



**BOR ACADEMIC AND STUDENT AFFAIRS COMMITTEE  
AGENDA**

**Friday, June 6, 2014 – 9:30 a.m.  
61 Woodland Street, Hartford, CT 06105  
3<sup>rd</sup> Floor Board Conference Room**

1. Approval of Minutes – May 2, 2014

**ACTION ITEMS**

2. New Policies
  - a. PA 12-40 Multiple Measures Resolution
  - b. PA 12-40 Courses Resolution
3. Termination of Existing Academic Programs
  - a. Technology Studies: Wastewater Option – Three Rivers CC
  - b. Aviation Maintenance Technology – A.S. – Three Rivers CC
  - c. Personal Financial Planner Certificate – Manchester CC
  - d. Sustainable Energy Certificate – Manchester CC
  - e. Taxation Certificate – Manchester CC
  - f. Forensic Science Track of Biotechnology – Middlesex CC
  - g. Machine Technology, Level 1 Certificate – Quinebaug Valley CC
4. Modifications of Programs
  - a. Manufacturing Management- B.S. – Central CSU
  - b. Biotechnology – A.S. – Middlesex CC
5. New Programs
  - a. Health Information Management Certificate – Capital CC
  - b. New Media Studies – Eastern CSU
  - c. Health Sciences – B.S. – Eastern CSU
  - d. Liberal Studies – B.A. – Eastern CSU
  - e. Philosophy – B.A. – Eastern CSU
  - f. Firefighter 1 & 2 Certificate – Gateway CC
  - g. Ophthalmic Medical Assistant Certificate – Middlesex CC
  - h. Health Information Management Certificate – Middlesex CC
  - i. Computer Aided Design Certificate – Quinebaug Valley CC
6. INFORMATION ITEMS
  - a. Below-Threshold – Business Administration modification – QVCC
  - b. Manchester CC 2014-15 Promotion & Tenure
7. UPDATES/DISCUSSION ITEMS [no action required]
  - a. Academic Program Review Policy
  - b. Normalize Associate and Baccalaureate Degree Credit Hours
  - c. Update – Health and Life Sciences Grant – Leslie Mara
  - d. Update – TAP – Aynsley Diamond
  - e. 2 + 2 Transfer Programs
  - f. Discussion – Promotion and Tenure Process



# CT BOARD OF REGENTS FOR HIGHER EDUCATION

## ACADEMIC & STUDENT AFFAIRS COMMITTEE

Meeting May 2, 2014  
9:30 a.m. – 61 Woodland Street, Hartford

### MINUTES

Regents Present: Merle Harris, Naomi Cohen, Lawrence DeNardis, Sarah Green (by conf), Craig Lappen

Regents Absent: Eugene Bell, Catherine Smith

Staff Present: Michael Gargano, Elsa Nunez (by conf), Ted Yungclas, Tracy Ariel, Aynsley Diamond, Maureen McClay

Other Attendees: Peter Angelastro (NVCC), Pat Bouffard (NWCCC), Lee deLisle (SCSU), Barbara Douglass (NWCCC), Caitlin Boger Hawkins (NWCCC), Janet Hayes (GCC), Patrick Heidkamp (SCSU), Ray Jarvic (ACC), Marianne Kennedy (SCSU), Mark Kosinski (GCC), Patrick Knowles (TRCC), Carl Lovitt (CCSU), Barbara McCarthy (ACC), Sharon Misasi (SCSU), Gregory Paveza (SCSU), Elizabeth Roop (HCC), Siamack Shojai (CCSU) Michael Rooke (TXCC)

Chair Merle Harris called the meeting to order at 9:38 a.m.

1. Minutes of March 7, 2014 – **A motion to approve was made by L. DeNardis, seconded by N. Cohen and unanimously approved.**  
Minutes of April 4, 2014 – **A motion to approve was made by C. Lappen, seconded by L. DeNardis and unanimously approved.**

Chair Harris announced a change in the agenda order to accommodate institutional representatives who were required to leave early.

6. Common Calendar-2015-2017. **A motion to approve was made by N. Cohen and seconded by L. DeNardis.** Discussion: Regent Cohen distributed a revised resolution. **The amendment to accept the revision was moved by L. DeNardis, seconded by C. Lappen and unanimously approved.** Provost Marianne Kennedy presented noting a full discussion had been held at a previous meeting of the ASA Committee.. She remarked the Calendar Committee had added the second year using the same principles as for the first year.. The calendar had been vetted and accepted at every campus and approved by the Academic Council. Some changes were expected when contract negotiations begin. Regent Harris thanked all for their herculean work. Provost Kennedy mentioned everyone's cooperation noting the biggest challenge was the three different collective bargaining contracts. Regent Adair also remarked on the work and support but mentioned the need for the fall reading days. Dr. Kennedy stated that was one of the items to be included when contract negotiations ended. Dr. Kennedy also credited Dr. Michael Rooke, co-chair of the committee, praising his work on the spreadsheet. **The vote was taken and unanimously approved.**

The agenda returned to the posted order.

## 2. New Programs

- a. Sport Management – BS – Southern CSU. **A motion to approve was made by C. Lappen and seconded by N. Cohen.** Dr. Yungclas introduced Provost Marianne Kennedy who introduced Dr. Lee deLisle, Dr. Sharon Misasi, Dr. Jim MacGregor and Dr. Gregory Paveza. Dr. Kennedy mentioned the three programs introduced by Southern noting their common theme. She said sports was big business in Connecticut and appealed to young people. Their programs had a lot of interest and created a need to think about a cluster. Dr. deLisle spoke about the Sport Management program citing the history and need to separate from recreation and leisure as a stand-alone major. Questions were addressed and the differences between the two undergraduate programs were described. Other questions were asked about fitting in our TAP initiative with Housatonic and Manchester CC programs being mentioned, and expectations for post-degree with the business aspect noted. **The vote was taken and unanimously approved.**
- b. Sport Studies – BS – Southern CSU. **The motion to approve was made by C. Lappen and seconded by N. Cohen.** Dr. Misasi described the program and the history of its creation noting it would reach students who do not qualify for Teacher Prep and those interested in sport programs. It was primarily a restructuring. Questions ensued, asking about TAP, the differences with Sport Management, the lack of academic focus, and where students could be employed. It was noted this was a liberal arts program, the comparison of the two was reiterated and potential community college transfers were mentioned. Other issues mentioned were strength of core courses. A longer discussion ensued about scarce resources and whether there was a need for new programs. It was reiterated that no additional resources were needed at SCSU for this program and there were presently students ready to enter this program. Dr. Kennedy also mentioned approval could be only for licensure requiring it to come back to the Board for accreditation in three years and could be reviewed at that time. There was further discussion on enrollment projections and more detailed cost projections. A more general discussion followed regarding separating licensure and accreditation. It was suggested the proposal be tabled and brought back with a firmer proposal. **There was a motion to table by N. Cohen, seconded by C. Lappen and unanimously approved.** Additional general discussion mentioned including more TAP information on proposals and Dr. Gargano indicated all programs coming before board henceforth will identify stackable credentials and transfers between institutions.
- c. Sport and Entertainment Management – MS – Southern CSU. Dr. deLisle described the Master's degree, noting the only other similar master's is at UConn. The program will be fully online and is expected to attract students from all over. **A motion to amend to licensure approval only was made by C. Lappen, seconded by N. Cohen and unanimously approved. A motion to approve the amended proposal was made by N. Cohen, seconded by C. Lappen and unanimously approved.**
- d. BOT: Electronic Health Records and Coding Option – AS – Gateway CC. **A motion to approve was made by C. Lappen, seconded by N. Cohen.** Dr. Yungclas introduced Dean Mark Kosinski. Dean Kosinski stated this program was part of the Health & Life Sciences grant and introduced Janet Hayes, the coordinator. Dean Kosinski mentioned Gateway's Business Office Technology area noting this program will add significant strength to it. It was set up as a pathway for transfer in addition for those students still undecided and those going directly to a job. The history and resources of the program development were described, including collaborating with Charter Oak. Potential jobs were also noted. It was mentioned projections were modest, leveraging existing resources. It was also noted students will be ready to take a national certification exam

upon completion. Questions were addressed. **The vote was taken and unanimously approved.**

3. Modifications of Programs

- a. Geography – BA/BS – Southern CSU. **A motion to approve was moved by L. DeNardis, seconded by S. Green.** Dr. Patrick Heidkamp, Chair of Geography Department, discussed needs and program changes with the goal to become nationally recognized for the applied geography program, also noting the credits being reduced from 145 to the more normalized 120. Questions were addressed, including transfer. **The vote was taken and unanimously approved.**
- b. Master of Business Administration – Central CSU. **A motion to approve was made by L. DeNardis, seconded by C. Lappen.** Provost Lovitt and Dr. Shojai described the modification noting CCSU had suspended the program previously to wait for accreditation, working on and strengthening the reconfiguration of the core. He described interest level, a partnership with UTC, and also noted a lot was available online. Questions were addressed. **The vote was taken and unanimously approved.**
- c. Machine Technology Level 2 – Asnuntuck, Housatonic, Naugatuck Valley and Quinebaug Valley Community Colleges. **A motion was made to approve by N. Cohen, seconded by L. DeNardis.** Dr. Yungclass introduced staff from the institutions and system office. Dean Barbara McCarthy described the program modifications noting they were made in response to their business and industry partners. In most cases, particularly at Asnuntuck, the present Level 1 certificate no longer fits job needs. **The vote was taken and unanimously approved.**

The agenda order was changed in order to address the termination in conjunction with above modification.

- 4.c. Termination – Machine Technology, Level 1 Certificate – Asnuntuck CC. Dean McCarthy noted this was in direct response to the modification of Level 2. **Approval was moved by N. Cohen, seconded by L. DeNardis and unanimously approved.**

- 3.d. Medical Billing and Coding Specialist – Northwestern CT CC. **A motion to approve was made by N. Cohen, seconded by C. Lappen.** Dr. Yungclas introduced Dean Bouffard. She noted the modification was basically a name change to Health Information and Reimbursement Specialist and described the reasons, also noting the change included two credit courses. The program transferred to Charter Oak and allowed recruitment from the Workforce Investment Boards. **The vote was taken and unanimously approved.**

4. Termination of Existing Academic Programs

- a. Technology Studies: Wastewater Option – A.S. – Three Rivers CC. **A motion to approve was made by N. Cohen, seconded by C. Lappen.**
- b. Aviation Maintenance Technology – A.S. – Three Rivers CC. **A motion to approve was made by C. Lappen, seconded by L. DeNardis.** Chair Patrick Knowles noted there had been no graduates for the last five years, in either program. Discussion ensued and it was observed no plan for presently enrolled students had been determined. **A move to table both was moved by N. Cohen, seconded by C. Lappen and unanimously approved.**

5. NEASC Accreditation – Northwestern CT CC. President Barbara Douglass introduced Institutional Research Director Caitlin Bogger Hawkins and Academic Dean Patricia Bouffard.

She thanked Regents Harris and Cohen for participating in the NEASC visit. She discussed the report noting it was a wonderful experience although much hard work and mentioned the self study was a great accomplishment. She said the usual 5-year report was ordered as well as the need for a 2-year report regarding state-wide governance. There was a short discussion on the governance question that had been included in some of our institutions' recent reports. Regent DeNardis offered congratulations with Regent Harris also commending the mention of Northwestern's high quality programs and engagement of faculty in assessment of learning outcomes. **A motion to approve was made by N. Cohen, seconded by L. DeNardis and unanimously approved.**

7. University Promotions and Tenure Recommendations. Regent DeNardis commented briefly that ASA ought to consider, at a future meeting, having more documentation from the presidents on the lists of promotion and tenure candidates. **A motion to approve was made by L. DeNardis, seconded by C. Lappen and unanimously approved.**

8. and 9. Information Items named below were noted. There was no discussion.

8. Below Threshold

- a. Social Sciences and Medicine – Southern CSU
- b. Geographic Information Science and Technology – Southern CSU

9. Promotions 2014 – Naugatuck Valley CC and Capital CC

10. TAP Update. Dr. Aynsley Diamond presented a brief update of the Transfer and Articulation Program initiative noting a fuller update would be given to the full Board at their June meeting. She observed communication was good, working out details difficult. She reviewed the organizational structure and mentioned the coordinating council continued to occasionally meet. The newly convened Implementation and Review Committee had met for the first time and would be working on the status at campuses and a good inventory. She described the pathways that had been done and the upcoming ones.

General discussion ensued with Chair Harris mentioning disappointment in the progress, noting the original timeline may have been unrealistic but expecting it to be further along. Regent Cohen suggested a new timeline be developed and asked about any further legislation. President Nunez said there was no new legislation now on TAP and that the report is due next year with the expectation it would be completed. There was further discussion on the delay in the general education implementation. It was determined there was a need to clarify the timeline and next steps and report back in June.

Chair Harris also discussed the future need to begin discussions on program review and normalization of credits. There was no further business.

**A motion to adjourn was made by N. Cohen, seconded by C. Lappen and unanimously approved. The meeting was adjourned at 12:22 p.m.**

An additional comment was communicated by Regent Green that the Student Advisory Committee had spoken to Board Chair Donofrio and was working with the Students for a Dream group. Dr. Adair also mentioned that the Faculty Advisory Committee had them on a future agenda in the fall.

**ITEM**

Approval of a list of multiple commonly accepted measures of skill level with the understanding that CSCU institutions have until no later than Fall of 2015 to determine which measures of student assessment are most appropriate for student placement at the individual institutions.

**BACKGROUND**

An important compliance with Public Act No. 12-40, An Act Concerning College Readiness and Completion was for the CSCU institutions to recommend through the PA-1240 Advisory Committee a list of multiple commonly accepted measures to determine skill level of incoming student to higher education.

Due to the extension date of compliance with Public Act No. 12-40, An Act Concerning College Readiness and Completion, it is requested that the attached list be approved for the determination at the local level which assessment is most appropriate for the demographics of the institution to determine.

This motion will be made with the understanding that full implementation of Public Act 12-40 will fully establish the full compliance with Public Act No. 12-40 no later than Fall of 2015. The full list of proposed multiple measures of assessment is listed in an attachment to this report.

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning

PA 12-40 Multiple Measures

[date]

RESOLVED: That the Board of Regents for Higher Education approve a list of multiple commonly accepted measures of skill level with the understanding that CSCU institutions have until no later than Fall of 2015 to determine which measures of student assessment are most appropriate for student placement at the individual institutions

A True Copy:

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

## **Multiple Measures for Student Assessment Fall 2014**

The following is a list of multiple commonly accepted measures of skill level as determined by the PA-1240 advisory council from information supplied by CSCU remediation summit on April 11 2014. This list is provided with the understanding that CSCU institutions have until no later than Fall of 2015 to determine which of these agreed upon multiple measures of student assessment are most appropriate for student placement at the individual institutions.

- CLEP/AP/DANTES
- ACT Scores
- SAT Scores
- HS Transcript
- Accuplacer
- Accuplacer WritePlacer
- Local Challenge Essay
- Non-Cognitive Questionnaire
- Student Interview
- Local Math Exam
- SBAC (Smarter Balanced Assessment Consortium)



**ITEM**

Approval of a proposed remedial course offerings for Fall 2014

**BACKGROUND**

Due to the extension date of compliance with Public Act No. 12-40, An Act Concerning College Readiness and Completion, it is requested that the courses deemed embedded, intensive, transitional, and traditional be granted a continuation for academic year 2014-2015. This motion will be made with the understanding that full implementation of Public Act 12-40 will fully establish the remedial courses under the prescription of the law no later than Fall of 2015. The full list of proposed remedial courses for Fall 2014 is listed in an attachment to this report.

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning

PA 12-40 Remedial Courses

[date]

RESOLVED: That the Board of Regents for Higher Education approve course offerings for Fall 2014.

A True Copy:

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

College	Subject	Course Number	Course Title	CRN	Type
Asnuntuck	ENG*	M096	Intro. to College English	3458	Traditional Remedial
Asnuntuck	ENG*	M096	Intro. to College English	3459	Traditional Remedial
Asnuntuck	ENG*	M096	Intro. to College English	3460	Traditional Remedial
Asnuntuck	ENG*	M101S	Composition Embedded Support	3461	Embedded Course
Asnuntuck	ENG*	M101S	Composition Embedded Support	3462	Embedded Course
Asnuntuck	ENG*	M101S	Composition Embedded Support	3463	Embedded Course
Asnuntuck	ENG*	M101S	Composition Embedded Support	3464	Embedded Course
Asnuntuck	MAT*	M085	Pre-Algebra&Elementary Algebra	3494	Traditional Remedial
Asnuntuck	MAT*	M085	Pre-Algebra&Elementary Algebra	3495	Traditional Remedial
Asnuntuck	MAT*	M085	Pre-Algebra&Elementary Algebra	3496	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations	3062	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations	3063	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations	3143	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations	3163	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations	3286	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations	3287	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations	3344	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations	3470	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations	3472	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations (SP)	3469	Traditional Remedial
Asnuntuck	MAT*	M095	Elem Algebra Foundations (SP)	3471	Traditional Remedial
Capital	ENG*	G043	Writ:Para/Ess Link w/CRN 3211	3077	Traditional Remedial
Capital	ENG*	G043	Writ:Para/Ess Link w/CRN 3212	3084	Traditional Remedial
Capital	ENG*	G043	Writ:Para/Ess Link w/CRN 3215	3031	Traditional Remedial
Capital	ENG*	G043	Writ:Para/Ess Link w/CRN 3216	3129	Traditional Remedial
Capital	ENG*	G043	Writ:Para/Ess Link w/CRN 3783	3592	Traditional Remedial
Capital	ENG*	G043	Writing:Para/Essay	3085	Traditional Remedial
Capital	ENG*	G043	Writing:Para/Essay	3196	Traditional Remedial
Capital	ENG*	G043	Writing:Para/Essay	3230	Traditional Remedial
Capital	ENG*	G043	Writing:Para/Essay	3236	Traditional Remedial
Capital	ENG*	G073	Acad Read Link w/CRN 3031	3215	Traditional Remedial
Capital	ENG*	G073	Acad Read Link w/CRN 3077	3211	Traditional Remedial
Capital	ENG*	G073	Acad Read Link w/CRN 3084	3212	Traditional Remedial
Capital	ENG*	G073	Acad Read Link w/CRN 3129	3216	Traditional Remedial
Capital	ENG*	G073	Acad Read Link w/CRN 3592	3783	Traditional Remedial
Capital	ENG*	G073	Acad Read Link w/CRN 3786	3214	Traditional Remedial
Capital	ENG*	G073	Academic Reading	3194	Traditional Remedial
Capital	ENG*	G073	Academic Reading	3195	Traditional Remedial
Capital	ENG*	G073	Academic Reading	3198	Traditional Remedial
Capital	ENG*	G073	Academic Reading	3213	Traditional Remedial
Capital	ENG*	G073	Academic Reading	3238	Traditional Remedial
Capital	ENG*	G073	Academic Reading	3239	Traditional Remedial
Capital	ENG*	G073	Academic Reading	3410	Traditional Remedial
Capital	ENG*	G073	Academic Reading	3780	Traditional Remedial
Capital	ENG*	G073	Academic Reading	3781	Traditional Remedial

College	Subject	Course Number	Course Title	CRN	Type
Capital	ENG*	G073	Academic Reading	3782	Traditional Remedial
Capital	ENG*	G095	Es of Coll Wri Link w/CRN 3214	3786	Traditional Remedial
Capital	ENG*	G095	ESL-Essentials of College Writ	3798	Traditional Remedial
Capital	ENG*	G095	Essentials of College Writing	3788	Traditional Remedial
Capital	ENG*	G095	Essentials of College Writing	3790	Traditional Remedial
Capital	ENG*	G095	Essentials of College Writing	3796	Traditional Remedial
Capital	ENG*	G095	Essentials of College Writing	3800	Traditional Remedial
Capital	ENG*	G095	Essentials of College Writing	3804	Traditional Remedial
Capital	ENG*	G095	Essentials of College Writing	3818	Traditional Remedial
Capital	ENG*	G101	Composition Plus Lec/Link w3616	3615	Embedded Course
Capital	ENG*	G101	Composition Plus Lec/Link w3850	3849	Embedded Course
Capital	ENG*	G101	Composition Plus Lec/Linkw3614	3613	Embedded Course
Capital	ENG*	G101	Composition Plus Lec/Linkw3843	3022	Embedded Course
Capital	ENG*	G101P	Composition Plus Lab/Link w3615	3616	Embedded Course
Capital	ENG*	G101P	Composition Plus Lab/Linkw3022	3843	Embedded Course
Capital	ENG*	G101P	Composition Plus Lab/Linkw3613	3614	Embedded Course
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3806	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3807	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3808	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3809	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3810	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3811	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3812	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3813	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3814	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3815	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3816	Traditional Remedial
Capital	MAT*	G085	Pre-Algebra & Elem Algebra	3817	Traditional Remedial
Capital	MAT*	G092	Statistics: Statway I	3398	Traditional Remedial
Capital	MAT*	G092	Statistics: Statway I	3399	Traditional Remedial
Capital	MAT*	G092	Statistics: Statway I	3461	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3291	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3292	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3293	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3294	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3295	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3296	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3297	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3298	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3299	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3300	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3301	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3302	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3303	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3313	Traditional Remedial

College	Subject	Course Number	Course Title	CRN	Type
Capital	MAT*	G095	Elem Algebra Foundations	3315	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3319	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3416	Traditional Remedial
Capital	MAT*	G095	Elem Algebra Foundations	3584	Traditional Remedial
Capital	MAT*	G139	Elem/Interm Alg Combined	3304	Embedded Course
Capital	MAT*	G139	Elem/Interm Alg Combined	3311	Embedded Course
Capital	ENG*	G101P	Composition Plu Lab/linkw3849	3850	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay (ALP 2)	3841	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay (ALP 3)	3793	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay (ALP 4)	3778	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay (ALP 5)	3917	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay (ALP 6)	3479	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay (ALP 7)	3531	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay (ALP 8)	4100	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay (ALP 9)	3813	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay(ALP 1)	4219	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay(ALP 10)	3579	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay(ALP 11)	3750	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay(ALP 12)	4102	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay(ALP 13)	4103	Embedded Course
Gateway	ENG*	I063	Writing:Intro to Essay(ALP 14)	4104	Embedded Course
Gateway	ENG*	I066	Intro to Acad Rdg Writ&Schol	4220	Traditional Remedial
Gateway	ENG*	I066	Intro to Acad Rdg Writ&Schol	4221	Traditional Remedial
Gateway	ENG*	I066	Intro to Acad Rdg Writ&Schol	4222	Traditional Remedial
Gateway	ENG*	I066	Intro to Acad Rdg Writ&Schol	4223	Traditional Remedial
Gateway	ENG*	I066	Intro to Acad Rdg Writ&Schol	4230	Traditional Remedial
Gateway	ENG*	I066	Intro to Acad Rdg Writ&Schol	4231	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4155	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4156	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4157	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4158	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4159	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4160	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4161	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4162	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4163	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4164	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4165	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4166	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4167	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4168	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4169	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4170	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4171	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4172	Traditional Remedial

College	Subject	Course Number	Course Title	CRN	Type
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4173	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4174	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4175	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4176	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4217	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4218	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4226	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4227	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4228	Traditional Remedial
Gateway	ENG*	I091	Intro to Adv. Reading/Writing	4229	Traditional Remedial
Gateway	MAT*	I085	Pre-Algebra & Elem. Algebra	4049	Traditional Remedial
Gateway	MAT*	I085	Pre-Algebra & Elem. Algebra	4050	Traditional Remedial
Gateway	MAT*	I085	Pre-Algebra & Elem. Algebra	4051	Traditional Remedial
Gateway	MAT*	I085	Pre-Algebra & Elem. Algebra	4052	Traditional Remedial
Gateway	MAT*	I085	Pre-Algebra & Elem. Algebra	4053	Traditional Remedial
Gateway	MAT*	I085	Pre-Algebra & Elem. Algebra	4054	Traditional Remedial
Gateway	MAT*	I085	Pre-Algebra & Elem. Algebra	4055	Traditional Remedial
Gateway	MAT*	I085	Pre-Algebra & Elem. Algebra	4056	Traditional Remedial
Gateway	MAT*	I085	Pre-Algebra & Elem. Algebra	4057	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Found.-CAI	3446	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3401	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3403	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3405	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3406	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3407	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3408	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3409	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3410	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3411	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3412	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3413	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3414	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3445	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3447	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3449	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3511	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3512	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3641	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3688	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3689	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3691	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3692	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3693	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3694	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3697	Traditional Remedial

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Gateway	MAT*	I095	Elem Algebra Foundations	3911	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3914	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3915	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3919	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3921	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	3923	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	4025	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	4026	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	4028	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	4040	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	4077	Traditional Remedial
Gateway	MAT*	I095	Elem Algebra Foundations	4078	Traditional Remedial
Gateway	MAT*	I095	MAT 137 Companion w/3418	4065	Traditional Remedial
Gateway	MAT*	I095	MAT 137 Companion w/3551	4038	Traditional Remedial
Gateway	MAT*	I095	MAT 137 Companion w/3786	4064	Traditional Remedial
Gateway	MAT*	I095	MAT 137 Companion w/4073	4072	Traditional Remedial
Gateway	MAT*	I095	MAT 137 Companion w/4075	4074	Traditional Remedial
Gateway	MAT*	I095A	Elem Algebra Found Module A1	4113	Traditional Remedial
Gateway	MAT*	I095A	Elem Algebra Found Module A2	4114	Traditional Remedial
Gateway	MAT*	I095A	Elem Algebra Found Module A3	4115	Traditional Remedial
Gateway	MAT*	I095A	Elem Algebra Found Module A4	4122	Traditional Remedial
Gateway	MAT*	I095A	Elem Algebra Found Module A5	4123	Traditional Remedial
Gateway	MAT*	I095A	Elem Algebra Found Module A6	4126	Traditional Remedial
Gateway	MAT*	I095B	Elem Algebra Found Module B1	4116	Traditional Remedial
Gateway	MAT*	I095B	Elem Algebra Found Module B2	4117	Traditional Remedial
Gateway	MAT*	I095B	Elem Algebra Found Module B3	4118	Traditional Remedial
Gateway	MAT*	I095B	Elem Algebra Found Module B4	4124	Traditional Remedial
Gateway	MAT*	I095B	Elem Algebra Found Module B5	4127	Traditional Remedial
Gateway	MAT*	I095B	Elem Algebra Found Module B6	4128	Traditional Remedial
Gateway	MAT*	I095C	Elem Algebra Found Module C1	4119	Traditional Remedial
Gateway	MAT*	I095C	Elem Algebra Found Module C2	4120	Traditional Remedial
Gateway	MAT*	I095C	Elem Algebra Found Module C3	4121	Traditional Remedial
Gateway	MAT*	I095C	Elem Algebra Found Module C4	4125	Traditional Remedial
Gateway	MAT*	I095C	Elem Algebra Found Module C5	4129	Traditional Remedial
Gateway	MAT*	I095C	Elem Algebra Found Module C6	4130	Traditional Remedial
Gateway	MAT*	I137S	Intermediate Algebra Embedded	4191	Embedded Course
Gateway	MAT*	I137S	Intermediate Algebra Embedded	4192	Embedded Course
Gateway	MAT*	I137S	Intermediate Algebra Embedded	4193	Embedded Course
Housatonic	DS	E099	Academic Skills Dev Online	3247	Traditional Remedial
Housatonic	DS	E099	Academic Skills Dev Online	3248	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3249	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3250	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3251	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3252	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3253	Traditional Remedial

