesia Practice II	Continuation of ANES 501.	1 cr.	ANES 501 and cumulative GPA of 3.00. Co-requisite: ACP 731 or ACP 732.	Fall, Spring	Existing, taught at affiliated hospital school of nurse anesthesia
ANES 510 Physics in Anesthesia	Physics with respect to anesthesia theory, practice, equipment, and safety. Includes a review of organic molecules from which anesthetics and accessory drugs are derived, diffusion and factors affecting diffusion; properties of flow characteristics; gas laws; electricity; lasers; and physics of the anesthesia machine, vaporizers, and cylinders.	1 cr.	Co-requisite: ACP 730.	Summer	Existing, taught at affiliated hospital school of nurse anesthesia
ANES 515 Professional Aspects of Nurse Anesthesia Practice	Practice of anesthesia including professional behavior; biomedical ethics and ethical responsibility; social, political, legal, and economic aspects of	3 cr.	ANES 500 and 3.00 cumulative GPA. Co-requisite: ACP 731 or ACP 733.	Fall, Spring	Existing, taught at affiliated hospital school of nurse anesthesia

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	anesthesia practice; substance abuse; quality assurance, risk management and insurance; government regulation of practice; historical background and development of nurse anesthesia.				
ANES 528 Anesthesia Pharmacology	Pharmacology of drugs used in anesthesia with emphasis on pharmacokinetics and dynamics of the volatile and non-volatile inhalation agents, intravenous anesthetic and accessory/adjuvant drugs (induction agents, muscle relaxants, opioids, benzodiazepines, butyrophenones, anticholinergics, and anticholinesterases), and local anesthetics. The signs and stages of anesthesia will be covered along with theories of narcosis.	2 cr.	Prerequisite or Co-requisite: ANES 500. Co-requisite: ACP 730.	Summer	Existing, taught at affiliated hospital school of nurse anesthesia
ANES 590 Clinical Correlation Conferences	Lectures, clinical case study presentations, student presentations and analysis of current anesthesia literature and research.	2 cr.	ANES 501. Co-requisite: ACP 732 or ACP 733.	Spring, Summer	Existing, taught at affiliated hospital school of nurse anesthesia
ACP 730 Anesthesia Clinical Practicum I	Structured, supervised clinical training and experience to learn to organize, administer, and manage anesthesia in a wide range of ages of patients (minimum 32 hours per week). Conducted at affiliated hospital school of nurse anesthesia or their	1 cr.	Completion of 36 credits in DNAP: Entry-level program and 3.00 cumulative GPA.	Summer	Existing, taught at affiliated hospital school of nurse anesthesia

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	affiliated sites.				
ACP 731 Anesthesia Clinical Practicum II	Continuation of ACP 730. Additional minimum of 32 hours per week. Conducted at affiliated hospital school of nurse anesthesia or their affiliated sites.	1 cr.	ACP 730 and 3.00 cumulative GPA.	Fall	Existing, taught at affiliated hospital school of nurse anesthesia
ACP 732 Anesthesia Clinical Practicum III	Continuation of ACP 731. Additional minimum of 32 hours per week. Conducted at affiliated hospital school of nurse anesthesia or their affiliated sites.	1 cr.	ACP 731 and 3.00 cumulative GPA.	Spring	Existing, taught at affiliated hospital school of nurse anesthesia
ACP 733 Advanced Anesthesia Clinical Practicum I	Structured, supervised clinical training and advanced experiences to organize, administer, and manages anesthesia in a general or specialty setting. Professional portfolio with written case studies of clinical experiences; focus on methods for determining best clinical practices through identification of problems, review and systematic evaluation of current research, interdisciplinary collaboration, and consideration of economic and other factors that may impact patient outcomes. Conducted at affiliated hospital school of nurse anesthesia or other approved clinical sites.	3 cr.	ACP 503, or previous anesthesia clinical experience and 3.00 cumulative GPA.	Summer	New course
ACP 734 Advanced Anesthesia Clinical Practicum II	Continuation of ACP 733. Continuation of professional portfolio at more advanced level. Conducted at affiliated hospital school of nurse anesthesia or other	3 cr.	ACP 733 and 3.00 cumulative GPA.	Fall	New course