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Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3254	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3255	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3256	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3257	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3258	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3259	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3260	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3261	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3262	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3263	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3264	Traditional Remedial
Housatonic	DS	E099	ACADEMIC SKILLS DEVELOPMENT	3265	Traditional Remedial
Housatonic	ENG*	E092	College Reading starts 9/15	3319	Traditional Remedial
Housatonic	ENG*	E092	College Reading Starts 9/16	3320	Traditional Remedial
Housatonic	ENG*	E092	College Reading Starts 9/16	3321	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3304	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3305	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3306	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3307	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3308	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3309	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3310	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3311	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3312	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3313	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3314	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3315	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3316	Traditional Remedial
Housatonic	ENG*	E092	Intro to College Reading	3317	Traditional Remedial
Housatonic	ENG*	E092I	Intro College Reading Intense	3297	Intensive
Housatonic	ENG*	E092I	Intro College Reading Intense	3298	Intensive
Housatonic	ENG*	E092I	Intro College Reading Intense	3299	Intensive
Housatonic	ENG*	E092I	Intro College Reading Intense	3300	Intensive
Housatonic	ENG*	E092I	Intro College Reading Intense	3301	Intensive
Housatonic	ENG*	E092I	Intro College Reading Intense	3302	Intensive
Housatonic	ENG*	E092I	Intro College Reading Intense	3303	Intensive
Housatonic	ENG*	E094	College Writing Online	3325	Traditional Remedial
Housatonic	ENG*	E094	College Writing Self-Paced	3322	Traditional Remedial
Housatonic	ENG*	E094	College Writing Self-Paced	3323	Traditional Remedial
Housatonic	ENG*	E094	College Writing Starts 9/15	3346	Traditional Remedial
Housatonic	ENG*	E094	College Writing Starts 9/16	3347	Traditional Remedial
Housatonic	ENG*	E094	College Writing Starts 9/16	3348	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3324	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3326	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3327	Traditional Remedial



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Housatonic	ENG*	E094	Intro to College Writing	3328	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3329	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3330	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3331	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3332	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3333	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3334	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3335	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3336	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3337	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3338	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3339	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3340	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3341	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3342	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3343	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3344	Traditional Remedial
Housatonic	ENG*	E094	Intro to College Writing	3345	Traditional Remedial
Housatonic	ENG*	E094I	Intro College Writing Intense	3349	Intensive
Housatonic	ENG*	E094I	Intro College Writing Intense	3350	Intensive
Housatonic	ENG*	E094I	Intro College Writing Intense	3351	Intensive
Housatonic	ENG*	E094I	Intro College Writing Intense	3352	Intensive
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3530	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3531	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3532	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3533	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3534	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3535	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3536	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3537	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3538	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3539	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3540	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3541	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3542	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3543	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3544	Traditional Remedial
Housatonic	MAT*	E095	ELEM ALGEBRA FOUNDATIONS	3545	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Self-Paced	3521	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Self-Paced	3522	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Self-Paced	3523	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Self-Paced	3524	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Self-Paced	3525	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Self-Paced	3526	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Self-Paced	3527	Traditional Remedial

College	Subject	Course Number	Course Title	CRN	Type
Housatonic	MAT*	E095	Elem Algebra Self-Paced	3528	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Self-Paced	3529	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Starts 9/15	3546	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Starts 9/15	3547	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Starts 9/15	3548	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Starts 9/15	3549	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Starts 9/16	3550	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Starts 9/16	3551	Traditional Remedial
Housatonic	MAT*	E095	Elem Algebra Starts 9/16	3552	Traditional Remedial
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3553	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3554	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3555	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3556	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3557	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3558	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3559	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3560	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3561	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3562	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3563	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3564	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3565	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3566	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3567	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3568	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3569	Intensive
Housatonic	MAT*	E095I	Elementary Algebra Intensive	3570	Intensive
Manchester	ENG*	B003	Foundations of Reading	31097	Traditional Remedial
Manchester	ENG*	B090	Intro to College Rdg-(ENG 093)	31027	Traditional Remedial
Manchester	ENG*	B090	Intro to College Rdg-(ENG 093)	31029	Traditional Remedial
Manchester	ENG*	B093	Intro Coll. Rdg Wrtg- 8 WK2	31020	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30144	Traditional Remedial
Manchester	ENG*	B093	Intro to Coll Rdg /Wrtg FIRST	30263	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30145	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30146	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30147	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30148	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30149	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30193	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30276	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30306	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30313	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30328	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30343	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30347	Traditional Remedial

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Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30403	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30404	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30459	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30464	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30490	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30552	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30556	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30592	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30593	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30594	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30595	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg & Wrtg	30596	Traditional Remedial
Manchester	ENG*	B093	Intro to College Rdg/Wrtg-Late	30896	Traditional Remedial
Manchester	ENG*	B093	IntroCollege Rdg Wrtg 8wk2	31028	Traditional Remedial
Manchester	ENG*	B096	Intro to Coll English -8wk1 B	31149	Traditional Remedial
Manchester	ENG*	B096	Intro to Coll English-8wk1 A	31147	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31125	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31126	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31128	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31129	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31131	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31133	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31135	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31137	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31139	Traditional Remedial
Manchester	ENG*	B096	Intro to College English	31140	Traditional Remedial
Manchester	ENG*	B096	Intro to College English FIRST	31144	Traditional Remedial
Manchester	ENG*	B101M	Composition-Embedded Support	31003	Embedded Course
Manchester	ENG*	B101M	Composition-Embedded Support	31004	Embedded Course
Manchester	ENG*	B101M	Composition-Embedded Support	31005	Embedded Course
Manchester	ENG*	B101M	Composition-Embedded Support	31006	Embedded Course
Manchester	ENG*	B101M	Composition-Embedded Support	31112	Embedded Course
Manchester	MAT*	B095	Elem Algebra Foundations	30170	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations	30172	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations	30173	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations	30174	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations	30177	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations	30620	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations	30996	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations	31159	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations	31160	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations FIRST	30171	Traditional Remedial
Manchester	MAT*	B095	Elem Algebra Foundations FIRST	30995	Traditional Remedial
Manchester	MAT*	B096	Alg Concpts Nmbr Sns & Geom	30931	Traditional Remedial
Manchester	MAT*	B096	Alg Concpts Nmbr Sns & Geom	30932	Traditional Remedial

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Manchester	MAT*	B096	Alg Concepts Nmbr Sns & Geom	30933	Traditional Remedial
Middlesex	ENG*	F063	Intro to Essay-ALP1 (w/3578)	3147	Traditional Remedial
Middlesex	ENG*	F063	Intro to Essay-ALP2 (w/3893)	3148	Traditional Remedial
Middlesex	ENG*	F063	IntroEssay-ALP3(w/3895)MERIDEN	3149	Traditional Remedial
Middlesex	ENG*	F063	IntroEssay-ALP4(w/3896)MERIDEN	3150	Traditional Remedial
Middlesex	ENG*	F096	Intro College English-MERIDEN	3886	Traditional Remedial
Middlesex	ENG*	F096	Intro College English-MERIDEN	3888	Traditional Remedial
Middlesex	ENG*	F096	Intro College English-MERIDEN	3889	Traditional Remedial
Middlesex	ENG*	F096	Intro College English-MERIDEN	3890	Traditional Remedial
Middlesex	ENG*	F096	Intro College English-MERIDEN	3891	Traditional Remedial
Middlesex	ENG*	F096	Intro College Eng-TYP-MERIDEN	3887	Traditional Remedial
Middlesex	ENG*	F096	Intro. to College English	3860	Traditional Remedial
Middlesex	ENG*	F096	Intro. to College English	3861	Traditional Remedial
Middlesex	ENG*	F096	Intro. to College English	3862	Traditional Remedial
Middlesex	ENG*	F096	Intro. to College English	3864	Traditional Remedial
Middlesex	ENG*	F096	Intro. to College English-TYP	3863	Traditional Remedial
Middlesex	ENG*	F101E	Comp Embedded-MERIDEN	3897	Embedded Course
Middlesex	ENG*	F101E	Comp Embedded-MERIDEN	3898	Embedded Course
Middlesex	ENG*	F101E	Composition Embedded	3630	Embedded Course
Middlesex	ENG*	F101E	Composition Embedded	3788	Embedded Course
Middlesex	MAT*	F085	Pre-Alg & Elem Alg-SP-MERIDEN	3831	Traditional Remedial
Middlesex	MAT*	F085	Pre-Alg. & Elem Algebra-SP	3827	Traditional Remedial
Middlesex	MAT*	F085	Pre-Algebra & Elem Algebra	3828	Traditional Remedial
Middlesex	MAT*	F085	Pre-Algebra & Elem Algebra	3829	Traditional Remedial
Middlesex	MAT*	F085	Pre-Algebra & Elem Algebra	3830	Traditional Remedial
Middlesex	MAT*	F085	Pre-Algebra & Elem Alg-MERIDEN	3832	Traditional Remedial
Middlesex	MAT*	F085	Pre-Algebra & Elem Alg-MERIDEN	3833	Traditional Remedial
Middlesex	MAT*	F095	Elem Alg Found LATE START 9/22	3834	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Foundations	3238	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Foundations	3241	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Foundations	3244	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Foundations	3266	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Foundations	3835	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Foundations	3836	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Foundations - P	3243	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Found-MERIDEN	3837	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Found-MERIDEN	3840	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Found-MERIDEN	3841	Traditional Remedial
Middlesex	MAT*	F095	Elem Algebra Found-WESTBROOK	3842	Traditional Remedial
Middlesex	MAT*	F137E	Inter Algebra Embedded-MERIDEN	3839	Embedded Course
Middlesex	MAT*	F137E	Intermediate Algebra Embedded	3624	Embedded Course
Middlesex	MAT*	F137E	Intermediate Algebra Embedded	3838	Embedded Course
Naugatuck Valley	ENG*	H063	Danbury:IN ESSAY ALP 1(w/4151)	4153	Traditional Remedial
Naugatuck Valley	ENG*	H063	Danbury:INTRO TO THE ESSAY	4221	Traditional Remedial
Naugatuck Valley	ENG*	H063	INTRO TO ESSAY (LC3 W/3684)	3463	Traditional Remedial

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Naugatuck Valley	ENG*	H063	INTRO TO ESSAY ALP 1 (w/4139)	4145	Traditional Remedial
Naugatuck Valley	ENG*	H063	INTRO TO ESSAY ALP 2 (w/3981)	3982	Traditional Remedial
Naugatuck Valley	ENG*	H063	INTRO TO ESSAY ALP 3 (w/4140)	4146	Traditional Remedial
Naugatuck Valley	ENG*	H063	INTRO TO ESSAY ALP 4 (w/4141)	4147	Traditional Remedial
Naugatuck Valley	ENG*	H063	INTRO TO ESSAY ALP 5 (w/4142)	4148	Traditional Remedial
Naugatuck Valley	ENG*	H063	INTRO TO ESSAY ALP 6 (w/3980)	3979	Traditional Remedial
Naugatuck Valley	ENG*	H063	INTRO TO ESSAY ALP 7 (w/4143)	4149	Traditional Remedial
Naugatuck Valley	ENG*	H063	INTRO TO ESSAY ALP 8 (w/4144)	4150	Traditional Remedial
Naugatuck Valley	ENG*	H063	Late Start:WRTG: INTR TO ESSAY	3782	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3121	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3122	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3247	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3290	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3304	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3372	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3448	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3503	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3504	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3509	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3539	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY	3643	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY(C)	3120	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY(C)	3577	Traditional Remedial
Naugatuck Valley	ENG*	H063	WRITING: INTRO TO THE ESSAY(C)	3711	Traditional Remedial
Naugatuck Valley	ENG*	H096	Danbury:INTRO-COLLEGE ENG	4219	Traditional Remedial
Naugatuck Valley	ENG*	H096	Danbury:INTRO-COLLEGE ENG	4220	Traditional Remedial
Naugatuck Valley	ENG*	H096	Danbury:INTRO-COLLEGE ENG (T)	4218	Traditional Remedial
Naugatuck Valley	ENG*	H096	Danbury:INTRO-COLLEGE ENG (T)	4327	Traditional Remedial
Naugatuck Valley	ENG*	H096	Danbury:INTRO-COLLEGE ENG (T)	4328	Traditional Remedial
Naugatuck Valley	ENG*	H096	Danbury:INTRO-COLLEGE ENG (T)	4329	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH	4189	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH	4231	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH	4232	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH	4330	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH	4331	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH (T)	4190	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH (T)	4233	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH (T)	4234	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH (T)	4324	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH (T)	4325	Traditional Remedial
Naugatuck Valley	ENG*	H096	INTRO TO COLLEGE ENGLISH (T)	4326	Traditional Remedial
Naugatuck Valley	MAT*	H092	STATWAY I	3658	Traditional Remedial
Naugatuck Valley	MAT*	H092	STATWAY I	3659	Traditional Remedial
Naugatuck Valley	MAT*	H094	Danbury:INTRO ALGEBRA	4107	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRO ALGEBRA (LC4 W/3676)	4039	Traditional Remedial

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Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4032	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4033	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4034	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4037	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4038	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4040	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4041	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4042	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4046	Traditional Remedial
Naugatuck Valley	MAT*	H094	INTRODUCTORY ALGEBRA	4047	Traditional Remedial
Naugatuck Valley	MAT*	H095	Danbury:ELEM ALGEBRA FOUND	4104	Traditional Remedial
Naugatuck Valley	MAT*	H095	Danbury:ELEM ALGEBRA FOUND	4105	Traditional Remedial
Naugatuck Valley	MAT*	H095	Danbury:ELEM ALGEBRA FOUNDATION	3754	Traditional Remedial
Naugatuck Valley	MAT*	H095	Danbury:ELEM ALGEBRA FOUNDATION	3585	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALG AMP (w/4072)	4071	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALG-Computer Based	3440	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALG-Computer Based	3622	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA AMP(w/3728)	3727	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3076	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3078	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3081	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3214	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3245	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3263	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3295	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3300	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3329	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3337	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3363	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3370	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3540	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3610	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3970	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	3971	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	4076	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA FOUNDATIONS	4077	Traditional Remedial
Naugatuck Valley	MAT*	H095	ELEM ALGEBRA-OLCR	3837	Traditional Remedial
Naugatuck Valley	MAT*	H095	Late Start XL:ELEM ALG FOUND	3722	Traditional Remedial
Northwestern CT	ENG*	C101W	Composition/with Workshop	3290	Embedded Course
Northwestern CT	ENG*	C096	Intro. to College English	3367	Embedded Course
Northwestern CT	ENG*	C096	Intro. to College English	3368	Embedded Course
Northwestern CT	ENG*	C096	Intro. to College English	3370	Embedded Course
Northwestern CT	ENG*	C096	Intro. to College English	3371	Embedded Course
Northwestern CT	ENG*	C101W	Composition/with Workshop	3291	Embedded Course
Northwestern CT	ENG*	C101W	Composition/with Workshop	3372	Embedded Course

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Northwestern CT	MAT*	C094	Introductory Algebra	3350	Embedded Course
Northwestern CT	MAT*	C094	Introductory Algebra	3351	Embedded Course
Northwestern CT	MAT*	C094	Introductory Algebra	3352	Embedded Course
Northwestern CT	MAT*	C094	Introductory Algebra	3353	Embedded Course
Northwestern CT	MAT*	C094	Introductory Algebra	3354	Embedded Course
Northwestern CT	MAT*	C094	Introductory Algebra	3355	Embedded Course
Northwestern CT	MAT*	C094	Introductory Algebra	3356	Embedded Course
Northwestern CT	MAT*	C137X	Intermediate Algebra Extension	3357	Embedded Course
Northwestern CT	MAT*	C137X	Intermediate Algebra Extension	3358	Embedded Course
Northwestern CT	MAT*	C137X	Intermediate Algebra Extension	3359	Embedded Course
Northwestern CT	MAT*	C137X	Intermediate Algebra Extension	3360	Embedded Course
Northwestern CT	MAT*	C137X	Intermediate Algebra Extension	3361	Embedded Course
Norwalk	ENG*	D088	College Writing & Reading	5725	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5726	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5728	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5729	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5846	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5847	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5848	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5849	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5850	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5851	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5852	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5853	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5854	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5855	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5856	Traditional Remedial
Norwalk	ENG*	D088	College Writing & Reading	5940	Traditional Remedial
Norwalk	MAT*	D010	Mathematics Foundations	5808	Traditional Remedial
Norwalk	MAT*	D010	Mathematics Foundations	5809	Traditional Remedial
Norwalk	MAT*	D010	Mathematics Foundations	5810	Traditional Remedial
Norwalk	MAT*	D010	Mathematics Foundations	5811	Traditional Remedial
Norwalk	MAT*	D010	Mathematics Foundations	5812	Traditional Remedial
Norwalk	MAT*	D010	Mathematics Foundations	5813	Traditional Remedial
Norwalk	MAT*	D010	Mathematics Foundations	5814	Traditional Remedial
Norwalk	MAT*	D010	Mathematics Foundations	5815	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3175	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3176	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3178	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3179	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3182	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3186	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3187	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3188	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3189	Traditional Remedial

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Norwalk	MAT*	D094	Introductory Algebra	3190	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3451	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	3518	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	4261	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	4581	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	4590	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	4594	Traditional Remedial
Norwalk	MAT*	D094	Introductory Algebra	4756	Traditional Remedial
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5640	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5816	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5817	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5818	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5819	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5820	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5821	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5822	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5823	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5824	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5825	Embedded Course
Norwalk	MAT*	D094E	Intro Algebra w/Embedded Supp	5826	Embedded Course
Norwalk	MAT*	D136E	Inter Algebra w/ Embed Support	5641	Embedded Course
Norwalk	MAT*	D136E	Inter Algebra w/ Embed Support	5827	Embedded Course
Norwalk	MAT*	D136E	Inter Algebra w/ Embed Support	5828	Embedded Course
Norwalk	MAT*	D136E	Inter Algebra w/ Embed Support	5829	Embedded Course
Norwalk	MAT*	D136E	Inter Algebra w/ Embed Support	5830	Embedded Course
Quinebaug Valley	ENG*	L093	Intro to College Rdg & Wrtg	3099	Traditional Remedial
Quinebaug Valley	ENG*	L093	Intro to College Rdg & Wrtg	3100	Traditional Remedial
Quinebaug Valley	ENG*	L093	Intro to College Rdg & Wrtg	3101	Traditional Remedial
Quinebaug Valley	ENG*	L093	Intro to College Rdg & Wrtg	3102	Traditional Remedial
Quinebaug Valley	ENG*	L096	Intro to College Composition	3274	Intensive
Quinebaug Valley	ENG*	L096	Intro to College Composition	3275	Intensive
Quinebaug Valley	ENG*	L096	Intro to College Composition	3276	Intensive
Quinebaug Valley	ENG*	L096	Intro to College Composition	3277	Intensive
Quinebaug Valley	ENG*	L096	Intro to College Composition	3278	Intensive
Quinebaug Valley	ENG*	L096	Intro to College Composition	3279	Intensive
Quinebaug Valley	ENG*	L101S	Composition w/Embedded Support	3281	Embedded Course
Quinebaug Valley	ENG*	L101S	Composition w/Embedded Support	3282	Embedded Course
Quinebaug Valley	ENG*	L101S	Composition w/Embedded Support	3283	Embedded Course
Quinebaug Valley	MAT*	L085	Pre-Algebra & Elem Algebra	3171	Embedded Course
Quinebaug Valley	MAT*	L085	Pre-Algebra & Elem Algebra	3172	Embedded Course
Quinebaug Valley	MAT*	L085	Pre-Algebra & Elem Algebra	3173	Embedded Course
Quinebaug Valley	MAT*	L085	Pre-Algebra & Elem Algebra	3174	Embedded Course
Quinebaug Valley	MAT*	L085	Pre-Algebra & Elem Algebra	3175	Embedded Course
Quinebaug Valley	MAT*	L095	Elem Algebra Foundations	3176	Traditional Remedial
Quinebaug Valley	MAT*	L095	Elem Algebra Foundations	3177	Traditional Remedial



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Quinebaug Valley	MAT*	L095	Elem Algebra Foundations	3178	Traditional Remedial
Quinebaug Valley	MAT*	L095	Elem Algebra Foundations	3179	Traditional Remedial
Quinebaug Valley	MAT*	L095	Elem Algebra Foundations	3180	Traditional Remedial
Quinebaug Valley	MAT*	L095	Elem Algebra Foundations	3181	Traditional Remedial
Quinebaug Valley	MAT*	L095	Elem Algebra Foundations	3182	Traditional Remedial
Quinebaug Valley	MAT*	L095	Elem Algebra Foundations	3183	Traditional Remedial
Quinebaug Valley	MAT*	L137S	Intermediate Algebra Embedded	3194	Intensive
Quinebaug Valley	MAT*	L137S	Intermediate Algebra Embedded	3195	Intensive
Three Rivers	ENG*	K096	Intro. to College English	32289	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32290	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32291	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32292	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32512	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32513	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32514	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32515	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32516	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32517	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32518	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32519	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32520	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32521	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32522	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32523	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32524	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32525	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32526	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32527	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32528	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32529	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32530	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32531	Traditional Remedial
Three Rivers	ENG*	K096	Intro. to College English	32532	Traditional Remedial
Three Rivers	ENG*	K101S	Composition Embedded Support	32278	Embedded Course
Three Rivers	ENG*	K101S	Composition Embedded Support	32279	Embedded Course
Three Rivers	ENG*	K101S	Composition Embedded Support	32280	Embedded Course
Three Rivers	ENG*	K101S	Composition Embedded Support	32508	Embedded Course
Three Rivers	ENG*	K101S	Composition Embedded Support	32509	Embedded Course
Three Rivers	ENG*	K101S	Composition Embedded Support	32510	Embedded Course
Three Rivers	ENG*	K101S	Composition Embedded Support	32511	Embedded Course
Three Rivers	MAT*	K095	Elem Algebra Foundations	30135	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30136	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30137	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30138	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30140	Traditional Remedial

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Three Rivers	MAT*	K095	Elem Algebra Foundations	30142	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30148	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30350	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30365	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30390	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30444	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	30464	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	31016	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	31182	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	31399	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	31512	Traditional Remedial
Three Rivers	MAT*	K095	Elem Algebra Foundations	32032	Traditional Remedial
Three Rivers	MAT*	K095I	Elem Alg Int College Readiness	32297	Traditional Remedial
Three Rivers	MAT*	K095I	Elem Alg Int College Readiness	32298	Traditional Remedial
Three Rivers	MAT*	K095I	Elem Alg Int College Readiness	32299	Traditional Remedial
Three Rivers	MAT*	K095I	Elem Alg Int College Readiness	32300	Traditional Remedial
Three Rivers	MAT*	K095I	Elem Alg Int College Readiness	32500	Traditional Remedial
Three Rivers	MAT*	K095I	Elem Alg Int College Readiness	32501	Traditional Remedial
Three Rivers	MAT*	K095I	Elem Alg Int College Readiness	32502	Traditional Remedial
Three Rivers	MAT*	K095I	Elem Alg Int College Readiness	32503	Traditional Remedial
Three Rivers	MAT*	K137S	Interm Alg Embedded	32293	Embedded Course
Three Rivers	MAT*	K137S	Interm Alg Embedded	32294	Embedded Course
Three Rivers	MAT*	K137S	Interm Alg Embedded	32295	Embedded Course
Three Rivers	MAT*	K137S	Interm Alg Embedded	32296	Embedded Course
Three Rivers	MAT*	K137S	Interm Alg Embedded	32506	Embedded Course
Three Rivers	MAT*	K137S	Interm Alg Embedded	32507	Embedded Course
Tunxis	ENG*	J093	Intro to Coll Rdg & Wrtg #5065	3265	Traditional Remedial
Tunxis	ENG*	J093	Intro to Coll Rdg & Wrtg #5067	3830	Traditional Remedial
Tunxis	ENG*	J093	Intro to Coll Rdg & Wrtg #5070	3266	Traditional Remedial
Tunxis	ENG*	J093	Intro to Coll Rdg & Wrtg #5073	3267	Traditional Remedial
Tunxis	ENG*	J093	Intro to Coll Rdg & Wrtg #5077	4766	Traditional Remedial
Tunxis	ENG*	J093	Intro to Coll Rdg & Wrtg #5079	5122	Traditional Remedial
Tunxis	ENG*	J093	Intro to Coll Rdg & Wrtg #5083	5123	Traditional Remedial
Tunxis	ENG*	J093	Intro to Coll Rdg & Wrtg #5085	5124	Traditional Remedial
Tunxis	ENG*	J096	Intr to Coll Eng (#3159)	5060	Traditional Remedial
Tunxis	ENG*	J096	Intro Coll Eng (GS only/#4980)	5046	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5041	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5042	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5043	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5044	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5045	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5047	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5048	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5049	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5050	Traditional Remedial

College	Subject	Course Number	Course Title	CRN	Type
Tunxis	ENG*	J096	Intro. to College English	5051	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5052	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5053	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5054	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5055	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5056	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5057	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5058	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5059	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5061	Traditional Remedial
Tunxis	ENG*	J096	Intro. to College English	5062	Traditional Remedial
Tunxis	ENG*	J101	English Composition	5065	Embedded Course
Tunxis	ENG*	J101	English Composition	5067	Embedded Course
Tunxis	ENG*	J101	English Composition	5070	Embedded Course
Tunxis	ENG*	J101	English Composition	5073	Embedded Course
Tunxis	ENG*	J101	English Composition	5077	Embedded Course
Tunxis	ENG*	J101	English Composition	5079	Embedded Course
Tunxis	ENG*	J101	English Composition	5083	Embedded Course
Tunxis	ENG*	J101	English Composition	5085	Embedded Course
Tunxis	MAT*	J085	Pre-Algebra & Elem Algebra	5101	Transitional Developmental
Tunxis	MAT*	J085	Pre-Algebra & Elem Algebra	5102	Transitional Developmental
Tunxis	MAT*	J085	Pre-Algebra & Elem Algebra	5103	Transitional Developmental
Tunxis	MAT*	J085	Pre-Algebra & Elem Algebra	5104	Transitional Developmental
Tunxis	MAT*	J085	Pre-Algebra & Elem Algebra	5105	Transitional Developmental
Tunxis	MAT*	J085	Pre-Algebra & Elem Algebra	5106	Transitional Developmental
Tunxis	MAT*	J085	Pre-Algebra & Elem Algebra	5107	Transitional Developmental
Tunxis	MAT*	J094	Introductory Algebra	5108	Intensive
Tunxis	MAT*	J094	Introductory Algebra	5109	Intensive
Tunxis	MAT*	J094	Introductory Algebra	5110	Intensive
Tunxis	MAT*	J094	Introductory Algebra	5111	Intensive
Tunxis	MAT*	J094	Introductory Algebra	5112	Intensive
Tunxis	MAT*	J095	Elem Algebra Foundations	3406	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	3410	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	3411	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	3414	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	3415	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	3417	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	3420	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	3423	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	3424	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	3714	Traditional Remedial
Tunxis	MAT*	J095	Elem Algebra Foundations	4752	Traditional Remedial
Tunxis	MAT*	J139	Elem & Intermed Alg	4419	Embedded Course
Tunxis	MAT*	J139	Elem & Intermed Alg	4753	Embedded Course
Tunxis	MAT*	J139	Elem & Intermed Alg	4754	Embedded Course

University	Subject	Course Number	Course Title	CRN	Type	Link
Central	ENG	099	Remedial English	11058	Traditional Remedial	
Central	ENG	099	Remedial English	11059	Traditional Remedial	
Central	ENG	099	Remedial English	11060	Traditional Remedial	
Central	ENG	099	Remedial English	11064	Traditional Remedial	
Central	ENG	099	Remedial English	11065	Traditional Remedial	
Central	ENG	099	Remedial English	11066	Traditional Remedial	
Central	ENG	099	Remedial English	11067	Traditional Remedial	
Central	ENG	105	Enhncd Intro to College Writng	11071	Embedded Course	A
Central	ENG	105	Enhncd Intro to College Writng	11080	Embedded Course	B
Central	ENG	105	Enhncd Intro to College Writng	11084	Embedded Course	C
Central	ENG	105	Enhncd Intro to College Writng	11088	Embedded Course	D
Central	ENG	105	Enhncd Intro to College Writng	11092	Embedded Course	E
Central	ENG	105	Enhncd Intro to College Writng	11096	Embedded Course	F
Central	ENG	105	Enhncd Intro to College Writng	11061	Embedded Course	G
Central	ENG	105	Enhncd Intro to College Writng	11100	Embedded Course	H
Central	ENG	105	Enhncd Intro to College Writng	11068	Embedded Course	I
Central	ENG	105	Enhncd Intro to College Writng	11075	Embedded Course	J
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11072	Embedded Course	A
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11081	Embedded Course	B
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11085	Embedded Course	C
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11089	Embedded Course	D
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11093	Embedded Course	E
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11097	Embedded Course	F
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11062	Embedded Course	G
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11101	Embedded Course	H
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11069	Embedded Course	I
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11076	Embedded Course	J
Central	MATH	099	Elementary Algebra	12055	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12056	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12057	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12058	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12059	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12060	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12061	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12062	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12064	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12065	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12066	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12068	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12069	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12073	Traditional Remedial	
Central	MATH	101	Intermediate Algebra (Combo)	12100	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12104	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12105	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12110	Embedded Course	

University	Subject	Course Number	Course Title	CRN	Type	Link
Eastern	ENG	100P	College Writing Plus		Embedded	
Eastern	ENG	100P	College Writing Plus		Embedded	
Eastern	ENG	100P	College Writing Plus		Embedded	
Eastern	ENG	100P	College Writing Plus		Embedded	
Eastern	ENG	100P	College Writing Plus		Embedded	
Eastern	ENG	100P	College Writing Plus		Embedded	
Eastern	ENG	100P	College Writing Plus		Embedded	
Eastern	ENG	100P	College Writing Plus		Embedded	
Eastern	ENG	100P	College Writing Plus		Embedded	
Eastern	MAT	99	Algebra Essentials		Intensive	
Eastern	MAT	99	Algebra Essentials		Intensive	
Eastern	MAT	99	Algebra Essentials		Intensive	
Eastern	MAT	99	Algebra Essentials		Intensive	
Eastern	MAT	99	Algebra Essentials		Intensive	
Eastern	MAT	99	Algebra Essentials		Intensive	
Eastern	MAT	99	Algebra Essentials		Intensive	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	135P	Math For Liberal Arts Plus		Embedded	
Eastern	MAT	139P	Number Systems Plus		Embedded	
Eastern	MAT	139P	Number Systems Plus		Embedded	
Eastern	MAT	139P	Number Systems Plus		Embedded	
Eastern	MAT	139P	Number Systems Plus		Embedded	
Eastern	MAT	155P	Precalculus Mathematics Plus		Embedded	
Eastern	MAT	155P	Precalculus Mathematics Plus		Embedded	
Eastern	MAT	155P	Precalculus Mathematics Plus		Embedded	
Central	ENG	099	Remedial English	11058	Traditional Remedial	
Central	ENG	099	Remedial English	11059	Traditional Remedial	
Central	ENG	099	Remedial English	11060	Traditional Remedial	
Central	ENG	099	Remedial English	11064	Traditional Remedial	
Central	ENG	099	Remedial English	11065	Traditional Remedial	
Central	ENG	099	Remedial English	11066	Traditional Remedial	
Central	ENG	099	Remedial English	11067	Traditional Remedial	
Central	ENG	105	Enhncd Intro to College Writng	11071	Embedded Course	A
Central	ENG	105	Enhncd Intro to College Writng	11080	Embedded Course	B
Central	ENG	105	Enhncd Intro to College Writng	11084	Embedded Course	C
Central	ENG	105	Enhncd Intro to College Writng	11088	Embedded Course	D
Central	ENG	105	Enhncd Intro to College Writng	11092	Embedded Course	E

University	Subject	Course Number	Course Title	CRN	Type	Link
Central	ENG	105	Enhncd Intro to College Writng	11096	Embedded Course	F
Central	ENG	105	Enhncd Intro to College Writng	11061	Embedded Course	G
Central	ENG	105	Enhncd Intro to College Writng	11100	Embedded Course	H
Central	ENG	105	Enhncd Intro to College Writng	11068	Embedded Course	I
Central	ENG	105	Enhncd Intro to College Writng	11075	Embedded Course	J
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11072	Embedded Course	A
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11081	Embedded Course	B
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11085	Embedded Course	C
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11089	Embedded Course	D
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11093	Embedded Course	E
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11097	Embedded Course	F
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11062	Embedded Course	G
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11101	Embedded Course	H
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11069	Embedded Course	I
Central	ENG	105P	Enhcd Intrdn Collg Wrtng Wrksp	11076	Embedded Course	J
Central	MATH	099	Elementary Algebra	12055	Traditional Remedial	
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Central	MATH	099	Elementary Algebra	12057	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12058	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12059	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12060	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12061	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12062	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12064	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12065	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12066	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12068	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12069	Traditional Remedial	
Central	MATH	099	Elementary Algebra	12073	Traditional Remedial	
Central	MATH	101	Intermediate Algebra (Combo)	12100	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12104	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12105	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12110	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12112	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12113	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12114	Embedded Course	
Central	MATH	101	Intermediate Algebra (Combo)	12116	Embedded Course	

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning

Termination of a Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Technology Studies: Wastewater Option, leading to an Associate of Science degree at Three Rivers Community College

A True Copy:

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

**ITEM**

Termination of a program in Technology Studies: Wastewater Option, leading to an Associate of Science degree at Three Rivers Community College; and the termination of linked Wastewater certificate program leading to a certificate at Three Rivers Community College.

**BACKGROUND****Summary**

Three Rivers Community College is proposing to terminate the Associate of Science: Technology Studies Wastewater Option program and its linked Wastewater certificate program. These programs have experienced a continuous low enrollment from year to year for an extensive period of time (maximum of 4 students enrolled in associate program and maximum of 2 students enrolled in certificate program), and have had no graduates for the past 10 years.

**Rationale**

Three Rivers Community College has identified insufficient student demand to sustain these programs, as evidenced in the longstanding low enrollment patterns and zero graduates in the past decade. The rationale for terminating this associate program and its linked certificate is further justified by the lack of workforce demand. CT Department of Labor projections indicate negligible annual growth for wastewater technicians within the State of Connecticut, with an average growth rate of just .8%, and only 34 average annual job openings.

**Phase Out/Teach Out Strategy**

There are 4 students currently enrolled in the Technology Studies: Wastewater Option Associate of Science degree program and 1 student enrolled in its linked Wastewater certificate program. Each student will be contacted via email and certified mail to inform them of the program termination, the effective date of the termination and phase out period, and the plan instituted to enable completion of their program requirements during the established phase out period. For students wishing to complete their program requirements, students will be able to substitute 3 courses currently offered at GWCC in Clean Water Management for the first 3 courses of the TRCC wastewater option, or may complete equivalent contact hours of wastewater content through online coursework at CA State University Sacramento. The final course in the wastewater option will be taught as an independent study at TRCC. For students wishing to change their program, students will be advised of all other possible program alternatives.

**Resources**

No additional resources are required for this termination and no resource impacts related to faculty, physical facilities, equipment, library resources, etc. are anticipated with the termination of this low demand program. Some resource savings are expected through the termination of these programs through decrease of advising time within the Academic and Student Services Divisions.



# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## SECTION 1: GENERAL INFORMATION

<b>Institution:</b> Three Rivers Community College		Date of Submission to BOR Office:
Discontinued Program: <i>Associate of Science: Technology Studies: Wastewater Option</i> CIP:		DHE# (if available):
Accreditation Date:		
Phase Out /Teach Out Period <i>2 years</i>	Expected Date of Program Termination <i>June 2016</i>	
<b>Program Characteristics</b>		
Name of Program: <i>Technology Studies: Wastewater Option</i>		
Degree: Title of Award (e.g. Master of Arts) <i>Associate of Science</i>		
Certificate: (specify type and level) <i>linked certificate program (Wastewater Certificate)</i>		
Modality of Program: <input checked="" type="checkbox"/> On ground <input type="checkbox"/> Online <input type="checkbox"/> Combined		
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: <i>Norwich campus</i>		
<b>Institutional Contact for this Proposal:</b> <i>Dr. Ann Branchini</i>	Title: <i>Dean of Academic Affairs</i>	Tel.: (860) 215-9004 e-mail: <i>ABranchini@trcc.commnet.edu</i>

## 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.

### Reason(s) for Technology Studies: Wastewater option termination recommendation:

Insufficient enrollment for an extensive period of time, and no graduates for 10 years.

### Annual enrollment

	2011 Spring	2011 Summer	2011 Fall	2012 Spring	2012 Fall	2013 Spring	2013 Fall	2014 Spring
Tech Studies: Wastewater	2	1	3	2	0	2	4	4
Wastewater Certificate	0	0	0	1	0	0	2	1
These numbers reflect duplicated headcount of students enrolled.								

### Degrees granted

None in the last ten years.

### Workforce demand

The lack of workforce demand further justifies terminating the TRCC Technology Studies: Wastewater associate degree program and linked certificate. From the CTDOL's [Connecticut Job & Career ConneCTion](#) website, negligible growth is projected in the demand for this specialty:


### WASTEWATER TECHNICIANS Occupation Outlook:

Region	Employment		Average Annual Growth Rate	Average Annual Job Openings
	2010	2020		
State of Connecticut	950	1,040	0.8%	34

Regarding current wastewater workforce demands: a search within 25 miles, resulted in a small return (1 opening). The search was broadened to 50 miles (adding the search term "technician" as the return was very large and seemed to include many positions requiring 4-year degrees). Searching by "wastewater AND technician" returned 10 results – several of which also require a 4-year degree:

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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



Keywords

Location(s)

CT's Employment Exchange





Home | Select Language |

10 jobs found matching wastewater AND technician in 06360 (within 50 miles)





Jobs 1 - 10 of 10

Sort by: Relevance | Date





**Resident Engineer**  
URS Corporation (Rocky Hill, CT)  
first acquired 2014-3-4 2:04 PM

Share this job:  









**Chief Inspector**  
URS Corporation (Rocky Hill, CT)  
first acquired 2014-3-14 1:23 PM

Share this job:  









**Office Engineer**  
URS Corporation (Rocky Hill, CT)  
first acquired 2014-3-4 1:59 PM

Share this job:  









**Senior Inspector**  
URS Corporation (Rocky Hill, CT)  
first acquired 2014-3-4 1:35 PM

Share this job:  









**Nuclear Chemistry Technician CPF**  
Dominion Resources Services, Inc. (Waterford, CT)  
first acquired 2014-4-24 1:36 AM

Share this job:  









**Field Service Technician, Sr./HACH/WALLINGFORD/STAMFORD/CT**  
Danaher (Wallingford, CT)  
first acquired 2014-3-27 2:01 AM

Share this job:  









**Service Technician**  
Effluent Technologies (Portsmouth, RI)  
first acquired 2014-4-2 8:06 AM

Share this job:  









**Inspector**  
URS Corporation (Rocky Hill, CT)  
first acquired 2014-3-4 1:34 PM

Share this job:  





**Service Technician Wastewater**  
White Water Incorporated (Charlton, MA)  
first acquired 2014-5-1 0:05 AM

Share this job:  





**InSite Technician - Bristol, CT**  
Clean Harbors Environmental Services, Inc. (Bristol, CT)  
first acquired 2014-4-7 7:23 PM

Share this job:  





Jobs 1 - 10 of 10

## 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.)

No new students will be enrolled in the Technology Studies: Wastewater option associates degree and certificate programs effective the date of program cancellation. The college's website will be updated to reflect that this degree program is no longer available.

Each of the 5 ( 4 degree; 1 certificate) students who are currently enrolled in the Technology Studies: Wastewater program will be contacted via email and certified mail to inform them that:

- program termination will occur,
- they will have two years from the date of program cancellation to complete the Technology Studies: Wastewater degree/certificate requirements,
- if they wish to continue working toward a Technology Studies: Wastewater option degree/certificate, three courses currently offered in the Gateway Community College Clean Water Management certificate will be substituted for the first three courses of the wastewater option. The

## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

fourth and final course in the wastewater option is an internship that will be taught as an independent study at TRCC. Alternatively, an online resource offered by California State University Sacramento (equating to 180 contact hours of wastewater content) will satisfy the first three courses of the wastewater option. Again, the fourth and final course in the wastewater option is an internship that will be taught as an independent study at TRCC.

- they will be advised of all other possible degree alternatives (e.g. informing them that the TRCC courses for their current degree may count towards another degree program).

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning

Termination of a Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Aviation Maintenance Technology, leading to an Associate of Science degree at Three Rivers Community College

A True Copy:

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

**ITEM**

Termination of a program in Aviation Maintenance Technology, leading to an Associate of Science degree at Three Rivers Community College.

**BACKGROUND****Summary**

Three Rivers Community College is proposing to terminate a program in Aviation Maintenance Technology, leading to an Associate of Science degree, due to consistent low enrollment and a zero percent graduation rate in the past 10 years. Termination of an academic program must receive approval from the Board of Regents, following the policy for academic program approval adopted in January 2012.

**Rationale**

Three Rivers Community College is requesting the termination of this Aviation Maintenance Technology degree program due to having continuous low enrollment, ranging from 1 to 4 students, and no graduates in the past decade. With the termination of the local Ellis Vocation-Technical High School Aviation program, enrollment increases in this program are not projected. The decision to terminate is further reinforced by the lack of workforce demand in this specialty field. CT Department of Labor projections indicate zero percent average annual growth rate for Aircraft Mechanics and Service Technicians within the State of Connecticut.

**Phase Out/Teach Out Strategy**

There are 3 students currently enrolled in the Aviation Maintenance Technology program. Students will be contacted via email and certified mail to inform them of: the program termination, the effective date of the termination and phase out period, and the plan to enable completion of their program requirements during the established phase out period. Students who wish to complete their program requirements will be permitted to make arrangements for the aviation mechanic's portion of the program with either Connecticut Aero Tech or the Stratford School for Aviation Maintenance. Students wishing to change their program will be advised of all other possible program alternatives, and will be informed that the TRCC courses for their current degree may count towards another degree program.

**Resources**

No additional resources are required for this termination, and no resource impacts related to faculty, physical facilities, equipment, library resources, etc. are anticipated with the termination of this low demand program.

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## SECTION 1: GENERAL INFORMATION

<b>Institution:</b> Three Rivers Community College	Date of Submission to BOR Office:	
Discontinued Program: <i>Associate of Science: Aviation Maintenance Technology</i> CIP: DHE# (if available):		
Accreditation Date:		
Phase Out /Teach Out Period <i>Two Years</i> Expected Date of Program Termination <i>June 2016</i>		
<b>Program Characteristics</b>		
Name of Program: <i>Aviation Maintenance Technology</i>		
Degree: Title of Award (e.g. Master of Arts) <i>Associate of Science</i>		
Certificate: (specify type and level)		
Modality of Program: <input checked="" type="checkbox"/> On ground <input type="checkbox"/> Online <input type="checkbox"/> Combined		
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: <i>Norwich campus</i>		
<b>Institutional Contact for this Proposal:</b> <i>Dr. Ann Branchini</i>	Title: <i>Dean of Academic Affairs</i>	Tel.: (860) 215-9004 e-mail: <i>ABranchini@trcc.commnet.edu</i>

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

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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.*

### Reason(s) for Aviation Maintenance termination recommendation:

Insufficient enrollment for an extensive period of time, and no graduates for 10 years. A primary factor contributing to this program's declining enrollment trend over the years was the termination of the local Ellis Vocational-Technical High School Aviation program.

### Annual enrollment

2011 Fall	2012 Spring	2012 Fall	2013 Spring	2013 Fall	2014 Spring
4	2	3	3	2	3
These numbers reflect duplicated headcount of students enrolled.					

### Degrees granted

None in the last ten years.

### Workforce demand

The lack of workforce demand further justifies terminating the TRCC Aviation Maintenance associate degree program. From the CTDOL's [Connecticut Job & Career Connection](#) website zero growth is projected in the demand for this specialty:

### AIRCRAFT MECHANICS AND SERVICE TECHNICIANS Occupation Outlook:

Region	Employment		Average Annual Growth Rate	Average Annual Job Openings
	2010	2020		
State of Connecticut	2,930	2,930	0%	88



## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

Regarding current Aviation Maintenance workforce demand: a search within 25 miles returns 8 job openings, six of which require National Guard membership:

[Home](#) | [States](#) | [Cities](#)

**CT.JOBS**  
CT's Employment Exchange

Keywords  
aviation AND maintenance  
job title, industry, keyword, or company

Location(s)  
06360  
enter zip code or

[Home](#) | [Select Language](#) | ▼

8 jobs found matching aviation AND maintenance in 06360 (within 25 miles)

Jobs 1 - 8 of 8

Sort by: [Relevance](#) | [Date](#)

**ULLS-A(E) CFT**  
[QinetiQ](#) (Groton, CT)  
first acquired 2014-4-22 0:13 AM

Share this job:  
[Email](#) [in](#) [f](#) [t](#)

**ULLS-A(E) CFT**  
[QinetiQ North America](#) (Groton, CT)  
first acquired 2014-4-22 3:10 AM

Share this job:  
[Email](#) [in](#) [f](#) [t](#)

**Aircraft Mechanic**  
[Department of Defense - Dept. of the Army](#) (Groton, CT)  
first acquired 2014-5-1 6:13 PM

Share this job:  
[Email](#) [in](#) [f](#) [t](#)

**Electronics Mechanic**  
[Department of Defense - Dept. of the Army](#) (Groton, CT)  
first acquired 2014-4-18 1:37 AM

Share this job:  
[Email](#) [in](#) [f](#) [t](#)

**Electronic Integrated Systems Mechanic**  
[Department of Defense - Dept. of the Army](#) (Groton, CT)  
first acquired 2014-4-17 10:07 AM

Share this job:  
[Email](#) [in](#) [f](#) [t](#)

**Supply Technician**  
[Department of Defense - Dept. of the Army](#) (Groton, CT)  
first acquired 2014-5-1 6:11 PM

Share this job:  
[Email](#) [in](#) [f](#) [t](#)

**Electronic Integrated Systems Mechanic**  
[Department of Defense - Dept. of the Army](#) (Groton, CT)  
first acquired 2014-4-9 1:44 AM

Share this job:  
[Email](#) [in](#) [f](#) [t](#)

**Supply Technician**  
[Department of Defense - Dept. of the Army](#) (Groton, CT)  
first acquired 2014-4-9 1:44 AM

Share this job:  
[Email](#) [in](#) [f](#) [t](#)

Jobs 1 - 8 of 8

## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

A search within 50 miles returns 35 job openings (including the eight above), many more of which also require National Guard membership as well as several that require four-year degrees.

Home | States | Cities |

**CTJOBS**  
CT's Employment Exchange

Keywords:   
Location(s):   
job title, industry, keyword, or company enter zip code or

Home | Select Language |

35 jobs found matching aviation AND maintenance in 06360 (within 50 miles)

Jobs 1 - 10 of 35 Next >

Sort by: Relevance | Date

**ULLS-A(E) CFT**  
QinetiQ (Groton, CT)  
first acquired 2014-4-22 0:13 AM

Share this job:

**Strategic Account Manager**  
Verint Systems, Inc. (Providence, RI)  
first acquired 2014-4-23 11:30 PM

Share this job:

**Military Customer Support Engr F117 Hardware**  
United Technologies Corporation (East Hartford, CT)  
first acquired 2014-4-9 8:58 PM

Share this job:

**Senior Treasury Analyst / Treasury Manager**  
United Technologies Corporation (East Hartford, CT)  
first acquired 2014-4-2 11:07 PM

Share this job:

**Quality Engineer, Mirabel Canada**  
United Technologies Corporation (Middletown, CT)  
first acquired 2014-3-31 10:18 AM

Share this job:

**Operations Manager**  
Bombardier Aerospace (Hartford, CT)  
first acquired 2014-4-30 9:32 AM

Share this job:

**Strategic Account Manager**  
Verint Systems, Inc. (Hartford, CT)  
first acquired 2014-4-23 11:30 PM

Share this job:

**Executive Assistant**  
Textron (Providence, RI)  
first acquired 2014-4-15 11:48 PM

Share this job:

**ULLS-A(E) CFT**  
QinetiQ North America (Groton, CT)  
first acquired 2014-4-22 3:10 AM

Share this job:

**Quality Inspector 2 or 3 (Worcester, MA) (P)**  
Honeywell (Canton, MA)  
first acquired 2014-3-4 4:02 PM

Share this job:

Jobs 1 - 10 of 35 Next >

### 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.)

No new students will be enrolled in the Aviation Maintenance Technology associates degree program effective the date of program cancellation. The college's website will be updated to reflect that this degree program is no longer available.

The original program included an articulation agreement with Ellis Vocational-Technical High School for a

## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

total of 22 college credits for that school's aviation mechanic's program. That program was terminated at Ellis and transferred to Connecticut Aero Tech School with whom no articulation agreement exists. The only other comparable program to the one at Aero Tech, is Stratford School for Aviation Maintenance Technicians.

Gateway Community College, Housatonic Community College, and Three Rivers Community College offer this degree program, all of which have similar requirements as the TRCC program. The requirements are that they complete a Federal Aviation Agency (FAA) approved Airframe and Powerplant Mechanics program offered at FAA-approved schools and have an active license. Thirty credits will be granted to individuals who have an active FAA license. An additional thirty-two (32) credits of college instruction must be completed for the Associate in Science degree.

Each of the 3 students who are currently enrolled in the Aviation Maintenance Technology program will be contacted via email and certified mail to inform them that:

- program termination will occur,
- they will have two years from the date of program cancellation to complete the Aviation Maintenance Technology degree requirements,
- if they wish to continue working toward an Aviation Maintenance Technology degree, they will be permitted to make arrangements for the aviation mechanic's portion of the program with either Connecticut Aero Tech or the Stratford School for Aviation Maintenance.
- they will be advised of all other possible degree alternatives (e.g. informing them that the TRCC courses for their current degree may count towards another degree program).

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning  
Termination of a Program  
[date]

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Personal Financial Planning leading to a Certificate at Manchester Community College

A True Copy:

---

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

## ITEM

Termination of a certificate program in Personal Financial Planning at Manchester Community College

## BACKGROUND

Summary

Enrollment in the Personal Financial Planning Certificate program has been low for the past 5 years (6, 7, 9, 11, and 6 students) with the number of students graduating each year of 6, 4, 0, 1, 0, respectively. Of the 6 courses in the Personal Financial Planning curriculum, 5 are unique to the certificate, and it has been increasingly difficult to run the courses due to low enrollment. Also, competition for Certified Financial Planning students has increased due to the growing number of online professional programs designed specifically to prepare students to take the CFP certification exam.

The 5 Personal Financial Planning courses were offered during the 2012-2013 and 2013-2014 academic years and students were advised to take them to finish the certificate. Any students who were not able to complete during that time period are now advised to finish their courses at a CFP education center which can be found online at the CFP site.

Need for the ProgramCurriculumStudentsFacultyLearning ResourcesFacilitiesFiscal NoteReview of Documents:

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

Accreditation:

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## SECTION 1: GENERAL INFORMATION

<b>Institution:</b> Manchester Community College		<b>Date of Submission to BOR Office:</b>	
Discontinued Program: Personal Financial Planner Certificate		CIP: B13BJ07	DHE# (if available):
Date: NA		Accreditation	
Phase Out /Teach Out Period: 2012-14		Expected Date of Program Termination: Spring 2014	
<b>Program Characteristics</b>			
Name of Program: Personal Financial Planner Certificate			
Degree: Title of Award (e.g. Master of Arts) Certificate			
Certificate: (specify type and level) Credit			
Modality of Program: X On ground    Online    Combined			
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: Business Dept., Main campus			
<b>Institutional Contact for this Proposal:</b> Catherine Seaver		Title: Division Director	Tel.: 860-512-2622 e-mail: cseaver@mcc.commnet.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.*

Enrollment in the Personal Financial Planning Certificate program has been low for the past five years (6, 7, 9, 11 and 6 students) with the number of students graduating each year of 6, 4, 0, 1, and 0, respectively. Of the six courses in the Personal Financial Planning curriculum, five of the courses are unique to the certificate and it has been increasingly difficult to run the courses due to low enrollment. Also, competition for CFP students has increased due to the growing number of online professional programs designed specifically to prepare students to take the CFP certification exam.

### 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.)*

The five Personal Financial Planning courses were offered during the 2012-13 and 2013-14 academic years and students were advised to take them to finish the certificate. Any students who were not able to complete during that time period are now advised to finish their courses at a CFP education center which can be found online at the CFP site.

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning  
Termination of a Program  
[date]

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Sustainable Energy leading to a Certificate at Manchester Community College

A True Copy:

---

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



**ITEM**

Termination of a certificate in Sustainable Energy at Manchester Community College.

**BACKGROUND**Summary

Enrollment in the Sustainable Energy Certificate program has been steady at 6 students for the past 4 years. There are 3 courses unique to this program. It has been very difficult getting enough enrollment to run these 3 courses, and students often have to substitute another course or complete a course as an independent study in order to graduate.

The remaining students in the Sustainable Energy Certificate will be given the option to complete the needed 3 courses as independent study courses or substitute another environmental science or engineering course in its place for graduation.

Need for the ProgramCurriculumStudentsFacultyLearning ResourcesFacilitiesFiscal NoteReview of Documents:

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

Accreditation:

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## SECTION 1: GENERAL INFORMATION

<b>Institution:</b> Manchester Community College		<b>Date of Submission to BOR Office:</b>	
Discontinued Program: Sustainable Energy Certificate CIP: B13BJ60 DHE# (if available):		Accreditation Date:	
NA			
Phase Out /Teach Out Period: 2012-14 Expected Date of Program Termination: Spring 2014			
<b>Program Characteristics</b>			
Name of Program: Sustainable Energy Certificate			
Degree: Title of Award (e.g. Master of Arts) Certificate			
Certificate: (specify type and level) Credit			
Modality of Program: X On ground Online Combined			
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: Engineering Dept, Main campus			
<b>Institutional Contact for this Proposal:</b> Catherine Seaver		Title: Division Director	Tel.: 860-512-2622 e-mail: cseaver@mcc.commnet.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.*

Enrollment in the Sustainable Energy Certificate program has been steady at six students for the past four years. There are three courses unique to this program, EGR\*241 Sustainable Electrical Systems, EGR\*242 Sustainable Building Systems, and EGR\*240 Current Topics in Sustainable Engineering. It has been very difficult getting enough enrollment to run these three courses and students often have to substitute another course or complete the course as an independent study in order to graduate.