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	approved clinical sites.				
ACP 735 Advanced Anesthesia Clinical Practicum III	Continuation of ACP 734. Continuation of professional portfolio at more advanced level. Conducted at affiliated hospital school of nurse anesthesia or other approved clinical sites.	3 cr.	ACP 734 and 3.00 cumulative GPA.	Spring	New course

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APPENDIX H Admissions Requirements for DNAP Program

Admission requirements to DNAP: Entry-level Specialization Program

All Applicants must demonstrate:

1. Bachelor's degree from a regionally accredited institution of higher education and satisfy both the University's and the affiliated hospital school of nurse anesthesia's criteria for acceptance. The BSN from an NLN or AACN accredited baccalaureate program in nursing or another appropriate baccalaureate degree (biology, chemistry, etc.) from a regionally accredited institution of higher education must be completed at the time of application.
2. Cumulative GPA 3.00 or higher on a 4.00 scale (A is 4.00).
3. Completed a year in chemistry (this must include inorganic *and* organic chemistry or biochemistry), a year in anatomy and physiology, and one course in microbiology. *Please note* one course in chemistry and one course in anatomy and physiology must be less than 10 years old.
4. Current unencumbered licensure as a registered nurse in one of the 50 states and a current certification in basic life support (BLS).
5. A minimum of one year of critical care experience at the time of application in which the applicant has had the opportunity to develop independent decision making, demonstrate psychomotor skills and the ability to use and interpret advanced monitoring, based on a knowledge of physiologic and pharmacologic principles as evidence by a letter from a supervisor.
6. Graduate Record Examination
7. A satisfactory interview with the admissions committee from an affiliated hospital school of nurse anesthesia, if selected as finalist.

All Applicants must send the following to a director of affiliated hospital school of nurse anesthesia*:

1. Official transcripts of all undergraduate and graduate coursework;
2. Copy of licensure as a registered nurse in one of the 50 states and a current certification in basic life support (BLS);
3. Three letters of recommendation from employers or educators familiar with your academic or professional experience; one must be from the Office of the Dean or Director of your school of nursing and one from a current supervisor; one of these letters must demonstrate your years of critical care experience;
4. Resume or Curriculum Vitae outlining work experience;
5. Graduate Record Examination scores;
6. Narrative statement covering career goals, reason for pursuing doctorate, life/work experience relevant as part of your educational experience, ability to pursue study during summer, fall and spring semesters;
7. Application form for affiliated hospital school of nurse anesthesia.
8. Application materials are due October 15 for summer matriculation into the DNAP: Entry-level Specialization Program*. If selected, application must be made to Central Connecticut State University no later than March 1.

*Until 2017, send application materials to Judy Thompson, CRNA, MS, DNAP, Director; School of Nurse Anesthesia, Yale Hospital of New Haven- Saint Raphael Campus (previously Hospital of Saint Raphael); 1423 Chapel Street, New Haven, CT 06511.

Students not meeting admissions requirements will not be allowed to take course(s) in the program on a conditional or provisional basis. Conditional or provisional acceptance into the program is not an option.

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Students not meeting admissions requirements will not be allowed to take course(s) in the program on a conditional or provisional basis. Conditional or provisional acceptance into the program is not an option.

Admission requirements to DNAP: Advanced Specialization Program

All Applicants must demonstrate

1. Graduation from a nurse anesthesia educational program accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA).
2. Master's degree from a regionally accredited institution of higher education;
3. Cumulative GPA 3.00 or higher on a 4.00 scale (A is 4.00).
4. Current unencumbered licensure as a registered nurse in one of the 50 states, a current certification in basic life support (BLS), and advanced practice nurse (if required by home state).
5. Either certification by the Council on Certification of Nurse Anesthetists (certified registered nurse anesthetist, CRNA); or current recertification by the Council on Recertification of Nurse Anesthetists (if past initial certification period).
6. Graduate Record Examination (May be waived if applicant has demonstrated evidence of advanced scholarship, teaching, leadership, and/or ability to conduct research as evidenced by a letter from a supervisor, resume, or other documentation).
7. A satisfactory interview with the admissions committee from an affiliated hospital school of nurse anesthesia, if selected as finalist.