### 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.)*

The remaining students in the Sustainable Energy Certificate will be given the option to complete the needed EGR\*240, EGR\*241 or EGR\*242 courses as independent study courses or to substitute another environmental science or engineering course in its place for graduation.

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning  
Termination of a Program  
[date]

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Taxation leading to a Certificate at Manchester Community College

A True Copy:

---

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

## ITEM

Termination of a certificate in Taxation at Manchester Community College

## BACKGROUND

Summary

Enrollment in the Taxation Certificate program has been consistently low (3 students or fewer) for the past 4 years. There is 1 course unique to this program that the college has not been able to run due to low enrollment for several years. This makes it very difficult for the students to complete the program's curriculum. The rest of the courses in the Taxation Certificate are also found in the Accounting Certificate so students will be advised to select the Accounting Certificate in the future if they express a desire for education in the field of accounting and/or taxation.

There is currently 1 student enrolled in the Taxation Certificate program. This student has been advised to take an alternative course for the unique course which will be substituted for graduation.

Need for the ProgramCurriculumStudentsFacultyLearning ResourcesFacilitiesFiscal NoteReview of Documents:

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

Accreditation:

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## SECTION 1: GENERAL INFORMATION

<b>Institution:</b> Manchester Community College		<b>Date of Submission to BOR Office:</b>	
Discontinued Program: Taxation Certificate CIP: B13BJ38 DHE# (if available):		Accreditation Date: NA	
Phase Out /Teach Out Period: 2013-14 Expected Date of Program Termination: Spring 2014			
<b>Program Characteristics</b>			
Name of Program: Taxation Certificate			
Degree: Title of Award (e.g. Master of Arts) Certificate			
Certificate: (specify type and level) Credit			
Modality of Program: X On ground      Online      Combined			
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: Business Dept., Main campus			
<b>Institutional Contact for this Proposal:</b> Catherine Seaver		<b>Title:</b> Division Director	<b>Tel.:</b> 860-512-2622 <b>e-mail:</b> cseaver@mcc.commnet.edu

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

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<b>Log of BOR Steps Towards Discontinuation Approval:</b>	
<b>Resolution number for BOR Approval:</b>	<b>Date of Approval:</b>
<b>Conditions for Discontinuation Approval (if any)</b>	

# 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.*

Enrollment in the Taxation Certificate program has been consistently low (3 students or fewer) for the past four years. There is one course unique to this program, ACC8242 Federal Taxes II, that we have not been able to run due to low enrollment for several years. This makes it very difficult for the students to complete the program's curriculum. The rest of the courses in the Taxation Certificate are also found in the Accounting Certificate so students will be advised to select the Accounting Certificate in the future if they express a desire for education in the field of accounting and/or taxation.

### 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 currently one student enrolled in the Taxation Certificate program. This student has been advised to take an alternative course for ACC\*242 Federal Taxes II which will be substituted for graduation.

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning  
Termination of a Program  
[date]

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Forensic Science Track of the Biotechnology Program leading to an Associates of Science degree at Middlesex Community College

A True Copy:

---

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

**BACKGROUND**

Background and rationale are included in the Staff Report Summary for the Modification of the Biotechnology program at Middlesex Community College



# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## SECTION 1: GENERAL INFORMATION

<b>Institution:</b> Middlesex Community College		<b>Date of Submission to BOR Office:</b>	
Discontinued Program: Forensic Science Track of Biotechnology Program		CIP:	DHE# (if available):
Accreditation Date: <b>Reaccredited March 2014; Next Evaluation Fall 2022</b>			
Phase Out /Teach Out Period Fall 2014-Spring 2016 Expected Date of Program Termination Fall 2016			
<b>Program Characteristics</b>			
Name of Program: Forensic Science Track of the Biotechnology Program			
Degree: Title of Award (e.g. Master of Arts) Associates of Science			
Certificate: (specify type and level)			
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: Science, Allied Health and Engineering Division; main campus			
<b>Institutional Contact for this Proposal:</b> Dr. Steven Minkler		Title: Dean of Academic Affairs	Tel.: 860.343.5706 e-mail: sminkler@mxcc.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.*

As part of our current efforts to update, revise, and revitalize our biotechnology degree program, our first step is to remove the forensic science track. This program revision is an outcome of careful review that was spurred by a federal grant, the Health and Life Sciences Career Initiative, aimed at providing targeted certifications, industry-recognized credentials, and Associate degrees to veterans, Trade Adjusted Assistance (TAA) impacted, dislocated, and other un/under-employed workers statewide for careers in health and life sciences through implementation of evidence-based program strategies such as curriculum innovation.

We recommend removing the forensic science track, as it is no longer a necessary addition to the biotechnology program, nor is it sufficient in training students for a career in forensic science at the associates' level. Graduates can be employed in forensic science positions using a regular biotechnology degree. For those types of jobs, the biotechnology skill set is necessary and the three criminal justice courses that the track required do not add substantially to the skill set of a laboratory technician. More importantly, all forensic positions can utilize the laboratory skills taught, and should have the courses that are not included in the forensic science track, e.g. microbiology and the biotechnology internship which both provide students with important skills for employability. Any criminal justice focus that is still desired by a student would be better fulfilled by taking an application oriented course, like a criminalistics course that is currently being developed at our college, or other existing criminal justice courses, as their open elective. This would be a sufficient course for contributing those types of hands-on forensics skills and/or a better understanding of application to criminal justice in addition to the biology laboratory skills they would acquire in the Biotechnology program courses. Based on conversations with industry and academia, the forensic science track is not necessary and the biotechnology one is sufficient and contains a skill set that is more likely to lead to employment.

### 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.)*

As we currently have students enrolled in the forensic science track (Table 1 below) these student will continue to have the option of graduating within this track for two more years as part of the phase out. This will be accomplished simply because the four courses that differ between the forensic science and regular biotechnology tracks are not being eliminated from the college. The three criminal justice courses are part of the criminal justice degree program here at the college. The fourth course is PHY\*110 Introductory Physics, which is also continuing at the college as part of other programs like radiologic technology and Technology Studies: Manufacturing Machine Technology option. We do not foresee any problems in supporting students to completion of the forensic science track.

### MIDDLESEX COMMUNITY COLLEGE

#### Biotechnology Program Enrollments & Graduates AY2009-AY2013

	Fa09	Sp10	Fa10	Sp11	Fa11	Sp12	Fa12	Sp13	Fa13	Sp14
<b>Forensic Science Track</b>										
FT Enrollment	8	7	6	4	6	5	12	8	10	4
PT Enrollment	1	1	3	7	4	5	3	5	4	6
<b>Total Enrollment</b>	<b>9</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>13</b>	<b>14</b>	<b>10</b>
Graduation Numbers (spring)		0		0		0		3		2

Source: Banner Census & Graduation Data

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning  
Termination of a Program  
[date]

RESOLVED: That the Board of Regents for Higher Education approve the discontinuation of a program in Machine Technology, Level 1 leading to a Certificate at Quinebaug Valley Community College

A True Copy:

---

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

## ITEM

Termination of a program in Machine Technology, Level 1 leading to a Certificate at Quinebaug Valley Community College

## BACKGROUND

Summary

In 1999, two certificates were developed to meet the need of Connecticut's manufacturers: Machine Technology, Level 1 and Machine Technology, Level II. At that time, employment could be secured after completing Level 1. QVCC adopted the Asnuntuck model along with the other 2 Advanced Manufacturing Technology Centers when they were established in 2012. However, students are not competitive for employment after only completing the Level 1 certificate; completion of both certificates is necessary. Thus, we are combining the certificates into one. Both QVCC and Asnuntuck are terminating Level 1 and simultaneously submitting a program modification for Level II.

## 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: 5/14/14

Discontinued Program: **Banner #MJ83** CIP: **48-0510** DHE# (if available): **008147** Accreditation Date: **9/1/99**

Phase Out /Teach Out Period Through **12/31/14** Expected Date of Program Termination **12/31/14**

#### Program Characteristics

Name of Program: **Machine Technology, Level 1**

Degree: Title of Award (e.g. Master of Arts)

Certificate: (specify type and level) **16 Credit Certificate**

Modality of Program: **X** On ground      Online      Combined

Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: **Manufacturing Technology Center, main campus.**

Institutional Contact for Proposal: **Jakob Spjut**

Title: **Instructor of Engineering**

Tel.: **860.932.4156** e-mail: [JSpjut@qvcc.commnet.edu](mailto:JSpjut@qvcc.commnet.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.*

In 1999, two certificates were developed to meet the need of Connecticut's manufacturers: Machine Technology, Level 1 and Machine Technology, Level II. At that time, employment could be secured after completing Level 1. QVCC adopted the Asnuntuck model along with the other 2 Advanced Manufacturing Technology Centers when they were established in 2012. However, students are not competitive for employment after only completing the Level 1 certificate; completion of both certificates is necessary. Thus, we are combining the certificates into one. Both QVCC and Asnuntuck are terminating Level 1 and simultaneously submitting a program modification for Level II.

### 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 are no current students in Certificate Level I. It is a one semester certificate and was last offered in fall 2013. Students who completed Level I are now in Level II and will complete it this semester (spring 2014).

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning

Modification of a Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve modification changing the name of a program in Industrial Technology specializing in Manufacturing or Environmental and Occupational Safety to Manufacturing Management leading to a Bachelor of Science degree at Central Connecticut State University

A True Copy:

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

## ITEM

Modification of a program in **Industrial Technology specializing in Manufacturing or Environmental and Occupational Safety** to **Manufacturing Management** leading to a Bachelor of Science degree at Central Connecticut State University.

## BACKGROUND

Summary

Manufacturing Management better describes the curriculum that we offer. It is better understood by our constituents; students, parents, employers and faculty. We will be better able to recruit more students and bolster enrollments with the rebranding of this program. The term Manufacturing Management is a better descriptor and aligns the program with the department name Manufacturing and Construction Management. Combining the Manufacturing and Environmental & Occupational Safety concentration into one Manufacturing Management degree will better utilize campus resources. Employers will know where to find students with manufacturing management knowledge.

Need for the Program

- Manufacturing supports an estimated 17.2 million jobs in the United States—about one in six private-sector jobs. Nearly 12 million Americans (or 9 percent of the workforce) are employed directly in manufacturing.
- More than 600,000 manufacturing jobs go unfilled because workers don't have the right skills—this skills gap threatens U.S. competitiveness.
- The current trends in manufacturing indicate a shortage of skilled labor in the Manufacturing sector. Connecticut Manufacturers are struggling to hire qualified workers.
- An expected surge in exports could help create up to five million U.S. jobs by 2020, according to a report released by the Boston Consulting Group: "While the return of jobs to U.S. shores, also referred to as insourcing and on-shoring, is still a relatively new phenomenon, several large manufacturers have recently announced plans to expand or move production to the country."



Curriculum

<b>Central Connecticut State University</b>				Name:	
1615 Stanley Street New Britain, Connecticut 06050-4010				ID#	
Department of Manufacturing & Construction Management				Major: <b>Manufacturing Management</b>	
				<b>B.S. MANUFACTURING MANAGEMENT DEGREE</b>	
				Entry: <input type="checkbox"/> Fall <input type="checkbox"/> Spring <input type="checkbox"/> Transfer Cr. <input type="checkbox"/>	
<b>General Education (45 credits)</b>		<b>Major Requirements</b>			
<b>Study Area I - Arts and Humanities (9)</b>		<b>Core Requirements (45 credits)</b>		<b>Directed Technology Electives (12 credits)</b>	
<input type="checkbox"/>	Literature 3	<input type="checkbox"/>	CET 113 Intro to Info Proc 3	Precision Manufacturing Option	
<input type="checkbox"/>	3	<input type="checkbox"/>	<b>TM 120</b> Intro to Technology Mgt 3	<input type="checkbox"/>	<b>MM 226</b> Principles of CNC 3
<input type="checkbox"/>	3	<input type="checkbox"/>	<b>MM 121</b> Mechanical CAD 3	<input type="checkbox"/>	<b>MM 236</b> Tool Design 3
<b>Study Area II - Social Sciences (9)</b>		<input type="checkbox"/>	TM 190 Global Quality Mgmt Systems 3	<input type="checkbox"/>	<b>MM 324</b> Fluid Power 3
<input type="checkbox"/>	ECON 201 3	<input type="checkbox"/>	<b>MM 216</b> Manufacturing Processes 3	<input type="checkbox"/>	TM 480 Industrial Robots 3
<input type="checkbox"/>	Historical 3	<input type="checkbox"/>	AC 210 Industrial Accounting 3		
<input type="checkbox"/>	3	<input type="checkbox"/>	MGT 295 Fundamentals of Management 3	EH&S Option	
<b>Study Area III - Behavioral Sciences (6)</b>		<input type="checkbox"/>	MKT 295 Fundamentals of Marketing 3	<input type="checkbox"/>	CM 335 Construction Safety 3
<input type="checkbox"/>	PSY 112 ** 3	<input type="checkbox"/>	TM 310 EH&S 3	<input type="checkbox"/>	TM 411 Industrial Hygiene 3
<input type="checkbox"/>	3	<input type="checkbox"/>	<b>MM 360</b> Production Systems 3	<input type="checkbox"/>	TM 414 Accident Investigation 3
		<input type="checkbox"/>	TM 362 Leading Project Teams Purchasing and Supply Chain 3	<input type="checkbox"/>	TM 456 Hazardous Material Management 3
<b>Study Area IV - Natural Scientific (7)</b>		<input type="checkbox"/>	<b>MM 366</b> Senior Seminar and Internship 3		
<input type="checkbox"/>	PHYS 111 w/lab 3	<input type="checkbox"/>	TM 401 Six Sigma Quality Lean Operations Management 3	<b>Recommended Free Electives (to complete required 120)</b>	
<input type="checkbox"/>	CHEM 161/162 w/lab 4	<input type="checkbox"/>	TM 464 Six Sigma Quality Lean Operations Management 3	<input type="checkbox"/>	SET 490 International Field Studies 3
<b>Skill Area I - Communication Skills (6)</b>		<input type="checkbox"/>	MM 390 Management 3	<input type="checkbox"/>	TM 490 Advanced Six Sigma 3
<input type="checkbox"/>	ENG 110* 3		45		3
<input type="checkbox"/>	ENGR 290 3				3
<b>Skill Area II - Mathematical (6)</b>					3
<input type="checkbox"/>	STAT 104 * 3	<b>Six credit designated "international"</b>			3
<input type="checkbox"/>	MATH 115 3	met: <input type="checkbox"/> YES <input type="checkbox"/> NO			3
<b>Skill Area III - Foreign Language</b>					3
<input type="checkbox"/>	3 sequential years of one foreign language at the high school level	<b>First Year Experience requirement</b>			Total 30
<input type="checkbox"/>	passed the foreign language exam.	met: <input type="checkbox"/> YES <input type="checkbox"/> NO			
<input type="checkbox"/>	Completed 112 or 114 foreign language courses				
<input type="checkbox"/>	completed above 112 or 114 foreign language course demonstration of native proficiency in a language other than English	<b>Double counting Restriction</b> - Of the courses taken in the major and minor/concentration, a total of two courses may be counted to fulfill the Study Areas portion of the general education program.			
<b>Skill Area IV - Univ. Requirements (2-3)</b>		<b>RESIDENCY REQUIREMENTS:</b> A minimum of 30 credits at CCSU with 15 credits in the Major and 9 credits in the Minor or Concentration (total 24 in Major).			
<input type="checkbox"/>	PE 144 Fitness/Wellness Venture 2	<b>NOTE:</b> Eligibility for high honors requires the student to earn 62 credits in residence at CCSU.			
<input type="checkbox"/>					

Students**Previous Three Years Enrollment and Completion for the Program being Modified**

<b>ACTUAL Enrollment</b>	First Term, Year 2011		First Term, Year 2012		First Term, Year 2013	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Internal Transfers <sup>1</sup>	-	-	-	-	-	-
New Students	2	0	5	0	2	0
Returning Students <sup>1</sup>	15	10	17	16	21	11
ACTUAL Headcount Enrollment	17	10	22	16	23	11
<b>ACTUAL FTE per Year</b>	20.3		27.3		26.7	
<b>Size of Credentialed Group for Given Year</b>						

<sup>1</sup> Returning Student numbers also include Internal Transfer numbers.

**Number of Graduates in Industrial Technology by Concentration**

Degree	CIP 2010	Degree	Concentration	2008-09	2009-10	2010-11	2011-12	2012-13
Bachelor's	150612	BS	Environmental & Occupational Safety	2	3	4	4	4
Bachelor's	150612	BS	Manufacturing	7	3	7	6	7
Total				9	6	11	10	11

Faculty

The full-time faculty members for Manufacturing Management are, Dr. Mario Emiliani, Dr. Paul Resetarits, Dr. Eric Kirby, Dr. Haoyu Wang, and Dr. Ravindra Thamma. All of the faculty members hold PhDs and have extensive industrial and academic experience in their respective areas.

Learning Resources

This program modification does not create the need for additional resources as there are currently ample resources to support the curriculum are in place.

Facilities

This program modification does not create the need for additional facilities as there are currently ample resources to support the curriculum are in place.

Fiscal Note

<b>PROJECTED Program Revenue</b>	Year 1		Year 2	
	Full Time at \$8706	Part Time at \$378	Full Time at \$8706	Part Time at \$378
Tuition <i>(Do not include internal transfers)</i>	\$17,412	\$4,158	\$82,826	\$5,292

Program-Specific Fees	\$0	\$0	\$0	\$0
Other Rev. ( <i>Annotate in text box below</i> )	\$0		\$0	
<b>Total Annual Program Revenue</b>	\$21,570		\$88,118	

Review of Documents:

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

Accreditation:

Most Recent NEASC Institutional Accreditation Action and Date: 5th Year Report, 2013 Also Accreditation received from the Association of Technology Management and Applied Engineering (ATMAE) 2006 with recent reaccreditation visit in March 2014 yielding a recommendation for continuing accreditation.

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## SECTION 1: GENERAL INFORMATION

<b>Institution:</b> Central Connecticut State University	<b>Date of Submission to BOR Office:</b>
Most Recent NEASC Institutional Accreditation Action and Date: 5 <sup>th</sup> Year Report, 2013 Also Accreditation received from Association of Technology Management and Applied Engineering (ATMAE) 2006 with reaccreditation visit in 2014	
<b>Original Program Characteristics</b> CIP Code No.                      Title of CIP Code                      CIP Year: 2000                      or 2010 Name of Program: <b>Industrial Technology – Manufacturing Specialization</b> Degree: Title of Award (e.g. Master of Arts) <b>Bachelor of Science</b> Certificate: (specify type and level) Date Program was Initiated: Modality of Program:    On ground                      Online    X Combined If "Combined", % of fully online courses? 10% Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 122	<b>Original Program Credit Distribution</b> # Cr in Program Core Courses: 24 # Cr of Electives in the Field: 6 # Cr of Free Electives: 8 # Cr Special Requirements (include internship, etc.): <b>33</b> <u>Total # Cr in the Program</u> (sum of all #Cr above): 122 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: <b>122</b>
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) Offering of Program Using an Alternate Modality (e.g. from on ground to online) X Change of Degree Title or Program Title	
<b>Modified Program Characteristics</b> Name of Program: <b>Manufacturing Management</b> Degree: Title of Award (e.g. Master of Arts) <b>Bachelor of Science</b> Certificate <sup>1</sup> : (specify type and level) Program Initiation Date: Spring 2014 Modality of Program:    On ground                      Online    X Combined If "Combined", % of fully online courses? 10% Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 120 Other:	<b>Modified Program Credit Distribution</b> # Cr in Program Core Courses: 45 # Cr of Electives in the Field: 12 # Cr of Free Electives: 18 # Cr Special Requirements (include internship, etc.): <b>45</b> <u>Total # Cr in the Program</u> (sum of all #Cr above): <b>120</b> From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: <b>120</b>
If program modification is concurrent with discontinuation of related program(s), please list for such program(s): Program Discontinued: <b>Industrial Technology, Specializations in Manufacturing and Environmental &amp; Occupational Safety</b> CIP: <b>15.0612</b> DHE# (if available): <b>00071</b> Accreditation Date: <b>July 2007</b> Phase Out Period <b>Spring 2014</b> Date of Program Termination <b>Fall 2016</b>	
Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program: School of Engineering & Technology, CCSU: <b>Department of Manufacturing and Construction Management, School of Engineering and Technology, Central Connecticut State University, 1615 Stanley St New Britain, CT 06050</b>	
Other Program Accreditation:	

<sup>1</sup> 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.

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- If seeking specialized/professional/other accreditation, name of agency and intended year of review: **ATMAE 2014**
- If program prepares graduates eligibility to state/professional license, please identify: N/A

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

Institutional Contact for this Proposal: Dr. Carl Lovitt	Title: Provost and Vice President for 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. <sup>2</sup> (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)	

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<sup>2</sup> 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)

Manufacturing Management better describes the curriculum that we offer. It is better understood by our constituents: students, parents, employers and faculty. We will be better able to recruit more students and bolster enrollments with the rebranding of this program. The term Manufacturing Management is a better descriptor and aligns the program with the department name Manufacturing and Construction Management. Combining the Manufacturing and Environmental & Occupational Safety concentration into one Manufacturing Management degree will better utilize campus resources. Employers will know where to find students with manufacturing management knowledge.

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)** (See appendix A) The shortage of manufacturing workers nationwide has been the subject of numerous national news shows such as 60 minutes and the evening news reports. Unlike Germany the US gave up on manufacturing and sent a large part of their production offshore. U.S. companies are learning that this approach has not been effective and has resulted in problems with logistics, quality and meeting their customers' needs. Over the years we have worked with many organizations placing students in the Connecticut workforce with internship and Co-op positions which are a requirement of this program. In many cases these students are then hired as permanent employees upon graduation. Among the organizations which we work with are;
- The Connecticut Center for Advance Technology (CCAT),
- Connecticut Business and Industry Association (CBIA)
- Aerospace Manufacturers Association (ACM)
- American Association for Quality (ASQ) Hartford Chapter
- The Regional Center for Next Generation Manufacturing (RCNGM)

Due to the shortage of manufacturing employees there are several events in October to promote the opportunities for careers in Manufacturing. One example can be found below;

Dream It. Do It. Is a program, officially proclaimed by Governor Dannel P. Malloy to recognize the importance of the manufacturing industry to Connecticut's long-term economic viability and to showcase manufacturing career opportunities statewide.

Endorsed by the Manufacturing Institute and administered by the Connecticut Center for Advanced Technology, Inc. (CCAT), *Connecticut. Dream It. Do It.* is part of a nationwide effort to create a positive image of manufacturing today and to develop an awareness of rewarding manufacturing careers.

Through partnerships with business, industry, education, economic and workforce development organizations statewide, *Connecticut. Dream It. Do It.* is taking the lead in enhancing Connecticut's current and future manufacturing workforce pipeline.

One last example is there is a great concern in many companies about where the replacement workers are going to come from as their current workforce is going to retire in large number in the next five years. One creative and generous employer has worked with the manufacturing faculty to develop their future talent pool through a scholarship program. The program pays for the student's Junior and Senior years and provides them with a summer internship to gain valuable work experience. If all goes well the student will be hired upon graduation.

- **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?** Central Connecticut State University (CCSU) by its very name is centrally located geographically within the state of Connecticut thus giving easy access to students and employers throughout the state. CCSU has long been known for its School of Engineering and Technology. The practical curricula and applied research done by CCSU faculty provide CT employers with student who are work ready and hit the ground running. With

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minimal orientation, they quickly become contributing members of staff. The faculty in the Department of Manufacturing and Construction Management are well known and respected in the CT manufacturing community. Their expertise is utilized on a consulting basis by many manufacturers through the Institute for Technology and Business Development (ITBD). ITBD was developed and administered originally by faculty of the School of Engineering and Technology to meet the needs of CT manufacturers. Our manufacturing laboratories are well equipped with state of the manufacturing equipment such as CNC Mills and lathes, 3D printers, wire and plunge EDM machines. Another resource that we draw upon is our Industrial Advisory Board composed of leaders from area manufacturing companies.

- 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 "Connecticut College of Technology" pathway program is an articulation agreement that allows a student to begin engineering, engineering technology or technology studies at any of the 12 Connecticut Community Colleges, and transfer this credit to a four-year institution with the goal of completing a baccalaureate degree. Currently the Technological Studies Pathway has the following options: – Engineering Technology, Industrial Technology, Technology Education, and Bimolecular Sciences. These Pathway programs lead either to CCSU, the University of Hartford, or Charter Oak State College. Once the Manufacturing Management program is approved, the Chair of the department will meet with faculty from Springfield Technical Community College to complete a transfer agreement. CCSU will maintain the transfer academic standards established in the current Engineering Technology Curriculum of the Technological Studies Pathway program. This curriculum consists of coursework in engineering, mathematics, sciences and general education. Furthermore, once the Manufacturing Management program is licensed, the articulation agreement will be in effect with all Connecticut Community Colleges that offer similar or complementary programs to this degree.
- The Manufacturing and Construction Management Department currently has transfer policies for all the programs in the department. All community colleges in Connecticut and New England will be contacted regarding the new degree and pursue transfer agreements for out of state programs. Additionally we will apply for the NEBHE interstate tuition break program because no other state in New England has a BS Manufacturing Management
- Please indicate what similar programs exist in other institutions within your constituent unit <sup>3</sup>, and how unnecessary duplication is being avoided This is the only bachelor's degree program of its type in the ConnSCU system. There is no duplication. This is a unique program that only exists at CCSU
- Please provide a description/analysis of employment prospects for graduates of this proposed program

"Last year on my Jobs Tour, I visited dozens of businesses in our state, and one constant refrain I heard was the need for an educated and skilled workforce, particularly within the manufacturing sector. If we're going to increase job growth and remain competitive, we must be aware of how critically important it is for manufacturers to have access to employees with an advanced skill set," Governor Malloy said. "Having a workforce that is able to fill these jobs is vital to spurring economic growth, and these Manufacturing Centers will play a significant role in boosting those efforts."

"I believe it's absolutely critical to enhance collaboration and partnerships between the state's higher education system and the private sector," said Board of Regents President Kennedy. "Preparing our students for a future job without fully understanding the needs of local industry is detrimental to both the students, and to our economy. Manufacturing education programs that respond to the needs of the state's manufacturers will prepare students for the 21st century global workforce." Kennedy went on to say
- Connecticut Department of Labor Projects that in the year of 2020 there will be 161,675 jobs in Manufacturing in the state

<sup>3</sup> 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*

of Connecticut.

- There are currently 4300 manufacturing companies in the state of Connecticut all in need of employees.
- Employment prospects for graduates are outstanding. U.S. Representative John Larson, D 1<sup>st</sup> District noted that Connecticut Manufacturers are struggling to hire qualified workers. He noted that there is a "dire need for us to make sure that we are reinvesting in manufacturing" and training new workers.
- Gardner Carrick, vice president of the Manufacturing Institute, the industry's training arm, says manufacturers aren't restoring apprenticeships they cut as factory jobs moved offshore. But with about 500,000 jobs unfilled, he says a growing number of producers are working with community colleges and technical high schools to create a pipeline of workers for modernized factories.
- Joe Sylvestro vice president of manufacturing for Pratt and Whitney said that the company plans to double production by the end of the decade and "in order to be able to make that happen and meet our customers' expectations, we will need a thriving market with a growing talent pool."
- Manufacturing supports an estimated 17.2 million jobs in the United States—about one in six private-sector jobs. Nearly 12 million Americans (or 9 percent of the workforce) are employed directly in manufacturing.
- More than 600,000 manufacturing jobs go unfilled because workers don't have the right skills—this skills gap threatens U.S. competitiveness.
- Wages are also rising. In the third quarter of 2013, 27 industry sectors had increased average pay 5% or more during the previous 12 months, up from 19 sectors in the third quarter of 2012, Moody's Analytics figures show. "Wage growth appears to be accelerating for the first time since the recession," says Moody's economist Mark Zandi.
- The current trends in manufacturing indicate a shortage of skilled labor in the Manufacturing sector.