All Applicants must send the following to a director of affiliated hospital school of nurse anesthesia *:

1. Official transcripts of all undergraduate and graduate coursework;
2. Copy of licensure as a registered nurse in one of the 50 states, a current certification in basic life support (BLS), and advanced practice nurse (if required by home state);
3. Copy of either certification by the Council on Certification of Nurse Anesthetists (certified registered nurse anesthetist, CRNA); or current recertification by the Council on Recertification of Nurse Anesthetists (if past initial certification period);
4. Graduate Record Examination scores; for demonstration of advanced scholarship, teaching, leadership, and/or ability to conduct research as evidence by a letter from a supervisor.
5. Three letters of recommendation from employers or educators familiar with your academic or professional experience; one must be from the Office of the Dean or Director of your school of nurse anesthesia and one from a current supervisor;
6. Resume or Curriculum Vitae outlining work experience;
7. Narrative statement covering career goals, reason for pursuing doctorate, life/work experience relevant as part of your educational experience, ability to pursue study during summer, fall and spring semesters;
8. Application form for affiliated hospital school of nurse anesthesia.
9. Application materials are due January 1 for fall matriculation into the DNAP: Advanced Specialization Program*. If selected, application must be made to Central Connecticut State University no later than May 1.

*Until 2017, send application materials to Judy Thompson, CRNA, MS, DNAP, Director School of Nurse Anesthesia, Yale Hospital of New Haven- Saint Raphael Campus (previously Hospital of Saint Raphael); 1423 Chapel Street, New Haven, CT 06511.

Preference will be given to those with previous course in statistics.

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Students not meeting admissions requirements will not be allowed to take course(s) in the program on a conditional or provisional basis. Conditional or provisional acceptance into the program is not an option.

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APPENDIX I Full-time, part-time, and clinical faculty; experience and courses taught

Faculty Name and Title	Status: FT or PT	Degree, specialization; institution awarding highest degree	Area of specialization/Pertinent experience	Proposed course assignments
Ruth Rollin	FT	Ph.D. Physiology, Colorado State University; Post-doctoral Research, University of North Carolina	26 years faculty member Dept. Biology, CCSU; M.S. Biological Sciences: Anesthesia Program - taught courses in program (BIO 530 Immunology (25 years); BIO 517 Human Anatomy, Physiology, and Pathophysiology (20 years); Anesthesia Program Coordinator 15 years; Biology Department Chair 6 years; served as advisor and committee member on master's thesis committees; and participated in master's comprehensive exams.	BIO 530 Immunology; BIO 517 Human Anatomy, Physiology, and Pathophysiology; BIO 745, 746, 747, Doctoral Capstone Project I, II, III; Comprehensive Exams
Mark Jackson	FT	Ph.D. Neuroscience, University of Texas-Dallas; Postdoctoral Research, Psychiatry, Yale University School of Medicine	6 years faculty member Dept. Biology, CCSU; M.S. Biological Sciences: Anesthesia Program - taught courses in program (BIO 517 Human Anatomy, Physiology, and Pathophysiology (5 years); BIO 540 and 519 Advanced Neuroscience (4 years); served as advisor and committee member on master's thesis committees; and participated in master's comprehensive exams.	BIO 517 Human Anatomy, Physiology, and Pathophysiology; BIO 519 Advanced Neuroscience; BIO 745, 746, 747 Doctoral Capstone Project I, II, III; Comprehensive Exams BIO 736 Evidence-Based Practice and Biostatistics (team-teach); BIO 535 Bioethics and Nurse Anesthesia (team-teach)

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Jeremiah Jarrett	FT	Ph.D. Biology, Tufts University	15 years faculty member Dept. Biology, CCSU; Biology Department Chair 5.5 years; served as advisor and committee member on master's thesis committees; and participated in master's comprehensive exams.	BIO 598 Research in Biology; Doctoral Capstone Project I, II, III
Peter Osei	FT	Ph.D. Nutrition, University of Tennessee	19 years faculty member Dept. Biology, CCSU; Served as advisor and committee member on master's thesis committees; and participated in master's comprehensive exams. University Pre-Health Professions Advisor	BIO 500 Seminar in Biology; BIO 745, 746, 747 Doctoral Capstone Project I, II, III
David Spector	FT	Ph.D. Animal Behavior, University of Massachusetts-Amherst	18 years faculty member Dept. Biology, CCSU; Served as advisor and committee member on master's thesis committees; and participated in master's comprehensive exams.	BIO 745, 746, 747 Doctoral Capstone Project I, II, III
Sadie Marjani	FT	Ph.D. Animal Science, University of Connecticut; Post-doctoral Associate, University of Connecticut; Post-doctoral Fellow: Yale University and Yale University School of Medicine	New faculty, fall 2012 Dept. Biology, CCSU	BIO 745, 746, 747 Doctoral Capstone Project I, II, III

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Joan Dobbins	Program Director of New Britain School of Nurse Anesthesia	CRNA; M.S. Biological Sciences: Anesthesia, Central Connecticut State University	27 years experience as certified nurse anesthetist; 18 years experience as program director of New Britain School of Nurse Anesthesia; 19 years experience teach BIO 518 Pathophysiology and Applied Physiology in M.S. Biological Sciences: Anesthesia and participated in master's comprehensive exams.; 11 years on Connecticut Board of Nursing	BIO 745, 746, 747 Doctoral Capstone Project I, II, III; Comprehensive Exams; Anesthesia Clinical Practicum (ACP) 500, 501, 502,503; BIO 745, 746, 747 Doctoral Capstone Project I, II, III
Judy Thompson	Program Director of affiliated School of Nurse Anesthesia at Yale Hospital of New Haven-Saint Raphael Campus (previously Hospital of Saint Raphael)	CRNA; M.S. Biology, Southern Connecticut State University; DNAP, Virginia Commonwealth University	32 years experience as certified nurse anesthetist; 26 years experience as program director of Hospital of Saint Raphael School of Nurse Anesthesia; and participated in master's comprehensive exams;15 years served on review teams for reaccreditation of nurse anesthesia programs	BIO 745, 746, 747 Doctoral Capstone Project I, II, III; Comprehensive Exams; Anesthesia Clinical Practicum (ACP) 500, 501, 502, 503, 733, 734, 735; BIO 745, 746, 747 Doctoral Capstone Project I, II, III
Mark Foster	Program Director of affiliated Memorial Hospital of Rhode Island School of Nurse Anesthesia	CRNA; M.A. Biological Studies, Anna Maria College	27 years experience as certified nurse anesthetist; 20 years experience as program director of Hospital of Memorial Hospital of Rhode Island School of Nurse Anesthesia; and participated in master's comprehensive exams; 20 years Anesthesia Department Manager	BIO 745, 746, 747 Doctoral Capstone Project I, II, III; Oral Comprehensive Exams; Anesthesia Clinical Practicum (ACP) 500, 501, 502, 503, 733, 734, 735; BIO 745, 746, 747 Doctoral Capstone Project I, II, III