"An expected surge in exports could help create up to five million U.S. jobs by 2020, according to a report released by the Boston Consulting Group. While the return of jobs to U.S. shores, also referred to as insourcing and on-shoring, is still a relatively new phenomenon, several large manufacturers have recently announced plans to expand or move production to the country."

There are several factors which are causing this;

- Re-shoring of manufacturing operations after unsuccessful off-shore attempts
- The graying of the current manufacturing workforce
- Growth in the economy leading to more manufacturing jobs

Students who earn a Bachelor of Science degree in Manufacturing Management will have a broad background in manufacturing and will be able to fill a number of job based on their critical thinking and problem solving skills.

Students are prepared for careers in areas such as:

- Production System Design
- Quality and Lean Management
- Automated Systems and Control
- Materials Management
- Manufacturing Process Planning
- Project Management

Graduates of the current industrial technology program typically work as:

- Manufacturing Engineering Directors
- Quality Engineers
- Sales Engineers
- Project Managers
- Procurement Specialists
- Directors of Operations
- (See complete list in appendix)

The Industrial Technology program is accredited by the Association of Technology, Management, and Applied Engineering -



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ATMAE (formally National Association of Industrial Technology- NAIT)

Currently, 95% of the graduates of our industrial technology program are working as full-time employees in a wide range of companies. Employers include such prominent companies as Pratt Whitney, Sikorski, Hamilton Sunstrand, Tyco Healthcare, and Bobcat of CT. Our graduates hold positions ranging from Manufacturing Engineer, Quality Engineer, Site Safety Coordinator and Sales Specialist, Engineering Manager, and Quality Assurance Group Leader. Our employed graduates' salaries range from \$51,000 to well over \$150,000. (We have included the full list of employers, job titles, and salaries as an appendix.

**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.*

This program has been thoroughly modified based on the knowledge of the faculty and feedback from our Industrial Advisory Board (IAB), employers, students and alumni of the program. We were encouraged by all to modernize the Industrial Technology programs, which we have successfully offered for over 40 years, to bring them in line with current trends in Manufacturing Management. We were encouraged to rename the program Manufacturing Management. It was felt that the rebranding of the program would help boost the stagnant enrollment in the program and bring more new students into manufacturing to meet the workforce needs of the state manufacturers. This program modification takes the best of two former specializations of Industrial Technology and combines them into a single new program under one major Manufacturing Management and a single CIP code. The result will be eliminating two CIP codes and specializations in Technology, Manufacturing, and Environmental and Occupational Safety. Course titles have been updated to reflect current terminology as indicated Bold typeface as seen on page 10. In total we are only adding one new course TM 120 and revising the prefix or title of 13 number of courses. These courses include MM121, TM 190 MM216, TM310, MM 360, TM 362, MM366, TM401, MM390, MM226, MM236, MM324, TM 456. Currently several of these courses are being offered Online with plans to put more online and deliver some as hybrid courses in the future.

**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)*

This program modification does not create the need for additional resources as there are currently ample resources in place to support the curriculum.

### Faculty

The full-time faculty members for Manufacturing Management are, Dr. Mario Emiliani, Dr. Paul Resetarits, Dr. Eric Kirby, Dr. Haoyu Wang, and Dr. Ravindra Thamma. All of the faculty members have extensive industrial and academic experience in their respective areas.

Mario Emiliani, Professor, full time, PhD, Brown University. Areas of specialization: Lean leadership, Lean management such as supply chain management, Lean in higher education, and the history of Lean management. Dr. Emiliani will teach: MM 366, MM 390, TM 120, and TM 362.

Paul Resetarits, Professor, full time, PhD, University of Connecticut. Areas of specialization: Lean Manufacturing, Quality Assurance, Applications of Computers, Quality Management Systems, Applications of Lean Principles. Dr. Resetarits will teach: TM 120, TM 190, TM 401, TM 464, and MM 121.

Eric Kirby, Associate Professor, full time, PhD, Iowa State University. Areas of specialization: CNC, AGV Systems, Digital Manufacturing, quality management systems and lean manufacturing. Dr. Kirby will teach: MM 216, MM 226, TM 310, and TM 401.

Haoyu Wang, Associate Professor, full time, PhD, Syracuse University. Areas of specialization: Tool design, Mechanical CAD, Manufacturing processes. Dr. Wang will teach: MM 121, MM 216, MM 236, and TM 401.

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Ravindra Thamma, Associate Professor, full time, PhD, Iowa State University. Areas of specialization: Robotics, Automation, Mechatronics. Dr. Thamma will teach: MM 324, TM 120, and TM 480.

### Administration

The Manufacturing Management Program was designed by faculty of the Manufacturing and Construction Management Department with the assistance of our Industrial Advisory Board. The University Curriculum Committee, Faculty Senate and administration have provided valuable input during the development of the curriculum and supported an application for Connecticut licensure and accreditation.

Dr. Zdzislaw B. Kremens, previous Dean of the School of Engineering & Technology, has provided constructive leadership based on the School of Engineering & Technology strategic plan, space utilization and departmental program objectives. The remodeling of facilities and allocation of equipment and OE (Operating and Expenses) budgets based on program growth and laboratory requirements have categorically supported the engineering technology programs.

The Manufacturing Management Program will be administered by the Manufacturing and Construction Management Department, Dr. Jacob Kovel, Chairperson, is responsible for the administration of all the programs offered by the MCM department.

### Specialized Equipment

The School of Engineering and Technology facilities, laboratories, classrooms and equipment have been recently equipped with state-of-the-art technology and require funding to keep up with the changing technologies to meet the industry's demands for skilled labor. The equipment utilized by the program presently includes;

#### Major Capital Equipment in Manufacturing Laboratory NC 145

Bridgeport EZ Vision CNC Mill

Bridgeport EZ Trak CNC Mill

Bridgeport EZ Path CNC Lathe

Bridgeport VMC 2216 CNC Mill

Haas ST-10 CNC Lathe

Haas VF-2 CNC Mill

Mitsubishi FX-1 CNC Wire EDM

Santec 301 Plunge EDM

Bridgeport Series I Vertical Mills (3)

Harrison M300 Engine Lathes (12)

Harig Automatic Surface Grinders (2)

Brown & Sharpe Microval CMM

Miller XMT 450 SMAW/GMAW/GTAW Welders (4)

Thermolyne Large & Small Capacity Programmable Benchtop Heat Treat Furnaces (2)

Sand Molding and Casting Furnace setup

#### CONTROL SYSTEMS EQUIPMENT (Laboratory NC 118-00)

Micrologic, Compactlogic, ControlLogic, Panelview HMI, PowerFlec AC Drive

Automation Studio I/O

Pneumatic Controllers

## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

Process Control System
Process Instrumentation Control System Trainer
<b>FLUID POWER EQUIPMENT (Laboratory NC 118-04)</b>
Pneumatic Trainer
Pneumatic Components
Amatrol Fluid Trainer Components
Amatrol Fluid Trainer
A set of 10 benches each equipped with: Oscilloscope, DMM, Function Generator, Logic Probes, Power Supply
<b>DATA ACQUISITION SYSTEM (Laboratory NC 118-00)</b>
NI USB Data Acquisition Boards
NI Elvis I
<b>ROBOTICS (Laboratory NC 118-01)</b>
Fanuc LR MATE 200iC Robots
Boe Bot
Mobile Robot Robotino
Cognex Vision System
Lights for vision system
Mitsubishi RVM1 Robots
<b>Other Considerations</b>

### Previous Three Years Enrollment and Completion for the Program being Modified

ACTUAL Enrollment	First Term, Year 2011		First Term, Year 2012		First Term, Year 2013	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Internal Transfers <sup>1</sup>	-	-	-	-	-	-
New Students	2	0	5	0	2	0
Returning Students <sup>1</sup>	15	10	17	16	21	11
ACTUAL Headcount Enrollment	17	10	22	16	23	11
ACTUAL FTE per Year	20.3		27.3		26.7	
Size of Credentialed Group for Given Year						

<sup>1</sup> Returning Student numbers also include Internal Transfer numbers.

### Number of Graduates in Industrial Technology by Concentration

Degree	CIP 2010	Degree	Concentration	2008-09	2009-10	2010-11	2011-12	2012-13
Bachelor's	150612	BS	Environmental & Occupational Safety	2	3	4	4	4
Bachelor's	150612	BS	Manufacturing	7	3	7	6	7
Total				9	6	11	10	11

### Fall Enrollment in Industrial Technology by Concentration

Concentration	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
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# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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Environmental & Occupational Safety	10	12	14	12	16	14
Manufacturing	18	13	25	15	22	20
<b>Total Fall Enrollment</b>	<b>28</b>	<b>25</b>	<b>39</b>	<b>27</b>	<b>38</b>	<b>34</b>

Curriculum Details for a Program Modification <small>(to be use as appropriate for specific modification request)<sup>4</sup></small>						
Course Number and Name <sup>5</sup>	L.O. #	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
<b>Program Core Courses</b>				<b>Other Related/Special Requirements</b>		
<b>Program Core Courses</b>				<b>Other Related/Special Requirements</b>		
CET 113 Intro to Info Proc	1, 5		3	ECON 201 Economics II	5	3
TM 120 Intro to Technology Mgt	1, 2, 3, 5		3	PSY 112 Psychology	4	3
MM 121 Mechanical CAD	1, 2, 3, 5		3	PHYS 111 w/lab Physics	2	3
TM 190 Global Quality Mgmt Systems	3, 4, 5		3	CHEM 161/162 w/lab Chemistry	2	3
MM 216 Manufacturing Processes	2, 3, 5		3	ENGR 290 Technical Writing	1	3
AC 210 Industrial Accounting	2, 5		3	STAT 104 Statistics	2	3
MGT 295 Fundamentals of Management	3, 4, 5		3	MATH 115 Trigonometry	2	3
MKT 295 Fundamentals of Marketing	1, 4, 5		3			
TM 310 EH&S	3, 4, 5		3			
MM 360 Production Systems	3, 4, 5		3			
TM 362 Leading Project Teams	1, 3, 4		3			
MM 366 Purchasing and Supply Chain	4, 5		3			
TM 401 Senior Seminar and Internship	4, 5		3			
TM 464 Six Sigma Quality	2, 3, 4		3			
MM 390 Lean Operations Management	3, 4, 5		3			
<b>Core Course Prerequisites</b>				<b>Directive Technology Elective Courses in the Field</b>		
				MM 226 Principles of CNC	3, 5	3
				MM 236 Tool Design	1, 3, 5	3
				MM 324 Fluid Power	2, 5	3
				TM 480 Industrial Robots	2, 3	3
				CM 335 Construction Safety	3, 4, 5	3
				TM 411 Industrial Hygiene	3, 4, 5	3
				TM 414 Accident Investigation	3, 4, 5	3
				TM 456 Hazardous Material Management	3, 4, 5	3
<b>Total Other Credits Required to Issue Credential</b> <small>(e.g. GenEd/Liberal Arts Core/Liberal Ed Program)</small>						
<b>Core Course Prerequisites</b>				<b>Elective Courses in the Field</b>		

<sup>4</sup> 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.

<sup>5</sup> 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

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)

1. Communicate effectively in written, oral, graphic and visual modes.
2. Apply current knowledge of mathematics, science and technology principles to understand technical systems in the field.
3. Identify, analyze, and solve technical problems using continuous process improvement techniques.
4. Lead, manage and function as an effective team member within a diverse environment.
5. Demonstrate knowledge of modern skills, tools, and techniques required in Manufacturing Management.

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

<b>Central Connecticut State University</b>				Name:			
1615 Stanley Street New Britain, Connecticut 06050-4010				I.D.#			
				Major:		Manufacturing Management	
Department of Manufacturing & Construction Management				<b>B.S. MANUFACTURING MANAGEMENT DEGREE</b>			
				Entry:		<input type="checkbox"/> Fall <input type="checkbox"/> Spring <input type="checkbox"/> Transfer Cr.	
General Education (45 credits)				Major Requirements			
Study Area I - Arts and Humanities (9)				Core Requirements (45 credits)			
	Literature	3		CET 113	Intro to Info Proc	3	
		3		TM 120	Intro to Technology Mgt	3	
		3		MM 121	Mechanical CAD Global Quality Mgmt Systems	3	
Study Area II - Social Sciences (9)							
	ECON 201	3		TM 190	Manufacturing Processes	3	
	Historical	3		AC 210	Industrial Accounting	3	
		3		MGT 295	Fundamentals of Management	3	
Study Area III - Behavioral Sciences (6)							
	PSY 112 **	3		MKT 295	Fundamentals of Marketing	3	
		3		TM 310	EH&S	3	
				MM 360	Production Systems	3	
				TM 362	Leading Project Teams Purchasing and Supply Chain	3	
Study Area IV - Natural Scientific (7)							
	PHYS 111 w/lab	3		MM 366	Senior Seminar and Internship	3	
	CHEM 161/162 w/lab	4		TM 401	Six Sigma Quality Lean Operations Management	3	
Skill Area I - Communication Skills (6)							
	ENG 110*	3		MM 390		3	
	ENGR 290	3				45	
Skill Area II - Mathematical (6)							
	STAT 104 *	3		Six credit designated "international"			
	MATH 115	3		met:	<input type="checkbox"/> YES <input type="checkbox"/> NO		
Skill Area III - Foreign Language							
	3 sequential years of one foreign language at the high school level			First Year Experience requirement			
	passed the foreign language exam.			met:	<input type="checkbox"/> YES <input type="checkbox"/> NO		
	Completed 112 or 114 foreign language courses						
	completed above 112 or 114 foreign language course demonstration of native proficiency in a language other than English			<b>Double counting Restriction</b> - Of the courses taken in the major and minor/concentration, a total of two courses may be counted to fulfill the Study Areas portion of the general education program.  <b>RESIDENCY REQUIREMENTS:</b> A minimum of 30 credits at CCSU with 15 credits in the Major and 9 credits in the Minor or Concentration (total 24 in Major).  <b>NOTE:</b> Eligibility for high honors requires the student to earn 62 credits in residence at CCSU.			
Skill Area IV - Univ. Requirements (2-3)							
	PE 144 Fitness/Wellness Venture	2					
				Total 30			

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## 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)*

## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

# Three Community Colleges Selected for Manufacturing Centers

Board of Regents President Robert A. Kennedy today announced the selection of three community colleges for the creation of manufacturing centers to meet the state's manufacturing workforce needs. The BOR solicited proposals for the creation of three manufacturing centers in response to the passage of Governor Dannel P. Malloy's bipartisan Jobs Bill, which encouraged new job creation, while developing and strengthening the state's workforce competitiveness. Included in the bill is \$17.8 million in state bond funding through FY 2013 for the development of manufacturing programs at the three community colleges. This funding includes capital equipment purchases as well as the renovation and expansion of existing college facilities to accommodate a manufacturing center.

Housatonic Community College in Bridgeport, Naugatuck Valley Community College in Waterbury and Quinebaug Valley Community College in Danielson were selected by the BOR based on their ability to establish or expand manufacturing technology programs and their commitment to precision manufacturing. The proposal review committee included representatives from the Board of Regents, the Department of Economic and Community Development, the Connecticut Center for Advanced Manufacturing (CCAT), the Connecticut Business and Industry Association Education Foundation and Asnuntuck Community College. Details between the Board of Regents and the selected community colleges are still being finalized, including exact award amounts. A Memorandum of Agreement between the BOR and each community college will be prepared for the work of the manufacturing centers, and it the BOR plans to create a statewide advisory panel to support and guide the manufacturing centers.

The idea for the three new manufacturing centers was spurred by the success of Asnuntuck Community College's successful Manufacturing Technology Center in Enfield. Also included in the Jobs Bill package is \$2.2 million in bonding authorization to expand Asnuntuck's precision manufacturing program. More than 1,000 students have graduated from Asnuntuck's technology programs and have transitioned to the private sector with the technological abilities that benefit local industry.

"Last year on my Jobs Tour, I visited dozens of businesses in our state, and one constant refrain I heard was the need for an educated and skilled workforce, particularly within the manufacturing sector. If we're going to increase job growth and remain competitive, we must be aware of how critically important it is for manufacturers to have access to employees with an advanced skill set," Governor Malloy said. "Having a workforce that is able to fill these jobs is vital to spurring economic growth, and



## **CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**

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

these Manufacturing Centers will play a significant role in boosting those efforts.”

“I believe it’s absolutely critical to enhance collaboration and partnerships between the state’s higher education system and the private sector,” said President Kennedy. “Preparing our students for a future job without fully understanding the needs of local industry is detrimental to both the students, and to our economy. Manufacturing education programs that respond to the needs of the state’s manufacturers will prepare students for the 21st century global workforce.”

The three community colleges will also be responsible for providing measureable outcomes—which include students graduating from the program and final job placement in the state’s manufacturing industry. Programs must meet the specific needs of the region’s manufacturing sector, offer a standard core curriculum and industry recognized credentials, which is a priority for the Dream It. Do It. Initiative, led in Connecticut by CCAT and co-chaired by President Kennedy.



# MANUFACTURING & TECHNOLOGY DAY

## ***Manufacturing: Vital to Connecticut's Future***



### **Every \$1 MILLION in additional output from Connecticut manufacturing means:**

- **\$2+ million in sales** in other industries (potential sales tax revenue)<sup>1</sup>
- **8.3 new Connecticut jobs**<sup>2</sup>
- **Over \$700,000 in new personal income** (potential personal income tax revenue)<sup>3</sup>
- **More than \$1 million in value added.**<sup>1</sup>

### **Connecticut manufacturers pay a lot in taxes:**

- More than **\$200 million** in municipal taxes<sup>7</sup>
- **\$157 million** in sales and use taxes<sup>10</sup>
- **\$121 million** in corporate taxes<sup>13</sup>
- Manufacturing employees pay more than **\$415 million** in personal income taxes<sup>11</sup>
- About 73% of all manufacturers are organized as S-corporations or other entities that are taxed at the individual rate.<sup>16</sup>

### **Manufacturers invest in CT**

- Since 1977, Connecticut manufacturers have more than doubled annual new capital investments in their facilities, from \$566 million to \$1.13 billion in 2009 dollars.<sup>6</sup>

#### **Sources:**

- <sup>1</sup> MAC Index
- <sup>2</sup> Connecticut Center for Economic Analysis at the University of Connecticut
- <sup>3</sup> Annual Survey of Manufactures, U.S. Bureau of the Census

### **Manufacturing in Connecticut:**

- **4,826** manufacturing establishments.<sup>4</sup>
- **167,900** manufacturing workers.<sup>5</sup>
- **\$12.4 billion** in wages and salaries earned annually by Connecticut manufacturing employees.<sup>5</sup>
- **\$89,238** in average annual compensation.<sup>8</sup>
- **10.4%** of all private-sector payroll.<sup>5</sup>
- **10.79%** of nonfarm employees employed in manufacturing.<sup>5</sup>
- Connecticut is the **18th-most** intensive manufacturing state in the United States.<sup>6</sup>
- Manufacturing workers in Connecticut **average \$1,004.91** in weekly earnings.<sup>7</sup>
- **More than one-half** of the top 100 companies headquartered in Connecticut are manufacturing firms.<sup>4</sup>

### **Manufacturing creates more jobs:**

- **Connecticut manufacturers** purchase more than \$10 billion per year in goods and services from other state businesses, including \$3 billion from service firms.<sup>9</sup>
- **Each new job** in the key areas of Connecticut manufacturing creates 1.9 to 4 additional jobs throughout the economy.<sup>3</sup>

### **Productive workers:**

- Each Connecticut manufacturing worker creates **value-added of \$278,654** vs. the national average of \$261,261.<sup>10</sup>
- Connecticut manufacturing workers are on average **20% more productive** than the average U.S. manufacturing worker.<sup>11</sup>

### **Strong in defense:**

- Connecticut total defense contracts awarded totaled **\$12.2 billion** in 2008.<sup>12</sup>
- Connecticut ranks **2nd in the U.S.** at \$3,487 per capita in defense contracts.<sup>12</sup>

### **Key role in global economy:**

- **Manufacturing exports grew to \$16.03 billion** in 2010, from \$8.1 billion in 2003, nearly doubling in just seven years.<sup>13</sup>

- **Connecticut firms have exported to 225 different countries since 1988.** In the past three years, more than 200 countries have bought Connecticut-manufactured goods.<sup>14</sup>
- **Connecticut sent over \$300 million worth of goods each to our top 8 trading partners:** Canada, Japan, United Kingdom, France, Germany, Mexico, Singapore and South Korea.<sup>15</sup>
- **Connecticut's top five exporting areas in manufacturing,** which account for over 92% of our exports, include transportation equipment, industrial machinery, fabricated metal, electronic equipment, chemicals and food products.<sup>16</sup>

### **Important to Gross State Product:**

- **Almost \$25 billion of Connecticut's gross state product (GSP)** comes from manufacturing.<sup>17</sup>
- Manufacturing accounts for about **11.4% of Connecticut GSP**.<sup>18</sup>

#### **Sources:**

- <sup>4</sup> U.S. Bureau of the Census: County Business Patterns
- <sup>5</sup> Economic Report of the Governor
- <sup>6</sup> U.S. Bureau of the Census
- <sup>7</sup> Connecticut Department of Labor (Feb. 2011)
- <sup>8</sup> Connecticut Magazine
- <sup>9</sup> RIMS II multipliers
- <sup>10</sup> Annual Survey of Manufactures, U.S. Bureau of the Census
- <sup>11</sup> Connecticut Department of Economic and Community Development
- <sup>12</sup> Morgan Quilno, State Ranking
- <sup>13</sup> World Institute for Strategic Economic Research (WISER)
- <sup>14</sup> Connecticut Department of Economic and Community Development
- <sup>15</sup> Connecticut Economic Digest
- <sup>16</sup> National Association of Manufacturers
- <sup>17</sup> U.S. Bureau of Economic Analysis
- <sup>18</sup> Economic Report of the Governor
- <sup>19</sup> National Association of Manufacturers, 2009 CT Manufacturing Employment and Compensation
- <sup>20</sup> Connecticut Department of Revenue Services Annual Report 2009-2010
- <sup>21</sup> Connecticut Department of Revenue Services Annual Report 2009-2010 and Economic Report of the Governor 2011

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

<b>Industrial Technology – Manufacturing</b>	
<b>Employer's Names</b>	
AGC, Inc.	Henkel Loctite Corporation
American Power Conversion	Kaman Aerospace Corporation
Birken Manufacturing Co.	Longwood Engineered Products
BYCI Wyrepak Industries	OBEC Consulting Engineers
CDS Engineering	Pactsmaster
CEI Real Estate	Pem Chemicals Inc.
Cont's Manufacturing Co. Inc	Penitron Laboratory Technologies
Cooper-Atkins Corporation	Perkin Elmer
Corbin Russwin Architectural Hardware	Pratt & Whitney
Danfoss Commercial Compressors	Sikorsky Aircraft Corporation
Dynamic Gunver Technologies	Stewart EFI
Eastern Plastics	The EDRO Corporation
Electro Methods	The Purdy Corporation
Engineering Solutions	TI Automotive
Ensvnu Heucnstol Corporation	Torrington Public Schools
Entergy Nuclear Northeast	Torrington Research Co.
G&M Machine	Trumpf Inc.
Goodrich Landing Gear Division	Tyco Health Care
Hamilton Sundstrand	Vlasilc Sheet Metal
<b>Industrial Technology – Manufacturing</b>	
<b>Job Title</b>	<b>Salary Range</b>
Consultant	150,000-200,000
Continuous Improvement Engineering	41,000-50,000
Director of Operations	100,000-150,000
Director of Application Engineering	91,000-100,000
Director of Manufacturing Engineer	61,000-70,000

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Global Alliance Manager	100,000-150,000
Industrial Manager	71,000-80,000
Manufacturing Engineer	51,000-80,000
Manufacturing Estimating	51,000-60,000
Marketing Manager.	71,000-80,000
Manufacturing Project Engineer	41,000-50,000
Military Program Manager	71,000-80,000
Owner	71,000-80,000
Power plant Manager	71,000-80,000
President	51,000-60,000
Product Manager	81,000-90,000
Project Engineer	51,000-80,000
Production control Manager	81,000-90,000
Quality Engineer	51,000-70,000
Sales Executive	61,000-70,000
Sales Manager	100,000-150,000
Senior Process Engineer	81,000-90,000
Senior Manufacturing Engineer	71,000-80,000
Vice President	71,000-80,000
Vice President, Operations	100,000-150,000
<b>Industrial Technology – Safety &amp; Quality</b>	
<b>Employer's Names</b>	
Bobcat of CT	New England Technical Institute
BWXT Y-12 L.L.C	Pratt & Whitney
Defense Contract Management Agency (DDD)	Robert M. Finley Middle School
DHL Company	Sikorsky Aircraft
Dominion Nuclear Connecticut – Millstone Power Company	State of Connecticut

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George Campbell Painting Corp	Town of Berlin
Hayne's Construction Company	US Department of Labor - OSHA
John Hopkins Bayview Medical Center	
<b>Job Titles</b>	<b>Salary Range</b>
Campus Director	51,000-60,000
Chief Fire Marshal	51,000-60,000
Engineering Manager	51,000-70,000
Nuclear Fuel Specialist	71,000-80,000
Quality Assurance Group Leader	71,000-80,000
Safety Director	71,000-80,000
Safety Specialist	51,000-60,000
Sales Specialist	71,000-80,000
Security Specialist	61,000-70,000
Site Safety Coordinator	61,000-70,000

## **CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**

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

### **CCSU to develop engineering talent for Pratt & Whitney**

*Posted 10/31/2012 11:22AM*

The New Britain Herald  
October 28, 2012

NEW BRITAIN — An agreement for a new P&WA Quality Engineering Scholarship Program at CCSU is expected to enhance a pipeline of qualified workers to the aircraft giant while building awareness of careers in the aerospace quality engineering field.

A memorandum of agreement between Central Connecticut State University and Pratt & Whitney Aircraft was signed Friday by CCSU President Jack Miller and Mary Anne Cannon, PW&A vice president of quality, environment, health and safety, in Founders Hall.

Aircraft executives and university administrators who witnessed the agreement, anticipate that it will meet a growing need for quality engineers.

"Working with CCSU we realized we could develop talent early in the university setting," said Cannon. "We could graduate talent that could enter an environment like Pratt & Whitney at a proficiency level and be on-the-job ready."

By the time program graduates start work at P&W officials expect they will have experienced internships and are ready to hit the ground running.

Michael Wilson, senior fellow discipline lead-quality, said Pratt & Whitney wanted to work with CCSU because the university had an industrial engineering program curriculum in place that was closely aligned with P&W's quality needs.

"Then, too, CCSU demonstrated a willingness to partner with our future needs and build a working relationship to improve its curriculum and continue to provide that pipeline over the next few years," Wilson said.

Paul Resetarits, professor, manufacturing and construction management, said the program could result in more quality engineers and industrialist technologists.

Resetarits said the origin of quality at CCSU began with Rick Mullins, executive assistant to President Miller and managing director of Central's Institute of Technology and Business Development.

"I was teaching courses at ITBD," said Resetarits, "when someone said to me, 'Send me your two best students. I want to hire them.' I took a sabbatical leave and developed a curriculum including courses in Lean Management and Quality Management. My students took these courses, interned at various companies and ultimately were employed. This program formalizes this relationship so we'll have a nice flow of students to UTC (United Technologies Co.) divisions."

Resetarits said students that are selected need to have done well academically, demonstrate good interpersonal skills, an ability to interact with others, including top management, and be problem-solvers. He will begin identifying candidates next week. P&W will make the final selections.



## **CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**

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Cannon declined to speculate on a set number of scholarship students.

"That number depends on our business needs and the quality of students," she said. "While there is no guarantee of a job, interns are paid and the program expands their experience and their resume. Along with internship comes mentorship. We pair them up with quality folks at P&W."

The internships run from eight to 12 weeks. Candidates are identified at the beginning of their junior year. The internship takes place during the summer between the junior and senior years. Students return to campus for their senior year on scholarship.

Cannon said it was difficult to estimate costs of the program since that depends on a variety of factors, including quality of the talent.

"We saw a need to bring in talent coming out of universities," said Cannon. "But, we didn't have a focused process to do that. With this program we can better align student talent with P&W's future needs."

**CT Board of Regents for Higher Education**  
**Modification of an Accredited Program** PRO FORMA <sup>1</sup> BUDGET 1/20/12

Institution

Central Connecticut State University

Date

10/22/2013

Proposed Program

Manufacturing Management

PROJECTED Enrollment	First Term Year 1		First Term Year 2			
	Full Time	Part Time	Full Time	Part Time		
Internal Transfers <i>(from other programs)</i>	21	11	4	3		
New Students <i>(first time matriculating)</i>	2	0	3	2		
Continuing <i>(students progressing to credential)</i>	-	-	18	12		
Headcount Enrollment	23	11	25	17		
<b>Total Estimated FTE per Year</b>	27		31			

PROJECTED Program Revenue	Year 1		Year 2			
	Full Time at \$8706	Part Time at \$378	Full Time at \$8706	Part Time at \$378		
Tuition <i>(Do not include internal transfers)</i>	\$17,412	\$4,158	\$82,826	\$5,292		
Program-Specific Fees	\$0	\$0	\$0	\$0		
Other Rev. <i>(Annotate in text box below)</i>	\$0		\$0			
<b>Total Annual Program Revenue</b>	\$21,570		\$88,118			

PROJECTED Expenditures*	Year 1		Year 2			
	Number <i>(as applicable)</i>	Expenditure	Number	Expenditure		
Administration <i>(Chair or Coordinator)</i>	0.2	\$15,000	0.2	\$15,000		
Faculty <i>(Full-time, total for program)</i>	1.5	\$112,500	1.5	\$112,500		
Faculty <i>(Part-time -total for program)</i>	4	\$19,200	5	\$24,000		
Support Staff	0.2	\$7,000	0.2	\$7,000		
Library Resources Program		\$1,000		\$1,000		
Equipment <i>(List as needed)</i>		\$0		\$0		
Other (ATMAE Accreditation )		\$2,000		\$2,000		
Estimated Indirect Cost <i>(e.g. student services, operations, maintenance)</i>		\$5,000		\$6,000		
<b>Total ESTIMATED Expenditures</b>		\$161,700		\$167,500		

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

Please provide any necessary annotations:

ATMAE Accreditation has recently adopted an outcomes assessment model for program review. This process requires a substantial amount of data from a broad range of constituents to be collected annually.

<sup>1</sup> 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

Modification of an Accredited Program PRO FORMA <sup>1</sup> BUDGET 1/20/12

<sup>1</sup> 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

[date]

RESOLVED: That the Board of Regents for Higher Education approve modification of a program in Biotechnology leading to an Associate of Science degree at Middlesex Community College to substantively change the curriculum

A True Copy:

---

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

**ITEM**

Modification of a program in Biotechnology leading to an Associate of Science degree at Middlesex Community College to substantively change the curriculum

**BACKGROUND**Summary of the Proposal: Background for the Modifications

Middlesex Community College is proposing several modifications to its existing Associate Degree program in Biotechnology:

- Changing course requirements, totaling 18 credit hours;
- Reducing the total number of credits from 63 to 61, coming as close as possible to the proposed BOR policy limiting the Associate Degree to 60 credits despite the program's inclusion of eight, 4-credit/6-contact hour, laboratory-intensive courses;
- Discontinuing the Forensic Science Option.

The college's Biotechnology program was originally established in 1994 as an option to the existing Environmental Science degree program. Over the next few years, the Biotechnology option grew in enrollment, simultaneous with the increased visibility of, and employment demand in, that field. In 2006, the Biotechnology Option was split off from Environmental Science to become its own standalone degree. A Forensic Science Option was also added that year in response to student and employer interest.

At this point, these modifications are necessary to ensure students receive training that is current in the field of biotechnology, and prepare them for Baccalaureate programs by improving transferability. The college believes these updates will enable it to revitalize the program through new marketing efforts (especially through social media) tying the academic curriculum to career possibilities; improving outreach to area secondary schools; establishing additional internship opportunities; and, increasing community collaborations such as service learning projects, industry seminars, undergraduate research opportunities with university partners, and open houses.

The current group of Biotechnology students is approximately 25, but by generating new excitement about the program and engaging the community in new ways, the college will be able to strengthen the core of the program so that more students are guided to success, thus increasing retention and graduation rates. By looking at many other curricula around the country, the Biotechnology faculty are confident that the proposed new course additions are necessary.

As part of these modifications, the college recommends discontinuing the Forensic Science Option. Based on conversations with industry and academia, the college has learned this Option is no longer sufficient in training students for a career in forensic science at the Associate Degree level. Graduates are employable in forensic science positions through coursework found in the parent Biotechnology degree, without the need for specialized forensics courses. For those types of jobs, the biotechnology skill set is necessary and the three criminal justice courses that the track required do not add substantially to the skill set of a laboratory technician. More importantly, all forensic positions can utilize the laboratory skills taught, and should have the courses that are not included in the forensic science track, e.g. microbiology and the biotechnology internship, which both provide

students with important skills for employability. This proposal is timely in that the state of Connecticut is currently investing heavily in the biotechnology industry. With an updated and revitalized program, Middlesex Community College will be better suited to serve as an important pathway for those seeking careers in this growing field.

This Program Modification Proposal is one result of intensive curriculum development happening at the college, brought about by its participation in a consortium of CSCU institutions known as the Health & Life Sciences Initiative. This initiative has been funded by a \$12 million Trade Adjustment Assistance Community College and Career Training (TAA-CCCT) grant, with an implementation period of October 2012 through September 2015. Consortium members are Capital, Gateway, Manchester, Middlesex, and Norwalk Community Colleges; Eastern Connecticut State University, and Charter Oak State College. The consortium will provide targeted certifications, industry-recognized credentials, and Associate degrees to prepare veterans, TAA impacted, dislocated, and other under-employed workers statewide for careers in health and life sciences.

### Need for the Program

The biotechnology industry is currently experiencing resurgence in Connecticut. New companies are starting up and old ones are growing. The state has invested heavily with new initiatives, logistical support groups, and funding to promote growth of revenue and jobs in these companies. The majority of these companies are located in the southwestern region of the state, with the densities highest in New Haven County. This is leading to a growth in jobs and a need for trained professionals and expanded educational opportunities at all levels.

In 2013, the State of Connecticut announced that it will invest \$200 million in a 10-year BioScience Innovation Fund. Governor Dannel P. Malloy stated that the fund will help in “positioning Connecticut to be a leader in the creation of 21st Century jobs.” As reported in *HartfordBusiness.com* (2014, January 6), “The BioScience Facilities Fund helps qualified firms build out wet laboratory and related space to propel Connecticut’s bioscience industry. Since its inception in 1998, the program has committed more than \$37M translating into over 350,000 sq. ft. of lab and support space throughout the state, including 10,600 sq. ft. of transitional wet laboratory space in New Haven’s Science Park at Yale.” In the Farmington area, Jackson Laboratory serves as the “face” of the state’s billion-dollar Bioscience Connecticut initiative. This new 189,000 square foot facility will be focused on genomics and medical research and is hoped to spawn nearly 16,000 jobs over 25 years. They also believe that they will create momentum in the area generating new collaborations between academia, spin-off companies and attracting new biotech investors to the region.

Similarly, the demand for biological technicians is expected to grow by 14% in the coming decade, consistent with other jobs for an average growth rate. The number is considerably higher for other job titles that fall under the broad field of biotechnology such as biochemists and biophysicists, who have an expected growth rate of 31% in this decade (Bureau of Labor Statistics). Biological technicians are projected to have a 16.1% increase in statewide job growth and is on the hot list for fastest growing occupations in Connecticut. The U.S. Bureau of Labor Statistics reported 2012 median pay of various biotechnology occupations: biological technicians (\$39,750/year), chemists (\$42,920/year) which have a job outlook to increase by 14.7%, and medical scientists (\$76,980/year, but requiring a doctoral degree) projected to increase by 31.5%.

### Curriculum

The proposed modifications will increase and improve the laboratory techniques skills set taught in the Associate Degree program in Biotechnology. With so many research fields in biology, new discoveries are made every day. Biotechnology is no exception, and instead is a cornerstone of this continued advancement. Therefore, it is imperative that the college update its biotechnology program to reflect a curriculum that includes bioinformatics and a higher level of biotechnology skills. Biotechnology businesses are looking for individuals that not only have the skills and knowledge, but also emphasize good management practices that focus on quality, sterility, documentation, regulatory compliance, and safety in the laboratory environment.

The 18 credits of changes to the Biotechnology program include:

- Replacing MAT\* 186, “Pre-Calculus,” with MAT\* 173, “College Algebra” – Existing Course
- Replacing PHL\* 111, “Ethics,” with BIO\* 222, “Molecular Biotechniques – Existing Course
- Replacing “Open Elective” with BIO\* 109, “Principles of Biotechnology” – New Course
- Replacing CHE\* 112, “Principles of Organic & Biochemistry” with BIO\* 220, “Biochemistry” – New Course
- Removing CSA\* 140, “Database Applications”

Discontinuing the Forensic Science Option will remove four courses (13 credits) from the program. However, all four courses are integral to other degree and certificate programs at the college and will continue to be available to students continuing with this Option during its phase-out period.

Upon completion of the Associate Degree in Biotechnology, graduates will be able to:

1. Conduct themselves as lab technicians in a biotechnology laboratory with the basic skills and knowledge required to function effectively in a research setting.
2. Demonstrate proficiencies in both basic and advanced principles of chemistry and biology that are required by a person working as a lab technician or planning to enter into a four-year college science program.
3. Explain the basic principles of genetics, molecular biology, cell biology, chemistry, biochemistry, and microbiology.
4. Employ sterile technique in the handling of microbial cultures with knowledge of what is safe and what is hazardous.
5. Prepare solutions and perform accurate measurements using precision instruments such as balances and micropipettors.
6. Demonstrate skills in the use of recombinant DNA techniques, PCR, DNA sequence analysis, HPLC, gas chromatography, mass spectroscopy, IR spectroscopy, UV/VIS spectroscopy, as well as the use of the computer to collect and analyze experimental data.
7. Recognize the ethical issues that are relevant to the field of biotechnology.

### Students

#### **Biotechnology Program Enrollments & Graduates AY2009-AY2013**

<b>Biotechnology</b>	<b>Fa09</b>	<b>Sp10</b>	<b>Fa10</b>	<b>Sp11</b>	<b>Fa11</b>	<b>Sp12</b>	<b>Fa12</b>	<b>Sp13</b>	<b>Fa13</b>	<b>Sp14</b>
FT Enrollment	5	7	9	6	9	7	11	12	5	6
PT Enrollment	7	10	7	9	8	9	10	7	9	8
<b>Total Enrollment</b>	<b>12</b>	<b>17</b>	<b>16</b>	<b>15</b>	<b>17</b>	<b>16</b>	<b>21</b>	<b>19</b>	<b>14</b>	<b>14</b>
Graduation Numbers (spring)		2		5		2		4		0
<b>Forensic Science</b>	<b>Fa09</b>	<b>Sp10</b>	<b>Fa10</b>	<b>Sp11</b>	<b>Fa11</b>	<b>Sp12</b>	<b>Fa12</b>	<b>Sp13</b>	<b>Fa13</b>	<b>Sp14</b>
FT Enrollment	8	7	6	4	6	5	12	8	10	4
PT Enrollment	1	1	3	7	4	5	3	5	4	6
<b>Total Enrollment</b>	<b>9</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>13</b>	<b>14</b>	<b>10</b>
Graduation Numbers (spring)		0		0		0		3		2
<b>Total Biotech Enrollment</b>	<b>21</b>	<b>25</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>26</b>	<b>36</b>	<b>32</b>	<b>28</b>	<b>24</b>

Students currently enrolled in the Forensic Science Option will have the choice of moving into the revised Biotechnology degree program, or completing all Forensic Science Option requirements no later than May 2016 (a two year phase-out period). This will be accomplished simply because the four courses that differ between the Forensic Science Option and the parent Biotechnology program are not being eliminated from the college. The three Criminal Justice courses are part of the highly-enrolled Criminal Justice degree program; and, PHY\*110, "Introductory Physics," is an integral course in other degree and certificate programs while also serving as an excellent choice as a laboratory science elective for other students. The college does not foresee any problems in supporting students to completion of the forensic science track.

Faculty:

Faculty Name and Title	Institution of Higher Degree	Area of Specialization/Pertinent Experience	Other Administrative or Teaching Responsibilities
Patrick Bryan Assistant Professor	Ph.D. Biology, University of Alabama at Birmingham B.S. Biology, Bloomsburg University of Pennsylvania	Biology and cellular biology	Introductory biology courses
Patty Clow Adjunct Professor	Ph.D. Molecular Cell Biology and Biochemistry, Washington University B.S. Biology, The College of William and Mary	Biology, human biology, and 5 years of industry experience in biotechnology	Principles of the Human Body
Rosemarie Doris Adjunct Professor	Ph.D. Biochemistry and Molecular Biology, University of Glasgow, Scotland, UK BSc (Honors) Biochemistry, Strathclyde University, Glasgow, Scotland, UK	Biochemistry, biology, bioinformatics, molecular biology	Principles of the Human Body, Biochemistry
Kimberly Thomas Associate Professor	Ph.D. Chemistry, University of Rhode Island, 2000 M.S. Chemistry, Saint Joseph College, 1994 B.S. Biology, Southern Connecticut State University, 1987	Chemistry	Responsible for teaching chemistry courses at both the introductory and advanced level.
Michelle Tipton Interim Assistant Professor and Biotechnology Coordinator	Ph.D. Biology, Wesleyan University, 2013 M.A. Ecology and Environmental Science, Central Connecticut State University B.S. Marine Biology, University of Rhode Island	Biology, Ecology, and Molecular Genetics	Responsible for teaching introductory biology and upper level biology courses. Current coordinator duties include advising, and preparing and placing biotechnology students into internships.

### Learning Resources & Facilities

The college has adequate learning resources and facilities to continue this program for the foreseeable future.

### Fiscal Note:

As indicated in the attached Pro-Forma Budget, the college anticipates: 1) program enrollment to increase from 24 FTE to 32 FTE within the next two years; 2) expenses including that of a Program Coordinator assignment, salary and fringe benefits for part-time lecturers (including full-time faculty teaching an “overload” course), new/replacement equipment, consumable supplies, and an allowance for indirect costs; and, 3) growing income that will exceed expenses.

### Review of Documents:

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

### Accreditation:

This program is not separately accredited, but rather falls under the general accreditation of the college by the New England Association of Schools and Colleges.



# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## SECTION 1: GENERAL INFORMATION

<b>Institution:</b> Middlesex Community College		<b>Date of Submission to BOR Office:</b> April 2014	
<b>Most Recent NEASC Institutional Accreditation Action and Date:</b> Reaccredited March 2014; Next Evaluation Fall 2022			
<b>Original Program Characteristics</b> CIP Code No. 261201    Title of CIP Code                      CIP Year: 2000                      or 2010 <b>Name of Program:</b> Biotechnology <b>Degree:</b> Title of Award (e.g. Master of Arts) Associate of Science <b>Certificate:</b> (specify type and level) <b>Date Program was Initiated:</b> 1994 <b>Modality of Program:</b> On ground                      Online    X Combined If "Combined", % of fully online courses? 37% (based on courses that are available as online <i>option</i> ) <b>Total # Cr the Institution Requires to Award the Credential (i.e.</b> <b>include program credits, GenEd, other):</b> 63 credits		<b>Original Program Credit Distribution</b> # Cr in Program Core Courses: 38 # Cr of Electives in the <b>Field:</b> 13 <b># Cr of Free Electives:</b> 9 Free Electives # Cr Special Requirements (include internship, etc.): 3 <u><b>Total # Cr in the Program</b></u> (sum of all #Cr above): 63 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 63	
<b>Type of Program Modification Approval Being Sought (mark all that apply):</b> Licensure and Accreditation (specify whether New Certificate, Minor, Option, Concentration, or Other) X Significant Modification of Courses/Course Substitutions Offering of Program Using an Alternate Modality (e.g. from on ground to online) X Change of Degree Title or Program Title			
<b>Modified Program Characteristics</b> <b>Name of Program:</b> Biotechnology <b>Degree:</b> Title of Award (e.g. Master of Arts) Associate of Science <b>Certificate <sup>1</sup>:</b> (specify type and level) <b>Program Initiation Date:</b> Fall 2014 <b>Modality of Program:</b> On ground                      Online    X Combined If "Combined", % of fully online courses? approximately 50% (based on estimated number of courses with online <i>option</i> ) <b>Total # Cr the Institution Requires to Award the Credential (i.e.</b> <b>include program credits, GenEd, other):</b> 61 credits Other:		<b>Modified Program Credit Distribution</b> # Cr in Program Core Courses: 38 # Cr of Electives in the <b>Field:</b> 14 # Cr of Free Electives: 6 # Cr Special Requirements (include internship, etc.): 3 <u><b>Total # Cr in the Program</b></u> (sum of all #Cr above): 61 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 46	
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			
<b>Institution's Unit Science and Location (e.g. main campus) Offering the Program:</b> MxCC Main Campus			
<b>Other Program Accreditation:</b> <ul style="list-style-type: none"> <li>If seeking specialized/professional/other accreditation, name of agency and intended year of review: NA</li> <li>If program prepares graduates eligibility to state/professional license, please identify: NA</li> </ul> (As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)			
<b>Institutional Contact for this Proposal:</b> Dr. Steven Minkler		<b>Title:</b> Dean of Academic Affairs <b>Tel.:</b> 860.343.5706 <b>e-mail:</b> <a href="mailto:sminkler@mxcc.edu">sminkler@mxcc.edu</a>	

<sup>1</sup> 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*

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

BOR Sequence Number (to be assigned):

Approved 2010 CIP Code No. <sup>2</sup> (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)

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<sup>2</sup> 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)

The original biotechnology program at Middlesex Community College (MxCC) has been in existence for over 20 years. In 1994, it was introduced by Dr. Jon Morris as an option in combination with the environmental science program. As it grew, it became a more popular program, while the environmental science program decreased in activity, therefore, prompting the splitting off of the program in 2006. It was at that time that Dr. Marcie Swede added a forensic science track, as it was an up-and-coming career of the time. Around the same time period, versions of biotechnology programs were popping up around the state, but none prevailed with such enrollment and placement success as MxCC's has. Gateway started a biotechnology program in 2000 but it died out due to lack of funding, Capital had a program in the early 90's, which disappeared shortly thereafter, (resurrected last year), and Housatonic ended a type of biotechnology program in 2000 upon departure of its coordinator (*personal communication Jon Morris, 2014*).

Over time, MxCC's biotechnology program has received updates to the curriculum. At this point it is necessary to submit a major modification to ensure that students are receiving training that is current to the field of biotechnology and that will ensure transferability. We also believe that this update will enable us to revitalize the program through new marketing efforts and community collaborations like social media, google ads, brochures, industry seminars, and open houses, with assistance by the Health & Life Sciences Career Initiative. The current group of biotechnology students is approximately 25, but by generating new excitement about the program and engaging the community in new ways, we will be able to strengthen the core of the program so that more students are guided to success and thus, increasing retention and graduation rates. By looking at many other curricula around the country and comparing our courses to well respected documents in the field, like the Texas Skill Standards Board (TSSB) Skill Standards, we are confident that some new course additions are necessary. While doing so, we are careful to maintain the competencies necessary to be TAP compliant.

This proposal is timely in that the state of Connecticut is currently investing heavily in the biotechnology industry. With an updated and revitalized program, Middlesex Community College will be better suited to serve as an important pathway for training and retraining under/un-employed.

The proposed program modification will:

- *Increase and improve the laboratory techniques skill set taught in the biotechnology AS degree.*

With so many research fields in biology, new discoveries are made every day. Biotechnology is no exception, and rather is a cornerstone of this continued advancement. Therefore, it is imperative that we update MxCC's biotechnology program to reflect a curriculum that includes bioinformatics and a higher level of biotechnology skills. Biotechnology businesses are looking for individuals that not only have the skills and knowledge, but also emphasize good management practices that focus on quality, sterility, documentation, regulatory compliance, and safety in the laboratory environment. To do this end, we have added/resurrected three courses that would draw on the skills and knowledge level that employers and bachelors programs want to see: BIO\*109-Principles of Biotechnology, CHE\*220-Biochemistry, BIO\*222-Molecular Biotechniques.

- **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 biotechnology industry is currently experiencing resurgence in the state of Connecticut. New companies are starting up and old ones are growing. The state has invested heavily with new initiatives, logistic support groups, and funding to promote growth of revenue and jobs in these companies. The majority of these companies are located in the southwestern region of the state, with the densities highest in New Haven County. This is leading to a growth in jobs and

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a need for trained professionals and expanded educational opportunities at all levels.

Similarly, the demand for biological technicians is expected to grow by 14% in the coming decade for a national average, consistent with other jobs for an average speed.<sup>3</sup> The number is considerably higher for other job titles that fall under the broad field of biotechnology like biochemists and biophysicists who have an expected growth rate of 31% in this decade.<sup>3</sup>

This degree will train the workforce to respond to this statewide need. Biological technicians are projected to have a 16.1% increase in CT job growth and is on the hot list for fastest growing occupations in Connecticut. The U.S. bureau of labor reports the median pay of biological technicians in 2012 was \$39,750/year.<sup>3</sup> As biotechnology is a field that covers a broad range of occupations it is also important to include other job titles that students are eligible for. The CT hot list also includes chemists (2012 median pay: \$42,920/year<sup>3</sup>) which have a job outlook to increase by 14.7%, and medical scientists (2012 median pay: \$76,980 w/ a doctorate<sup>3</sup>) projected to increase by 31.5%.<sup>4</sup>

### Initiatives by CT to support Biotechnology Industry

In 2013, the state of Connecticut announced investing \$200 million for the 10-year Bioscience Innovation Fund. The governor stated that the fund will help in "...positioning Connecticut to be a leader in the creation of 21st Century jobs". "The BioScience Facilities Fund helps qualified firms build out wet laboratory and related space to propel Connecticut's bioscience industry. Since its inception in 1998, the program has committed more than \$37M translating into over 350,000 sq. ft. of lab and support space throughout the state, including 10,600 sq. ft. of transitional wet laboratory space in New Haven's Science Park at Yale."<sup>5</sup> In the Farmington area, Jackson Laboratory serves as the "face" of the state's billion dollar Bioscience Connecticut initiative. This new 189,000 square foot facility will be focused on genomics and medical research and is hoped to spawn nearly 16,000 jobs over 25 years. They also believe that they will create momentum in the area generating new collaborations between academia, spin-off companies and attracting new biotech investors to the region.<sup>6</sup>

- 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?

Middlesex Community College's (MxCC) location is ideal for this program as it is surrounded by two major hospitals in Middletown and one in Meriden, multiple healthcare providers, industry businesses both locally (e.g. Protein Sciences, in Meriden) and in the major industry hubs of New Haven, Wallingford, and Farmington due to the addition of Jackson Labs. All of these present opportunities for positions that hire qualified technicians and scientists. These institutions will provide necessary externship locations in close proximity to the college. MxCC has a strong track record of internship placement at local industry businesses where our graduates interned, obtained job placement, and worked their way of the ranks to managerial positions. Additionally, many of these businesses support their employees in furthering their education and learning new skills, and so we are optimally position to offer those educational services.

The Science, Allied Health, and Engineering Division at Middlesex Community College has a very diverse group of faculty that includes biologists, microbiologists, molecular ecologists, chemists, biochemists, geneticists, engineers, computer technologists, and allied health professionals, to name a few. This expansive covering of topics is very important for properly supporting the broad field of biotechnology. The experience that faculty bring range from local and international

<sup>3</sup> Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition, Biological Technicians,

<http://www.bls.gov/ooh/Life-Physical-and-Social-Science/Biological-technicians.htm> (visited November 25, 2013).

<sup>4</sup> Connecticut Labor Market Information, Fastest Growing Occupations in Connecticut. Date accessed: December 5, 2013. [http://www1.ctdol.state.ct.us/lmi/hotnot\\_results.asp](http://www1.ctdol.state.ct.us/lmi/hotnot_results.asp)

<sup>5</sup> Connecticut Innovations, Funding opportunities. Date accessed: November 25, 2013.

<http://www.ctinnovations.com/FundingOpportunities/BioScienceFacilitiesFund.aspx>

<sup>6</sup> HartfordBusiness.com. Lee spearheads Jackson Lab's \$1B CT bioscience bet.

<http://www.hartfordbusiness.com/article/20140106/PRINTEDITION/301029956>. Date accessed: March 10, 2014

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research to biotechnology industry experience at both small and large companies. This gives our students exceptional guidance in preparation for real world scenarios and out of the box experiences in the laboratory and classroom lectures.

- **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)*

Modifications to the Biotechnology A.S. degree program at Middlesex Community College were designed to enhance the skill set of the biotechnology student further supporting them to transfer and succeed at four year institutions. It is also important to note that we retain the internship experience, as many industry professionals expressed that this would give our students a leg up over students who had only a bachelor degree upon graduation. We have had a number of transfer agreements in the past with institutions like the University of New Haven and the Connecticut state universities, and we expect to renew or create new formal agreements once a fully approved curriculum can be presented to them. Development of articulation agreements is underway currently with Central and Eastern State Universities and University of New Haven.

- **Please indicate what similar programs exist in other institutions within your constituent unit <sup>7</sup>, and how unnecessary duplication is being avoided.**

Until recently, no other community college in the state still offered a biotechnology program besides Middlesex Community College. With the addition of Capital Community College to the list, we are still confident that these two community colleges can continue to service the state of Connecticut. Geographically speaking, Middlesex is positioned in the middle of the state, but can be viewed as more southern relative to Capital Community College. This allows for good separation of regions north by south. Conversely, these institutions are actually close, which enables students to take courses at either giving them larger freedom of scheduling. Additionally, Middlesex could also provide Capital with a place for their students to take courses if theirs are too low enrolled initially during its start-up phase of their biotechnology program, with a place for their students to take courses if theirs are too low enrolled initially.