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Justin Bruce	Assistant Program Director of New Britain School of Nurse Anesthesia	M.S. Biological Sciences: Anesthesia, Central Connecticut State University	13 years experience as certified nurse anesthetist; 3 years experience as program director of New Britain School of Nurse Anesthesia; 4 years experience teaching BIO 528 Pharmacology in M.S. Biological Sciences: Anesthesia Program	BIO 745, 746, 747, 748 Doctoral Capstone Project I, II, III, IV; BIO 728 Advanced Topics in Pharmacology (team-taught); Anesthesia Clinical Practicum (ACP) 500, 501, 502, 503, 733, 734, 735; BIO 745, 746, 747 Doctoral Capstone Project I, II, III
Marianne Cosgrove	Assistant Program Director of School of Nurse Anesthesia at Yale Hospital of New Haven-Saint Raphael Campus (previously Hospital of Saint Raphael)	M.S. Biological Sciences: Anesthesia, Central Connecticut State University	18 years experience as certified nurse anesthetist; 5 years experience as assistant program director of Hospital of Saint Raphael School of Nurse Anesthesia; 10 years experience teaching BIO 528 Pharmacology in M.S. Biological Sciences: Anesthesia Program	BIO 745, 746, 747 Doctoral Capstone Project I, II, III; Anesthesia Clinical Practicum (ACP) 500, 501, 502, 503, 733, 734, 735; BIO 745, 746, 747 Doctoral Capstone Project I, II, III
Keith Macksoud	Assistant Program Director of affiliated Memorial Hospital of Rhode Island School of Nurse Anesthesia	CRNA; M.A. Biological Studies, Anna Maria College	26 years experience as certified nurse anesthetist; twice served as President of Rhode Island Association of Nurse Anesthetists; American Association of Nurse Anesthetists Board of Directors; Federal Political Director	BIO 745, 746, 747, 748 Doctoral Capstone Project I, II, III, IV; Anesthesia Clinical Practicum (ACP) 500, 501, 502, 503, 733, 734, 735; BIO 745, 746, 747 Doctoral Capstone Project I, II, III
Ann Bassett	PT	CRNA; M.S. Biological Sciences: Anesthesia, Central Connecticut State University	7 years experience teaching BIO 528 Pharmacology	BIO 528 Pharmacology; Doctoral Capstone Project I, II, III;

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Kelly (Gorski) Gutauskas, CRNA	PT	CRNA; M.S. Biological Sciences: Anesthesia, Central Connecticut State University	3 years experience teaching BIO 518 Pathophysiology and Applied Physiology	BIO 518 Pathophysiology and Applied Physiology; Doctoral Capstone Project I, II, III;
Maureen Czick,	PT	M.D., UMDNJ New Jersey Medical School Newark, NJ	3 years experience teaching BIO 518 Pathophysiology and Applied Physiology	Anesthesiologist; pathophysiology
Maria Madonick,	PT	CRNA; M.S.N., SUNY Downstate Medical Center	3 years experience teaching BIO 528 Pharmacology	BIO 528 Pharmacology; Doctoral Capstone Project I, II, III;
Christopher Bartels	PT	M.S. Biological Sciences: Anesthesia, Central Connecticut State University	1 year experience teaching Advanced Physical Health Assessment for Nurse Anesthetists at CCSU	BIO 525 Advanced Physical Health Assessment for Nurse Anesthetists; Doctoral Capstone Project I, II, III;
Kristen Martinez	PT	MSN, Family Nurse Practitioner; M.S. Biological Sciences: Anesthesia, Central Connecticut State University	Experience working as family nurse practitioner with range of ages: neonates to geriatrics	BIO 525 Advanced Physical Health Assessment for Nurse Anesthetists
Proposed new faculty position Start fall 2014	FT	Certified registered nurse anesthetist with doctorate		BIO 730 Human Factors and Patient Safety for Nurse Anesthetists (team taught); BIO 733, 734, 735 Advanced Anesthesia Clinical Practicum I, II, III; BIO 736 Evidence-based Practice and Biostatistics (team-taught); BIO 535 Bioethics in Nurse Anesthesia (team taught); BIO 740 Leadership in Nurse Anesthesia

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				Education; BIO 745, 746, 747 Doctoral Capstone Project I, II, III
Proposed new faculty position Start fall 2014	FT	Certified registered nurse anesthetist with doctorate		ANES 500 Basic Principles of Nurse Anesthesia Practice; ANES 528 Anesthesia Pharmacology; ANES 510 Physics in Anesthesia; ANES 501 and 502 Advanced Principles of Nurse Anesthesia I and II; ANES 515 Professional Aspects of Nurse Anesthesia Practice; ANES 590 Clinical Correlation Conference; ACP 730, 731, 732 Anesthesia Clinical Practicum I, II, III; BIO 745, 746, 747 Doctoral Capstone Project I, II, III