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

As stated above, the biotechnology industry is currently experiencing resurgence as recovery from the 2008 recession continues. Middlesex Community College is well positioned among the New Haven and Middlesex Counties. The towns and cities within these are budding with new and current biotechnology hubs. The CURE (Connecticut United for Research Excellence) is a bioscience cluster that is heavily active statewide and aims to cultivate entrepreneurship, build bioscience companies, and collaborate to ensure a sustainable, high-value bioscience and healthcare community that improves our quality of life and keeps the Connecticut economy strong. With strong networks and increasing opportunity being fostered among businesses in the state, there is great opportunity for graduates to stay within Connecticut for employment.

By some standards, the central coast of Connecticut is considered the venture capital hub with a big focus in biotechnology. It is ranked third among locations for research dollars generated: National Institutes of Health Per Capita Research Grants; CT - \$133.38 of Research Money Per Capita.<sup>8</sup> The industry employs more than 18,000 people and spends more than \$6 billion annually on operations in the state.<sup>9</sup> As Middlesex Community College is position relatively close to this area, many of our students already reside in this region and may be more likely to stay in the area for jobs. This is both a great investment by the state in training and an incentive to recruit locally for creating a more knowledgeable and skilled employee ready for our workforce.

Middlesex Community College will benefit from the proposed program modifications because it will strengthen the skill set

<sup>7</sup> Constituent units are: the Connecticut Community College System, the Connecticut State University System, Charter Oak State College, and the University of Connecticut

<sup>8</sup> U.S. Department of Health and Human Services, National Institutes of Health and U.S. Census, 2008

<sup>9</sup> Life Sciences /Medical devices. <http://cteconomicdevelopment.com/CT-biotech-companies.php>. Date Accessed: March 10, 2014

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

of students, enabling them to obtain internships and employment. Exposing students to hands-on experiences which will enhance their resumes and better position them in the job search. The job market for biotechnology positions in Connecticut is higher than average<sup>3</sup> and students will complete their Associate's degree with many options including pursuit of immediate employment or obtaining more advanced degrees.

**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 following proposed modifications (see attached table of proposed changes) will broaden the scope of the existing Biotechnology program, provide students with more career exploration and hands-on learning opportunities, and ensure transfer to a variety of environmental programs at baccalaureate institutions:

- Addition of new required core courses:
    - BIO\*109-Principles of Biotechnology *(Introduces the field of biotechnology to students early in the program and provides an opportunity to students who are interested in biotechnology but want to find out what it is really about; this replaces PHL\*111 Ethics as they will have many ethics modules throughout their sciences courses, including this one.)*
    - CHE\*220-Biochemistry *(Provides a course that articulates better than the other combined chemistry course of CHE\*112 Principles of Organic & Biochemistry; additionally employers felt that organic chemistry was not as critical at this level of a degree.)*
    - BIO\*222-Molecular Biotechniques *(Provides an additional lab skills course enabling for more skills to be taught, quality of skills acquired by students to be enhanced, and more advanced skills and research techniques to be learned); this replaces CSC\*140 Database Applications as students at this level will not be doing much database creating. At a minimum they would need to know excel and word which is covered in CSC\*101.)*
  - Reduce the math requirement from MAT\*186 Pre-calculus to MAT\*173 College Algebra w/Technology. *(This change would better reflect the requirements of other biotechnology programs, and feedback from math faculty indicates it would provide students with the necessary math instruction for this degree. MAT\*168 Statistics, would be retained as it provides students with an important skill/understanding for employment in the biotechnology industry.)*
- There are no admissions requirements in the existing or proposed program.
- The program will continue to be offered as a combination of online and on-ground courses with approximately 30% of courses available online.
- Changes made to the learning outcomes were only grammatical adjustments *(Only seven can be listed, so it may not be the same seven as were previously chosen.)*

Note that all of the modifications to the program, including new course offerings, will be supported by Middlesex with existing faculty and resources. The modified program will be administered by the new Biotechnology Program Coordinator, with an estimated start of Fall 2014.

**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)*

Implementation of changes to the Biotechnology program can occur with no additional start-up costs, capital purchases, or personnel, however, some new equipment would be ideal. It would be in the best interest of improving the quality of the program and enable us to teach more sophisticated techniques if money could be invested in the acquisition of equipment like more micropipettes, an updated thermal cycler, cell counter, etc. The college has begun investing as it is slated to hire a new Biotechnology coordinator for an aimed start date of Fall 2014. Recently completed remodeling of the biotechnology/microbiology lab in Wheaton Hall at MxCC has created a sterile, updated, compliant space for students to learn critical hands on skills. It is also anticipated that the chemistry labs will be renovated in the next year which would greatly improve their learning experience.



## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

Our college is a consortium member of a \$12 million grant for the Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant program. The consortium will provide targeted certifications, industry-recognized credentials, and Associate degrees to prepare veterans, TAA impacted, dislocated, and other under-employed workers statewide for careers in health and life sciences. Within it, there are some funds available that may be used to purchase new equipment like a new thermal cyclor and more micropipettors, again enabling more hands on experience by students.

### Faculty Resources:

Faculty Name and Title	Institution of Higher Degree	Area of Specialization/Pertinent Experience	Other Administrative or Teaching Responsibilities
Patrick Bryan Assistant Professor	Ph.D. Biology, University of Alabama at Birmingham B.S. Biology, Bloomsburg University of Pennsylvania	Biology and cellular biology	Introductory biology courses
Patty Clow Adjunct Professor	Ph.D. Molecular Cell Biology and Biochemistry, Washington University B.S. Biology, The College of William and Mary	Biology, human biology, and 5 years of industry experience in biotechnology	Principles of the Human Body
Rosemarie Doris Adjunct Professor	Ph.D. Biochemistry and Molecular Biology, University of Glasgow, Scotland, UK BSc (Honors) Biochemistry, Strathclyde University, Glasgow, Scotland, UK	Biochemistry, biology, bioinformatics, molecular biology	Principles of the Human Body, Biochemistry
Kimberly Thomas Associate Professor	Ph.D. Chemistry, University of Rhode Island, 2000 M.S. Chemistry, Saint Joseph College, 1994 B.S. Biology, Southern Connecticut State University, 1987	Chemistry	Responsible for teaching chemistry courses at both the introductory and advanced level.
Michelle Tipton Interim Assistant Professor and Biotechnology Coordinator	Ph.D. Biology, Wesleyan University, 2013 M.A. Ecology and Environmental Science, Central Connecticut State University B.S. Marine Biology, University of Rhode Island	Biology, Ecology, and Molecular Genetics	Responsible for teaching introductory biology and upper level biology courses. Current coordinator duties include advising, and preparing and placing biotechnology students into internships.
Jon Morris Interim Division Chair Professor	Ph.D Biomedical Sciences, Wright State University, 1989 B.S. Biology, Antioch University, 1976	Biotechnology, genetics, biochemistry, microbiology, general biology, anatomy and physiology	Division chair. Also coordinates and teaches microbiology labs.

### Other Considerations

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

Previous Three Years Enrollment and Completion for the Program being modified

\*Internal transfers not tracked.

## MIDDLESEX COMMUNITY COLLEGE

### Biotechnology Program Enrollments & Graduates AY2009-AY2013

Biotechnology	Fa09	Sp10	Fa10	Sp11	Fa11	Sp12	Fa12	Sp13	Fa13	Sp14
FT Enrollment	5	7	9	6	9	7	11	12	5	6
PT Enrollment	7	10	7	9	8	9	10	7	9	8
Total Enrollment	12	17	16	15	17	16	21	19	14	14
Graduation Numbers (spring)		2		5		2		4		0
Forensic Science	Fa09	Sp10	Fa10	Sp11	Fa11	Sp12	Fa12	Sp13	Fa13	Sp14
FT Enrollment	8	7	6	4	6	5	12	8	10	4
PT Enrollment	1	1	3	7	4	5	3	5	4	6
Total Enrollment	9	8	9	11	10	10	15	13	14	10
Graduation Numbers (spring)		0		0		0		3		2
<b>Total Biotech Enrollment</b>	<b>21</b>	<b>25</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>26</b>	<b>36</b>	<b>32</b>	<b>28</b>	<b>24</b>

Source: Banner Census & Graduation Data



# 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 <i>(to be used as appropriate for specific modification request)</i> <sup>10</sup>						
Course Number and Name <small>11</small>	L.O. #	Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
<b>Program Core Courses</b>				<b>Other Related/Special Requirements</b>		
BIO*109 Principles of Biotechnology	1, 5, 7	eligible for ENG*101 and eligible for MAT*137E	3	MAT*168 Elementary Statistics and Probability I	2	4
BIO*121 General Biology I	1, 2, 3	Eligible for ENG*101 and eligible for MAT*137 (or higher)	4	CSC*101 Introduction to Computers <i>(or higher)</i>	2	3
BIO*222 Molecular Biotechniques	1, 2, 3, 4, 5, 6, 7	CHE*112 or higher and either BIO*121 or BIO*235, or permission of the instructor	4	COM*173 Public Speaking	2	3
BIO*235 Microbiology	1, 2, 4, 7	Eng*101 with a grade of 'C' or better; CHE*111 (or higher) and either BIO*105 or BIO*121, taken within the past five years with a grade of 'C' or better	4	MAT*173 College Algebra w/Technology <i>(or higher)</i>	2	4
BIO*263 Molecular Genetics	1, 2, 3, 4, 5, 6, 7	CHE*112 or BIO*121 or BIO*235, or permission of the instructor	4	ENG*202 Technical Writing or COM*173 Public Speaking	2	3
BIO*296 Biotechnology Internship	1, 4, 6, 7	Permission of Instructor	3			
CHE*121 General Chemistry I	1, 2, 3	ENG*101 and MAT*137 with a C- or better, and high school chemistry or CHE*111	4			
CHE*122 General Chemistry II	1, 2, 3	CHE*121 with a C- or better	4			
CHE*220 Biochemistry	1, 2, 3, 4, 5	BIO*121 with a "C" or better and CHE*122 with a "C" or better	4			
CHE*250 Instrumental Analysis	1, 2, 3, 4, 5, 6, 7	CHE*121 with a C- or better, or permission of instructor	4			
<b>Core Course Prerequisites</b>		<b>Elective Courses in the Field</b> <i>(12 credits required)</i>				
ENG*101 Composition	3					
<b>Total Other Credits Required to Issue Modified Credential</b>						
Social Science elective (3)						
Fine Arts elective (0)						
Open elective (3)						

<sup>10</sup> 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.

<sup>11</sup> 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


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

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

1. Conduct themselves as lab technicians in a biotechnology laboratory with the basic skills and knowledge required to function effectively in a research setting.
2. Demonstrate proficiencies in both basic and advanced principles of chemistry and biology that are required by a person working as a lab technician or planning to enter into a four-year college science program.
3. Explain the basic principles of genetics, molecular biology, cell biology, chemistry, biochemistry, and microbiology.
4. Employ sterile technique in the handling of microbial cultures with knowledge of what is safe and what is hazardous.
5. Prepare solutions and perform accurate measurements using precision instruments such as balances and micropipettors.
6. Demonstrate skills in the use of recombinant DNA techniques, PCR, DNA sequence analysis, HPLC, gas chromatography, mass spectroscopy, IR spectroscopy, UV/VIS spectroscopy, as well as the use of the computer to collect and analyze experimental data.
7. Recognize the ethical issues that are relevant to the field of biotechnology.

# Connecticut Board of Regents for Higher Education

APPLICATION FOR NEW PROGRAM APPROVAL [PRO FORMA](#) <sup>1</sup> BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

Institution	Middlesex Community College				Date	5/8/2014
Proposed Program	Biotechnology (REVISED PROGRAM and delete Forensic Science Track)					
PROJECTED Enrollment	First Term Year 1 (2014) = 10% growth		First Term Year 2 (2015) = 13% growth		First Term Year 3 (2016) = 15% growth	
	Full Time (12+ cr.)	Part Time (<12 cr.)	Full Time (12+ cr.)	Part Time (<12 cr.)	Full Time (12+ cr.)	Part Time (<12 cr.)
Internal Transfers (from other programs)	3	3	3	3	3	3
New Students (first time matriculating)	4	6	8	10	8	10
Continuing (students progressing to credential)	10	9	7	11	11	11
Headcount Enrollment	17	18	18	24	22	24
Estimated "Credits Sold" to Students assumes Full-Time Student = avg. of 13.5 credits Part Time Student = avg. of 7.5 credits	230	135	243	180	297	180
Total Estimated FTE per Year (Credits Sold / 15)	24		28		32	
Assumptions:	The number of actively enrolled students for the year of 2013/14 is 24.		Based on recruitment activities of meetings with students and my list of new advisees, I currently have 6 new students per year admitted, I estimate more to come, minus a few graduating, and a few internal transfers will result in a overall 10% growth increase.			
PROJECTED Program Revenue	Year 1 (2014-15)		Year 2 (2015-16)		Year 3 (2016-17)	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Tuition & fees*	\$65,722	\$46,692	\$70,980	\$63,501	\$88,488	\$64,771
Lab Fees (4 lab courses/student/year)	\$5,712	\$6,048	\$6,169	\$8,225	\$7,691	\$8,390
Other Rev. (Year 1 - \$7,000 Equipment from DOL Grant)	\$7,000					
Total Annual Program Revenue	\$131,174		\$148,875		\$169,340	
*Tuition is calculated using 2014-15 rates as follows. Full time: in-state, \$1933/semester (\$84 Lab fee where applicable); Part time: in-state, 8 credits, \$1297/semester), plus 2% increase for years 2 & 3						
PROJECTED Expenditures*	Year 1 (2014-15)		Year 2 (2015-16)		Year 3 (2016-17)	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator) - EXISTING	3 WLU** to cover release for Level I Program Coordinator (Salary + 50% Fringe)	\$6,876		\$7,153		\$7,153
Faculty (Full-time, total for program) - EXISTING plus 50% Fringe	Asst Prof/PC (Step 2)	\$84,695	Asst Prof/PC (Step 3)	\$90,158	Asst Prof/PC (Step 3)	\$90,158
Faculty (Part-time -total for program)	6 WLU** (Salary + 50% Fringe)	\$13,752	6 WLU** (Salary + 50% Fringe)	\$14,306	6 WLU** (Salary + 50% Fringe)	\$14,306
Support Staff	Lab support personnel	Included - College has an Academic Associate: Science Lab Supervisor for Entire Science Division				
Library Resources Program	estimated	\$500		\$2,000		\$2,000
Equipment (List as needed) Year 1 - \$7,000 from DOL Grant	Non-consumable supplies for new lab courses	\$15,000		\$12,500		\$1,000
Other (e.g. student services)	Consumable lab supplies (5 courses per year @ \$1000 ea)	\$5,000		\$5,000		\$5,000
Estimated Indirect Cost (e.g. student services, operations, maintenance)	calculated at \$200 per FTE per year	\$4,860		\$5,640		\$6,360
Total ESTIMATED Expenditures		\$130,683		\$136,756		\$125,976
NET New Revenue		\$492		\$12,119		\$43,364
* Note: Capital outlay costs, institutional spending for research and service, etc. can be excluded.						
** Based on the 4C's Part-Time Lecturer Rates (the average of Level 1 and Level 2)						

<sup>1</sup> 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.

## Biotechnology A.S. Degree Program – Proposed Changes

Rev. date 5/16/14, **Changes in BOLD RED FONT**

EXISTING PROGRAM			PROGRAM w/PROPOSED CHANGES	
Admissions Prerequisites			Admissions Prerequisites	
None			None	
General Education (26 credits)			General Education (26 credits)	
ENG*101 Composition	3	>	ENG*101 Composition	3
MAT*168 Elementary Statistics and Probability	4	>	MAT*168 Elementary Statistics and Probability	4
MAT*186 Pre-calculus	4		<b>MAT*173 College Algebra with Technology (or higher)</b>	<b>4</b>
CSC*101 Introduction to Computers (or higher)	3	>	CSC*101 Introduction to Computers (or higher)	3
ENG*202 Technical Writing or COM*173 Public Speaking	3	>	ENG*202 Technical Writing or COM*173 Public Speaking	3
Fine Arts Elective	3	>	Fine Arts Elective	3
Social Science elective	3	>	Social Science elective*	3
Open Elective	3		<b>BIO*109 Principles of Biotechnology</b>	<b>3</b>
Program Requirements (24 credits)			Program Requirements (38 credits)	
CHE*121 General Chemistry I	4	>	CHE*121 General Chemistry I	4
CHE*122 General Chemistry II	4	>	CHE*122 General Chemistry II	4
CHE*112 Principles of Organic & Biochemistry	4		<b>CHE*220 Biochemistry</b>	<b>4</b>
CHE*250 Instrumental Analysis	4	>	CHE*250 Instrumental Analysis	4
BIO*121 General Biology I	4	>	BIO*121 General Biology I	4
BIO*263 Molecular Genetics	4	>	BIO*263 Molecular Genetics	4
Choose One Track (13 credits):				
Biotechnology (Parent Program)				
BIO*235 Microbiology	4	>	BIO*235 Microbiology	4
BIO*296 Biotechnology Internship	3	>	BIO*296 Biotechnology Internship	3
CSA*140 Database Applications	3		<b>(Removed)</b>	
PHL*111 Ethics	3		<b>BIO*222 Molecular Biotechniques</b>	<b>4</b>
Forensic Science Track (Degree Option)			<b>Forensic Science Track removed*</b>	<b>X</b>
PHY*110 Introductory Physics	4			
CJS*101 Intro to Criminal Justice	3			
CJS*225 Forensics	3			
CJS*255 Ethical Issues in Criminal Justice Leadership	3			

Old Program Credit Total = 63 Credits

New program Credit Total = 61 Credits

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning

A New Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve a program in Health Information Management leading to a Certificate at Capital Community College

A True Copy:

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

## ITEM

Approval of a Health Information Management Certificate from Capital Community College

## BACKGROUND

Summary

Capital currently offers an Associate in Science in Health Information Management (HIM) and now proposes to add a related certificate. The proposed certificate will both prepare graduates for immediate entry into the workplace and also provide a fully articulated pathway from the certificate to the associate degree to the baccalaureate program at Charter Oak State College.

Those wishing to enter the workplace upon receipt of the certificate will be eligible to sit for the Certified Coding Associate examination and obtain this American Health Information Management Association-recognized credential. At the point at which these graduates may wish to continue to the associate degree level, all courses in the certificate are part of the degree program which articulates fully into the four year program at Charter Oak State College (COSC).

Need for the Program

In recently approving the HIM associate degree, the Board of Regents recognized the need for HIM/HIT workers in Connecticut. A 2011 report by the Connecticut Allied Health Workforce Policy Board to the legislature highlighted the complexity of the transition to electronic medical records in Connecticut and the need for additional skilled workers in this field.<sup>1</sup> Following this, the Connecticut Department of Higher Education and CWEALF solicited and funded proposals to develop the needed programs, including the one herein proposed.

An additional indicator of the need for HIM/HIT workers is the Connecticut Department of Labor (DOL) projection of a 16% increase in the need for Medical Records and Health Information Technologists.<sup>2</sup> At the same time, the DOL Training and Education Planning System reports that there are 47 openings annually for these workers but only three associate degrees were awarded in the state in 2009/10.<sup>3</sup> The DOL also projects a 7.9% increase in the need for healthcare managers at the baccalaureate level or higher.<sup>4</sup> The State's sole full degree in health information management at COSC was only recently approved.

While Capital offers the degree program, the College also sees a need for the certificate. Community colleges have long offered "stack and latticed" certificates and degrees programs. These create an educational continuum that allows the many part-time students at community colleges to obtain a credential and advance in their field while still pursuing the ultimate goal of a degree. A belief that this fosters student persistence has let the federal government to fund community colleges to do just this through its Trade Adjustment Assistance Community College

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<sup>1</sup> Connecticut Allied Health Workforce Policy Board. Annual Legislative Report, 2011. [www.cwcbh.org](http://www.cwcbh.org)

<sup>2</sup> State of Connecticut and Workforce Investment Area Occupational Projections: 2008-2018: <http://www1.ctdol.state.ct.us/lmi/projections.asp>

<sup>3</sup> Connecticut Department of Labor, Training and Education Planning System: <http://www1.ctdol.state.ct.us/TEPS/default.aspx>

<sup>4</sup> State of Connecticut and Workforce Investment Area Occupational Projections: 2008-2018: <http://www1.ctdol.state.ct.us/lmi/projections.asp>

and Career (TAACCCT) grants. Colleges in the CSCU system, including Capital, currently have multiple TAACCCT grants that call for building these educational pathways.

Capital's new HIM associate degree program has thirty-two matriculated students, five full-time and twenty-seven part-time. The acquisition of a credential prior to completing the degree will encourage part-time students' persistence and potentially allow them to advance in the field. This model is in place for both the medical assisting and paramedic degree programs at Capital and has proven effective for both.

### Curriculum

The certificate has 32 credits. In addition to 22 credits in health information management, it has three credits in the related field of medical assisting, one in computer applications and a third in human biology. Admission requires readiness for college level work as required by course pre-requisites

Course Number and Name	Pre-Requisite	Cr. Hrs.	Course Number and Name	Cr Hrs.
<b>Program Core Courses</b>			<b>Other Related/Special Requirements</b>	
HIM 125/BOT 180 Medical Terminology		3	MED 112 Medical Insurance and Billing	3
HIM 102 Introduction to Healthcare Systems		3	CSA 105 Introduction to Software Applications <b>or</b> CSA 140 Database Applications	3
HIM 155 Fundamentals of Clinical Informatics & EMR	HIM 125/BOT 180, 102	3	BIO 115 Human Biology with Lab	4
HIM 201 Health Information Management Principles	HIM 155	3		
HIM 210 Medical Coding 1	HIM 125	3		
HIM XXX Advanced Medical Coding	HIM 125 HIM 210	4		
HIM 24 Externship <b>or</b> BIO 210 Introduction to Pathophysiology	All HIM and MED courses	3		
		22		10
<b>Total credits: 32</b>				

Students

The college expects that current degree-seeking students, new high school graduates and incumbent workers will enroll in the certificate program, mirroring enrollment in the degree program. As indicated in the fiscal summary, the anticipated enrollment is nine (headcount), 4.8 FTE.

Faculty

The college will not hire new full-time faculty members for the certificate program. As indicated in the fiscal analysis, additional adjunct faculty will be required for added science sections but the tuition revenues will exceed expenditures for adjuncts. Courses within the major will be taught by the full-time faculty listed below.

<b>Faculty Name and Title</b>	<b>Institution of Highest Degree</b>	<b>Area of Specialization/Pertinent Experience</b>	<b>Other Administrative or Teaching Responsibilities</b>
Elaine Ippolito	MLS, Indiana University	Master's degree in Library and Information Science, 30 years of experience in HIM, 21 years supervisory experience and RHIA certification	Program Coordinator
Angela Simpson	Master's degree	Master's degree in healthcare area and CMA and RMA certifications	

Learning Resources

The learning resources acquired for the degree program were designed to be adequate for the additional certificate students who were contemplated from the beginning of the program's development.

Facilities

The existing facilities that serve the degree program will serve the certificate program.

Fiscal Note

The resources generated by the proposed certificate will exceed the expenses, as documented in the fiscal analysis.



**Review of Documents:**

- a) Campus Review: Approved by the Curriculum Committee and Senate
- b) Campus Budget and Finance: Approved the fiscal and facilities components
- c) Campus President: Approved program and related fiscal information
- d) Academic Council: Approved the Certificate
- e) System Office

**Accreditation:** NA

### SECTION 1: GENERAL INFORMATION

<b>Institution:</b> Capital Community College	<b>Date of Submission to BOR Office:</b>
<b>Most Recent NEASC Institutional Accreditation Action and Date:</b> Ten Year Accreditation, 2016	
<b>Program Characteristics</b> Name of Program: <b>Health Information Management</b> Degree: Title of Award <b>Certificate</b> Certificate: <i>(specify type and level)</i> <b>Health Information Management</b> Anticipated Program Initiation Date: Fall, 2014 Anticipated Date of First Graduation: 2015 Modality of Program: X On ground    Online    Combined Total # Cr the Institution Requires to Award the Credential: 32	<b>Program Credit Distribution</b> # Cr in Program Core Courses: Certificate: 22 # Cr of Electives in the Field: Transfer:0; Terminal 0; Certificate: 0 # Cr of Free Electives: Transfer : 0; Terminal: 0; Certificate: 0 # Cr Special Requirements: Certificate: 10 <u>Total # Cr in the Program</u> <i>(sum of all #Cr above)</i> : Certificate: 32 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: All
Type of Approval Action Being Sought: X Licensure OR Licensure and Accreditation Suggested CIP Code No. <i>(optional)</i> 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 <i>(e.g. School of Business)</i> and Location <i>(e.g. main campus)</i> Offering the Program: 950 Main St. Hartford, CT	
Program Accreditation: <ul style="list-style-type: none"> <li>If seeking specialized/professional/other accreditation, name of agency and intended year of review: CAHIIM 2016</li> <li>If program prepares graduates eligibility to state/professional license, please identify: RHIT</li> </ul> <i>(As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)</i>	
<b>Institutional Contact for this Proposal:</b> Mary Ann Affleck	Title: Dean of Academic Affairs Tel.: 860-906-5011 e-mail: maffleck@ccc.commnet.edu

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

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

<sup>1</sup> 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.

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

### **Alignment of Program with Institutional Mission, Role and Scope**

Connecticut's community colleges are part of the Connecticut State College and University (CSCU) system and share a "mission to make excellent higher education and lifelong learning affordable and accessible to all Connecticut citizens. The colleges enrich the intellectual, civic, cultural and social environments of the communities they serve through a wide range of credit transfer and career programs leading to associate degrees and certificates and non-credit life-long learning opportunities and job skills training programs. The colleges support the economic growth of the state and its citizens through programs and partnerships that supply business and industry with a skilled, well-trained work force..."<sup>2</sup>

Consistent with the community college mission, the proposed certificate in health information management (HIM) will both prepare graduates for immediate entry into the workplace and also provide a fully articulated pathway from the certificate to the associate degree to the baccalaureate program at Charter Oak State College.

### **Addressing Identified Needs**

#### **How does the program address CT workforce needs and/or the wellbeing of CT society/communities?**

The American Recovery and Reinvestment Act of 2009 and the Health Information Technology and Clinical Health Act (HITECH Act) initiated and funded the revamping of the health information technology infrastructure into a nationwide electronic record system. That federal stimulus has led to a demand for skilled workers in health information management (HIM) and health information technology (HIT) in Connecticut as well as the rest of the nation.

To provide skilled workers in this growing field, the Connecticut Department of Higher Education and Connecticut Women's Educational and Legal Fund (CWEALF), prompted by state employers, provided funding to Capital (CCC) and partner CSCU institutions to develop an educational pathway from certificate through the baccalaureate degree that would meet statewide needs. CCC's current associate's degree and the proposed certificate program will offer a pathway to the baccalaureate degree at Charter Oak State College and help Connecticut implement the federally mandated health information management system. The approach will be twofold:

- To offer a certificate for current health and information technology professionals who may already hold a degree but wish to upgrade, enhance or diversify skills in a rapidly changing field and
- To develop and offer health information programs of study on an educational continuum from the certificate to associate's and bachelor's degree levels.