STATE OF CONNECTICUT
BOARD OF EDUCATION



September 8, 2015

Office of the President
Connecticut Board of Regents

SEP 15 2015

Dr. Gregory W. Gray, President
Board of Regents for Higher Education
Connecticut State Colleges and Universities
39 Woodland Street
Hartford, CT 06105

Connecticut Board of Regents

Dear Dr. Gray:

The State Board of Education approved resolutions for Charter Oak State College, Eastern Connecticut State University, Central Connecticut State University and Southern Connecticut State University at its meeting on September 2, 2015.

- Charter Oak State College (COSC) was granted probationary approval for the Early Childhood Education Alternate Route to Certification (ECEARC) Program for the period September 30, 2015, through September 30, 2018, and required to prepare for and host an on-site visit no later than spring 2018 to determine progress towards meeting requirements described by the National Council for Accreditation of Teacher Education (NCATE) standards 1, 2, 3 and 4. Additionally, the Connecticut State Department of Education (CSDE) will conduct focused monitoring of the program until the on-site visit, including a review and evaluation of annual progress reports.
- Eastern Connecticut State University (ECSU) was granted full continuing approval for all educator preparation programs for the period September 30, 2015, through September 30, 2020. Additionally, ECSU is required to submit a progress report to the CSDE in spring 2017 that addresses ECSU's continuous improvement efforts towards meeting requirements described by NCATE standards 2, 3, 4 and 6.
- Central Connecticut State University (CCSU) was granted full continuing approval for all educator preparation programs for the period September 30, 2015, through September 30, 2020, with no additional requirements.
- Southern Connecticut State University (SCSU) was granted full continuing approval for all educator preparation programs for the period September 30, 2015, through September 30, 2019. Additionally, SCSU is required to submit a progress report to the CSDE in spring 2017 that describes SCSU's continuous improvement efforts towards meeting requirements described by NCATE standards 1, 2, 3, 4 and 6.

Dr. Gregory W. Gray
September 8, 2015
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The board resolutions for each of these educator preparation programs are included with this letter. If you have questions, please contact Dr. Katie Toohey, Educator Preparation Program Approval Coordinator, at 860-713-6733 or katie.toohey@ct.gov.

Sincerely,



Dr. Dianna R. Wentzell
Commissioner of Education

DRW:kt
Attachments

cc: Dr. Sarah J. Barzee, Chief Talent Officer
Ms. Shannon Marimón, Division Director, Bureau of Educator Effectiveness and Professional Learning



Founded in 1885

NEW ENGLAND ASSOCIATION OF SCHOOLS & COLLEGES, INC.
COMMISSION ON INSTITUTIONS OF HIGHER EDUCATION

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REV. BRIAN J. SHANLEY, O.P. (2018)
Providence College

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Vice President of the Commission
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Vice President of the Commission
TALA KHUDAJI
tkhudaji@neasc.org

October 19, 2015

Dr. Anna Wasescha
President
Middlesex Community College
100 Training Hill Road
Middletown, CT 06457

Dear President Wasescha:

I write to inform you that at its meeting on September 24, 2015, the Commission on Institutions of Higher Education considered the letter submitted by Middlesex Community College and took the following action:

that the letter submitted by Middlesex Community College regarding relocation of its Manufacturing Training Center from its current location in Meriden, CT to a temporary location at Wilcox Technical High School in Meriden, CT be accepted and the Wilcox Technical High School location encompassed within the institution's accreditation.

The Commission gives the following reasons for its action.

The letter submitted by Middlesex Community College regarding the relocation of its Manufacturing Training Center in Meriden, CT to a temporary location at Wilcox Technical High School in Meriden, CT was accepted, and the location encompassed within the institution's accreditation, because the Commission finds the activity to be substantially in compliance with the *Standards for Accreditation* and relevant Commission policies.

We are pleased to learn that, due to safety concerns and the age of the equipment available at the city maintenance garage where the College's Manufacturing Training Center is currently located, Middlesex Community College has decided to relocate the program temporarily to Wilcox Technical High School, a distance of less than five miles. While we understand that hours at the high school will be limited to evenings and Saturday mornings, we note with approval that students will have access to state-of-the-art equipment and also recognize that the College will save close to \$4,000 per semester. We further are aware that Middlesex Community College expects to complete construction of a new building on its Middletown campus in time for the Fall 2016 semester to house the Manufacturing Training Center permanently; the allocation of \$456,178 from the Connecticut Advanced Manufacturing Initiative to support the purchase of new training equipment for the Center is commendable.

Dr. Anna Wasescha
October 19, 2015
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The Commission expressed appreciation for the letter submitted by Middlesex Community College and for your cooperation with the effort to provide public assurance of the quality of higher education in New England.

You are encouraged to share this letter with all of the institution's constituencies. It is Commission policy to inform the chairperson of the institution's governing board of action on its accreditation status. In a few days we will be sending a copy of this letter to Mr. Nicholas Donofrio. The institution is free to release information about the letter and the Commission's action to others, in accordance with the enclosed policy on Public Disclosure of Information about Affiliated Institutions.

If you have any questions about the Commission's action, please contact Barbara Brittingham, President of the Commission.

Sincerely,


Patricia Maguire Meservey

PMM/jm

Enclosure

cc: Mr. Nicholas Donofrio



Council on Education for Public Health

1010 Wayne Avenue, Suite 220 • Silver Spring, MD 20910
Phone: (202) 789-1050 • Fax: (202) 789-1895 • www.ceph.org

November 5, 2015

Robyn A. Housemann, PhD, MPH
Associate Professor and Co-Chair
Western Connecticut State University
Bachelor of Science in Health Promotion Studies Program
Department of Health Promotion and Exercise Science
230b Berkshire Hall
Danbury, CT 06810

Dear Dr. Housemann:

I am pleased to advise you that the governing body of the Council on Education for Public Health, the nationally recognized accrediting body for schools and programs in public health, formally acted at its October 21-24, 2015 meeting to approve Western Connecticut State University's request to begin the accreditation process for its Bachelor of Science in Health Promotion Studies with concentrations in community health, wellness management, holistic health and allied health professions.

While the Council acted to accept the application, it also noted that the application did not provide clear evidence of administrative autonomy regarding admission to the major. The Council expects the program to have some control or input regarding admissions in the context of the institution. This issue must be addressed in your self-study process. Additionally, the Council noted the need for graduates from all concentrations by the time of the site visit or within two years of the application, whichever comes first. If the program is unable to meet this eligibility requirement, the site visit must be postponed.

Our procedures provide that you have up to two years to undertake a self-study and submit an acceptable self-study document. Your self-study must be submitted by October 24, 2017, although you may elect to submit it earlier; if an earlier date is selected, you will need to negotiate an earlier review schedule with CEPH staff. An on-site visit by a team of peer reviewers will follow self-study submission by approximately five months.

Please download and review the [Accreditation Criteria for Standalone Baccalaureate Programs, amended June 2014](#) and the [Accreditation Procedures](#). These documents, and any procedural revisions subsequently adopted by the Council, will govern your review. You may wish to download CEPH's [2015 fee schedule](#) from our website for your budget planning purposes, although fees are revised annually.

Please note that the Procedures Manual specifies that all applicants must 1) schedule an on-site CEPH consultation visit and 2) attend an accreditation orientation workshop before the accreditation review takes place. Additional information about consultation visits is available on the [CEPH website](#). The next accreditation orientation workshop will take place on July 28-29, 2016 in Washington DC. You will receive an invitation and additional details in early 2016, and you should direct any questions about the workshop to [Kristen Varol](#).

We sincerely hope that you find the analytical self-evaluation that is central to our accreditation process to be a valuable experience. If you have other questions, please contact the CEPH staff. They will be pleased to assist you as you progress with your self-study.

Sincerely,

Donna J. Petersen, MHS, ScD, CPH
President

cc: CEPH Councilors