#### Employment Trends:

##### *Nationally:*

The healthcare sector is one of the nation's largest employers and the above-cited federal legislation has now made the industry central to the revitalization of the U.S. economy. With the federally-required implementation of electronic health records nationally, the need for skilled professionals and expanded educational opportunities in the HIM field will grow.

The chart below from the Bureau of Labor Statistics' Occupational Outlook Handbook predicts strong employment growth for the health information managers at the baccalaureate level, including those with four year degrees who complete the proposed certificate.

<sup>2</sup> Connecticut State College and University System Draft Mission Statement for Community Colleges

*Quick Facts: Medical and Health Services Managers* <sup>3</sup>

2010 Median Pay	\$84,270 per year , \$40.52 per hour
Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	None
On-the-job Training	None
Number of Jobs, 2010	303,000
Job Outlook, 2010-20	22% (Faster than average)
Employment Change, 2010-20	68,000

Similarly, the demand for health information technologists at the associate degree and certificate levels is expected to grow by 21% in the coming decade, a rate faster than most professions. <sup>4</sup>

*Statewide:*

The need for HIM/HIT workers in Connecticut mirrors that seen on the national level. A 2011 report by the Connecticut Allied Health Workforce Policy Board to the legislature highlighted the complexity of the transition to electronic medical records in Connecticut and the need for additional skilled workers in this field.<sup>5</sup> Following this, the Connecticut Department of Higher Education and CWEALF solicited and funded proposals to develop the needed programs, including the one herein proposed.

An additional indicator of the need for HIM/HIT workers is the Connecticut Department of Labor (DOL) projection of a 16% increase in the need for Medical Records and Health Information Technologists.<sup>6</sup> At the same time, the DOL Training and Education Planning System reports that there are 47 openings annually for these workers but only three associate degrees were awarded in the state in 2009/10.<sup>7</sup> The DOL also projects a 7.9% increase in the need for healthcare managers at the baccalaureate level or higher.<sup>8</sup> The State's sole full degree in health information management at COSC has not yet been awarded.

**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?**

CCC's location is ideal for this program as it is surrounded by three major hospitals, multiple healthcare providers and insurance businesses that are in need of qualified health information management personnel. These institutions will provide necessary externship locations in close proximity to the college. CCC already has internship placements at hospitals and insurance companies throughout the city for students in allied health, computer science and financial programs. Because CCC currently has multiple degree programs in these areas, state of the art computer and science labs are already in place. An additional advantage is that CCC's Medical Assisting program faculty will be able to provide foundational courses that are components of the HIM program.

The program of study will also capitalize on the learning management system within the CSCU. The proposed certificate will incorporate innovative distance learning opportunities along with face-to-face instruction. A recently announced Department

<sup>3</sup> Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition, Medical and Health Services Managers, on the Internet at <http://www.bls.gov/ooh/management/medical-and-health-services-managers.htm> (visited April 28, 2013).

<sup>4</sup> Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition, Medical Records and Health Information Technicians, on the Internet at <http://www.bls.gov/ooh/healthcare/medical-records-and-health-information-technicians.htm> (visited April 28, 2013).

<sup>5</sup> Connecticut Allied Health Workforce Policy Board. Annual Legislative Report, 2011. [www.cwcbh.org](http://www.cwcbh.org)

<sup>6</sup> State of Connecticut and Workforce Investment Area Occupational Projections: 2008-2018:

<http://www1.ctdol.state.ct.us/lmi/projections.asp>

<sup>7</sup> Connecticut Department of Labor, Training and Education Planning System:

<http://www1.ctdol.state.ct.us/TEPS/default.aspx>

<sup>8</sup> State of Connecticut and Workforce Investment Area Occupational Projections: 2008-2018:

<http://www1.ctdol.state.ct.us/lmi/projections.asp>

of Labor grant will allow CCC to convert elements of the program on-line format going forward and will also provide funding for CCC to assess its non-credit HIT program for collegiate credit and articulate that credit into the proposed certificate.

**Please describe any transfer agreements with other institutions under the BOR that will become instituted as a result of the approval of this program.**

As required by the CWEALF grant guidelines, the program has been designed so that all of the courses transfer COSC. Any additional changes required as the CSCU Transfer/Articulation Policy is implemented will be made. The consortium's statewide advisory board will oversee the updating and coordinating of the program and its articulation going forward.

**Please indicate what similar programs exist in other institutions within your constituent unit <sup>9</sup>, and how unnecessary duplication is being avoided**

There is currently no other HIM certificate.

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

Health information management career pathways can vary widely by both job and setting. Graduates could code medical records or manage entire health information divisions in government agencies and healthcare facilities. The American Health Information Management Association website offers a comprehensive map of the career trajectories in the field ranging from entry to senior levels in: 1) compliance/risk management, 2) education/communications, 3) informatics/data analysis, 4) IT/Infrastructure, 5) operations (medical records administration), and 6) revenue management (coding and billing). All areas anticipate demand both within the state and nationally, as detailed above.

**Cost Effectiveness and Availability of Adequate Resources**

Based on the aforementioned labor market analyses and local employer interest in the HIM program, CCC anticipates adequate enrollment resulting in tuition revenues that will exceed program expenditures. It is important to note that if tuition revenues do not materialize, then termination of the program would be an option since no new full-time faculty members will be required in order to add the certificate.

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<sup>9</sup> Constituent units are: the Connecticut Community College System, the Connecticut State University System, Charter Oak State College, and the University of Connecticut

### SECTION 3: PROGRAM QUALITY ASSESSMENT

#### Learning Outcomes - L.O.

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

1. Apply principles as they relate to healthcare privacy, confidentiality, legal and ethical issues. (**Courses:** Introduction to Healthcare Systems, Medical Insurance and Billing)
2. Interpret and apply health information policies and procedures to ensure compliance with federal, state and accreditation agency requirements. (**Course:** Fundamentals of Clinical Informatics & EMR)
3. Employ computer-based health information systems while managing existing paper-based health information systems utilizing EMR software. (**Courses:** Introduction to Healthcare Systems)
4. Compare and contrast reimbursement methodologies and procedure-based payment systems such as Resource based Relative Value (RBRV) and Evaluation and Management and Ambulatory Payment Classification (APC). (**Courses:** Medical Insurance and Billing, Health Information Management Principles)
5. Evaluate and audit patient records and assign numeric codes for each diagnosis and procedure. (**Courses:** Advanced Medical Coding)
6. Apply coding knowledge utilizing coding guidelines from ICD-9-CM, ICD-10, CPT-4 and HCPCS. (**Courses:** Advanced Medical Coding)
7. Interpret diagnostic based perspective payment groups such as DRG; recognize the Systematized Nomenclature of Medicine (SNOMED). (**Courses:** Advanced Medical Coding, Health Information Management Principles)
8. Utilize medical coding software and clinical classification systems as they relate to the human body and disease processes. (**Courses:** Medical Coding 1, Advanced Medical Coding)
9. Identify and discuss healthcare delivery fundamentals and the technology used to gather healthcare information in a variety of settings. (**Courses:** Introduction to Healthcare Management)
10. Utilize appropriate terminology including abbreviations related to pathological conditions, diagnostic procedures, surgical interventions, and therapeutic procedures. (**Courses:** Medical Terminology, Advanced Medical Coding)

#### Program Level Assessment

All certificate courses are part of the Associate degree in health information management. The College plans to seek accreditation from the Commission on Accreditation for Health Informatics and Information Management Education (CAHIM) and will evaluate the program based on their program assessment system. Their assessment system considers program graduation rates, student performance on certification examinations, job placement and employer satisfaction. This will allow CCC to assess the certificate using some of the same metrics.

**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 coordinator of HIM has the rank of assistant professor and a master's degree in health information management, certification as a Registered Health Information Administrator (RHIA), and 30 years of experience which includes 21 years of experience in the supervision of the work of others. She has a load of 15 contact/credit hours with one release (nine hours a week) for administration. She will be coordinator for both the certificate and the degree.

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

**How many new full-time faculty members, if any, will need to be hired for this program?** None

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

**What percent of credits in the program will be taught by adjunct faculty?** 32%

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program. Adjunct faculty will be required to have a master's degree in the field and the specific certifications referenced above.

**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 Collections

Currently in place.

### Equipment

#### Lab Equipment

Cost

Currently in place.

#### Software

Cost

Currently in place.

### 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. #	Pre-Requisite	Cr. Hrs.	Course Number and Name	L.O. #	Cr Hrs.
<b>Program Core Courses</b>				<b>Other Related/Special Requirements</b>		
HIM 125/BOT 180 Medical Terminology	10		3	MED 112 Medical Insurance and Billing	1,4	3
HIM 102 Introduction to Healthcare Systems	1,3, 9		3	CSA 105 Introduction to Software Applications <b>or</b> CSA 140 Database Applications		3
HIM 155 Fundamentals of Clinical Informatics & EMR	2	HIM 125/BOT 180, 102	3	BIO 115 Human Biology with Lab		4
HIM 201 Health Information Management Principles	7	HIM 155	3			
HIM 210 Medical Coding 1	8	HIM 125	3			
HIM XXX Advanced Medical Coding	5, 6, 7, 8, 10	HIM 125 HIM 210	4			
HIM 24 Externship <b>or</b> BIO 210 Introduction to Pathophysiology	1-10	All HIM and MED courses	3			
			22			10

Core Course Prerequisites		Elective Courses in the Field		
HIM 125/BOT 180 Medical Terminology				
HIM 102 Introduction to Healthcare Systems				
HIM 155 Fundamentals of Clinical Informatics & EMR				
HIM 210 Medical Coding 1				
HIM 201 Health Information Management Principles with lab				
HIM XXX Advanced Medical Coding				
<b>Total Certificate Credits</b>			<b>32</b>	

**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 Gen Ed program), 24 credits of courses in Business (3 credits of which apply to the LAC/Gen Ed), 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 certificate has 32 credits; admission requires readiness for college level work as required by course pre-requisites. In addition to 22 credits in health information management, the certificate has three credits in the related field of medical assisting, one in computer applications and a third in human biology.



**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
Elaine Ippolito	MLS, Indiana University	Master's degree in Library and Information Science, 30 years of experience in HIM, 21 years supervisory experience and RHIA certification	Program Coordinator
Angela Simpson	Master's degree	Master's degree in healthcare area and CMA and RMA certifications	

# CT Board of Regents for Higher Education

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

Institution

Capital Community College

Date: 5/1/14

Proposed Program

Health Information Management Certificate

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)	0	0	0	0	0	0
New Students (first time matriculating)	3	3	3	4	3	4
Continuing (students progressing to credential)	0	0	0	2	0	2
Headcount Enrollment	3	3	3	6	3	6
<b>Total Estimated FTE per Year</b>	3.6		4.8		4.8	

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)	\$10,080	\$10,920	\$10,080	\$21,840	\$10,080	\$21,840
Program-Specific Fees	\$984	\$492	\$984	\$656	\$984	\$656
Other Rev. (Annotate in text box below)	\$1,920		\$2,154		\$2,154	
<b>Total Annual Program Revenue</b>	\$24,396		\$35,714		\$35,714	

PROJECTED Expenditures*	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)	0	\$0	0	\$0	0	\$0
Faculty (Full-time, total for program)	0	\$0	0	\$0	0	\$0
Faculty (Part-time -total for program) @ 5cr	1	\$11,318	2	\$22,635	2	\$22,635
Support Staff	N/A	\$0	N/A	\$0	N/A	\$0
Library Resources Program	N/A	\$0	N/A	\$0	N/A	\$0
Equipment (List as needed)	N/A	\$0	N/A	\$0	N/A	\$0
Other (e.g. student services)	N/A	\$0	N/A	\$0	N/A	\$0
Estimated Indirect Cost (e.g. student services, operations, maintenance)						
<b>Total ESTIMATED Expenditures</b>		\$11,318		\$22,635		\$22,635

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

Please provide any necessary annotations:

<sup>1</sup> 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

Modification of an Accredited Program PRO FORMA <sup>1</sup> BUDGET 1/20/12

<sup>1</sup> 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

A New Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve a program in New Media Studies leading to a Bachelor of Arts degree at Eastern Connecticut State University

A True Copy:

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

## ITEM

Approval of a Bachelor of Arts degree in New Media Studies at Eastern Connecticut State University

## BACKGROUND

Summary

The New Media Studies program is an interdisciplinary program combining courses, resources, and faculty from Communication, Computer Science, English, Performing Arts (Music and Theater), and Visual Arts departments. With its focus on critical arenas of human activity, the proposed New Media Studies major offers a unique approach to merging proficiency in increasingly important emergent digital media areas with critical and analytical skills. As with all majors at Eastern, the New Media Studies major incorporates a strong foundation in the liberal arts, rigorous coursework to develop expertise in a chosen field, and hands-on learning in a professional setting.

Curriculum

Students in the New Media Studies major will complete 120 credits, 52 to 56 of them for the New Media Studies (NMS) major as follows:

PROGRAM CREDITS:	Core	16-19
	Interdisciplinary	15
	Concentration	18- 22
		49-56

The Core, Interdisciplinary Explorations categories, and the Concentration requirements and electives balance students' acquisition of hands-on and problem-solving skills through project-based courses which emphasize creativity and innovation. Every student, in each concentration, therefore, will gain project experience, including conceptualization and design, project management and collaborative skills, excellent communication abilities across media, and strong work ethics. Moreover, throughout the curriculum, students will acquire field knowledge balanced with ethical, cultural and global awareness as it relates to social transformations resulting from digital transmission of information and knowledge. Just as digital media are expanding traditional disciplinary boundaries in Communication, Computing, English, Performance and the Arts, critical and theoretical paradigms related to New Media must account for transformations in the ways that information is coded and circulated—of particular relevance for every academic discipline—as well as its effects on cultural, social and political institutions on a national and global scale.

Need for the Program

The skills sets, knowledge, and critical and creative thinking abilities acquired in this program are consistently in demand by conventional companies that are finding these digital interactive tools essential in their strategic communications, marketing and managerial endeavors. For instance, the U.S. Commercial Service of the U.S. Department of Commerce has a Connecticut-U.S. Export Center and at the national level has established a Media & Entertainment promotion unit. This unit is a sub sector of the U.S. Department of Commerce Global Publishing, Media & Entertainment team that currently has as members in offices in 40 U.S. Embassies' Commercial Sections. The Media and Entertainment promotion unit was built for the purpose of globally promoting US firms engaged in the following: a) film, TV, and animation production; b) theatrical, television, home video, pay TV, and video-on-demand distribution; c) music; and d) video and online game industries. The office of Research for The Connecticut Labor Market Information lists employment projections for general areas in the **Arts, Design, Entertainment, Sports and Media**, all of which are closely related to the new media professions, as follows:

Occupation	Employment		Change	%	Annual Openings
	2010	2020			
Arts and Design Workers	11,214	12,122	908	8.1	92
Entertainers and performers and animators	11,912	14,053	2,141	18.0	214
Media and Communication Workers	7,284	7,704	420	5.8	63
Media and Comm. Equipment Workers	3,615	4,126	511	14.1	51
<b>Totals</b>	<b>34,025</b>	<b>38,005</b>	<b>3,980</b>		<b>420</b>

Source: CT Office of Research for labor Market information (2012)

The information presented in the table above does not account for all areas of potential employment covered by the scope of the proposed New Media Studies program nor does it account for the creation of start-ups or other potential areas, such as video and online gaming and apps developing, which are part of the program's curriculum. A December 2013 Middlesex Community College study prepared by Mason Inc., a well known Connecticut marketing and branding consulting firm as part of a grant designed to prepare a potential workforce in the areas of New Media, concludes that "there is a strong current and projected demand for New Media employees with many employers struggling to find qualified individuals, particularly in Fairfield County." The final report, based on "an analysis of available research and Labor Department projections with respect to New Media jobs in Connecticut, also notes that a supply and demand study by The CareerBuilder dated September 2012 found that between August 2010 and July 2012 the demand for digital media employees in Connecticut far outstripped the number of qualified available candidates. The ratio of supply to demand was found to be about one candidate for every three positions. The Connecticut Labor Department projections as well as CareerBuilder's report on past digital jobs show demand for digital positions to be strong to 2020.

### Students

Enrollment in the New Media Studies program is estimated to total approximately 60-75 students with about 15 to 20 students graduating each year once the program has been in full implementation for 3-4 years. Aside from freshmen, a potential source for a significant percentage of students in the major will be transfer students from the community colleges. There are 11 Community Colleges that offer programs in the broad area of digital media. The total of students registered for these programs were 1104 during Fall 2012 and the total enrollment for Fall 2013 yielded a total of 976. We expect this trend to continue.

Regarding transfer articulation pathway, it is important to note here that in-depth transfer analysis was completed by the Advising Center of popular associate degree programs in communication, multi-media, graphic arts, computer science, liberal arts, fine arts, and general studies offered by four community colleges (Middlesex, Three Rivers, Quinebaug, and Manchester). The analysis showed that Eastern's program would clearly allow associate degree graduates in these programs to transfer to Eastern and complete their bachelor degree in New Media Studies within two years of full-time study.

### Faculty

Eastern's faculty is committed to high academic achievement, mentorship, and the development of high-impact and immersive curricula that engages students' creative and analytic abilities. A Task Force composed of faculty members from several disciplines developed the New Major Studies Major with the goals of promoting innovative uses of and experimentation with new and emergent digital media for communicating and creating digital artifacts for personal, creative, civic, or business enterprises; and to prepare students for employment and further studies in media-related fields and industries. New and veteran faculty members have expertise/professional creative activity and research, in the theory, techniques, applications, and ethics of new & emergent media, spanning 1) Digital and electronic art, design, music, gaming, and software development; 2) Digital video, audio, and performance media production; 3) Applications of new media technologies in the Sciences, Business, and Educational fields, and 4) Digital Humanities and Writing and Designing for new Media platforms. Faculty in the Visual and Performing Arts, English, and Communication have won a number of international and national awards and are well recognized for their creative and innovative work. The New Media Studies program combines elements of the existing curricula and faculty expertise with new offerings that allow students to gain practical experience in formulating projects and creative works, that reinforce Eastern's mission as the state's liberal arts university, and that enrich its undergraduate research initiative.

#### Learning Resources

The current learning resources are adequate for the New Media Studies. As the major becomes more established, additional faculty and equipment may be required.

#### Facilities

Existing facilities will be sufficient to cover initial needs with new spaces coming into place with the new fine arts instructional facilities and enhancement of those in the Communication building.

#### Fiscal Note

With a total enrollment projection of 65-75 by Year 3, Revenues from tuition and fees are expected to total \$745,576 and Expenditures to total \$242,500.

#### Review of Documents:

- a) Campus Review: University Senate, April 15, 2014
- b) Campus Budget and Finance: N/A
- c) Campus President: April 15, 2014
- d) Academic Council: May 14, 2014
- e) System Office

#### Accreditation: N/A

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

**SECTION 1: GENERAL INFORMATION**

<b>Institution:</b> Eastern Connecticut State University	<b>Date of Submission to BOR Office:</b> March 2014
<b>Most Recent NEASC Institutional Accreditation Action and Date:</b> May 2011	
<b>Program Characteristics</b> Name of Program: New Media Studies Degree: Title of Award ( <i>e.g. Master of Arts</i> ) <b>Bachelor of Arts (B.A.)</b> Certificate: ( <i>specify type and level</i> ) Anticipated Program Initiation Date: Fall 2014 Anticipated Date of First Graduation: May 2016 Modality of Program: On ground    Online    X Combined If "Combined", % of fully online courses? <50% Total # Cr the Institution Requires to Award the Credential ( <i>i.e. include program credits, Gen Ed, other</i> ): 120	<b>Program Credit Distribution</b> # Cr in Program Core Courses: 16-19 # Cr of Interdisciplinary courses: 15 # Cr in Concentration: 18-22 # Cr Special Requirements ( <i>include internship, etc.</i> ): <u>Total # Cr in the Program</u> ( <i>sum of all #Cr above</i> ): 49-56 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: <b>approximately 49-56</b>
Type of Approval Action Being Sought:    Licensure OR    Licensure and Accreditation Suggested CIP Code No. ( <i>optional</i> )    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 ( <i>e.g. School of Business</i> ) and Location ( <i>e.g. main campus</i> ) Offering the Program: Interdisciplinary, School of Arts and Sciences	
Program Accreditation: <ul style="list-style-type: none"> <li>If seeking specialized/professional/other accreditation, name of agency and intended year of review:</li> <li>If program prepares graduates eligibility to state/professional license, please identify:</li> </ul> ( <i>As applicable, the documentation in this request should address the standards of the identified accrediting body or licensing agency</i> )	
<b>Institutional Contact for this Proposal:</b> Jaime Gomez	Interim Dean, School of Education & Professional Studies Tel.: 55293 e-mail: gomezj@easternct.edu

**BOR-AC REVIEW and Follow Up** (*For BOR Office Use Only - please leave blank*)

BOR Concept Paper Sequence Number (to be assigned):  
Summary of BOR-AC Comments and Recommendations:  
Log of Follow Up Steps:  
Expected Date of Full Proposal:



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

### Alignment of Program with Institutional Mission, Role and Scope

Eastern Connecticut State University is the state's designated public liberal arts university. An award-winning tiered Liberal Arts Core ensures that students in all majors develop strong analytical, information literacy and communication skills; a background of historical, scientific and cultural knowledge; and an understanding of ethical and social issues. Yet, with a history as a "Normal" school, Eastern has always offered carefully selected pre-professional programs and emphasized experiential learning. Extending the traditional model of preparing teachers through a combination of coursework and student teaching, all Eastern major programs incorporate a strong foundation in the liberal arts, rigorous coursework to develop expertise in a chosen field, and hands-on learning in a professional setting. The proposed major in New Media Studies follows this model and parallels the structure of existing interdisciplinary majors including Women and Gender Studies and Labor Relations and Human Resource Management.

The New Media Studies program is an interdisciplinary (multi-disciplinary, hybrid, or cross-disciplinary) program between Communication, Computer Science, English, Performing Arts, and Visual Arts departments. With its focus on critical arenas of human activity, the proposed New Media Studies major offers a unique approach to merging proficiency in increasingly important emergent digital media areas with critical and analytical skills. As with all majors at Eastern, the New Media Studies major incorporates a strong foundation in the liberal arts, rigorous coursework to develop expertise in a chosen field, and hands-on learning in a professional setting.

### Addressing Identified Needs

#### How does the program address CT workforce needs and/or the wellbeing of CT society/communities?

The degree program fosters the skills necessary for students to understand and succeed in the shifting media landscape. The goal is to prepare students for careers in areas such as digital motion graphics, interactive digital art and web design, digital video and audio design and production, content development, social media, public relations and marketing, gamification and mobile apps, and entrepreneurship for media startups. The curriculum design aims to integrate skills-based courses and conceptual courses which emphasize critical and creative thinking and problem-solving. The Core, Interdisciplinary Explorations categories, and the Concentration requirements and electives balance students' acquisition of hands-on and problem-solving skills through project-based courses which emphasize creativity and innovation. Every student, in each concentration, therefore, will gain project experience, including conceptualization and design, project management and collaborative skills, excellent communication abilities across media, and strong work ethics. Throughout the curriculum, students will acquire field knowledge balanced with ethical, cultural and global awareness as it relates to social transformations as a result of the digital transmission of information and knowledge.

Just as digital media are expanding traditional disciplinary boundaries in Communication, Computing, English, Performance and the Arts, critical and theoretical paradigms related to New Media must account for transformations in the ways that information is coded and circulated—of particular relevance for every academic discipline—as well as its effects on cultural, social and political institutions on a national and global scale. According to a MacArthur Foundation Report, *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*, media literacy advocates have emphasized that students must acquire an understanding of "the ways in which media representations structure our perceptions of the world, the economic and cultural contexts within which mass media is produced and circulated, the motives and goals that shape the media they consume, and alternative practices that operate outside the commercial mainstream" (2009). Moreover, Lev C. Gonick, CIO at Case Western Reserve University notes that, "...new media literacy is being seriously debated and integrated into core curriculums at a number of the most forward-thinking and prestigious colleges and universities in the world; " as examples of the trans-disciplinarity, he adds: "New Media, human creativity, and the legal system represent a core disciplinary offering in the best law schools in the United States. Storytelling through new media, once relegated to 'soft science' is gaining currency in the social sciences. Gaming curriculum, as a multidisciplinary undertaking with engineering, art, human interface design, medical, and business students have exploded in popularity." Taking all the above into account, the Tier III capstone courses designed for each concentration aim to integrate the teaching of skill sets related to discrete media fields with high-impact and real-world project-based approaches that foster holistic experiences of analytical, critical, and creative problem-solving and innovation that will prepare students for entry into the workforce and advanced study.

## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

The skills-sets, knowledge, and critical and creative thinking abilities acquired in this program are consistently in demand by conventional companies that are finding these digital interactive tools essential in their strategic communications, marketing and managerial endeavors. For instance, the U.S. Commercial Service of the U.S. Department of Commerce has a Connecticut-U.S. Export Center and at the national level has established a Media & Entertainment promotion unit. This unit is a sub sector of the U.S. Department of Commerce Global Publishing, Media & Entertainment team that currently has as members in offices in 40 U.S. Embassies' Commercial Sections. The Media and Entertainment promotion unit was built for the purpose of globally promoting US firms engaged in the following: a) film, TV, and animation production; b) theatrical, television, home video, pay TV, and video-on-demand distribution; c) music; and d) video and online game industries.

Furthermore, a December 2013 Middlesex Community College study prepared by Mason Consulting Inc., as part of a grant designed to prepare a potential workforce by developing skilled New Media labor for employers, concludes that "there is a strong current and projected demand for New Media employees with many employers struggling to find qualified individuals, particularly in Fairfield County." The final report, based on "an analysis of available research and Labor Department projections with respect to New Media jobs in Connecticut, also notes that a supply and demand study by The CareerBuilder dated September 2012 found that between August 2010 and July 2012 the demand for digital media employees in Connecticut far outstripped the number of qualified available candidates. The ratio of supply to demand was found to be about one candidate for every three positions. The Connecticut Labor Department projections as well as CareerBuilder's report on past digital jobs show demand for digital positions to be strong to 2020.

In sum, graduates of this program would be able to join traditional or new media companies, work for non-profit organizations with national and international objectives or launch their own startups.

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

Eastern's Faculty is committed to high academic achievement, mentorship, and the development of high-impact and immersive curricula that engages students' creative and analytic abilities. A Task Force composed of faculty members from several disciplines developed the New Major Studies Major with the goals of promoting innovative uses of and experimentation with new and emergent digital media for communicating and creating digital artifacts for personal, creative, civic, or business enterprises; and to prepare students for employment and further studies in media-related fields and industries. New and veteran faculty members have expertise/professional creative activity and research, in the theory, techniques, applications, and ethics of new & emergent media, spanning 1) Digital and electronic art, design, music, gaming, and software development; 2) Digital video, audio, and performance media production; 3) Applications of new media technologies in the Sciences, Business, and Educational fields, and 4) Digital Humanities and Writing and Designing for new Media platforms. Faculty in the Visual and Performing Arts, English, and Communication have won a number of international and national awards and are well recognized for their creative and innovative work. The New Media Studies program combines elements of the existing curricula and faculty expertise with new offerings that allow students to gain practical experience in formulating projects and creative works that reinforce strengthen Eastern's mission as the state's liberal arts university, and enriches its undergraduate research initiative. Additionally, the new Fine Arts Instructional Facility scheduled to open in Fall 2015 and programmed to have state of the art digital media technology—which, added to our labs in the Science building and our digital video and audio production facilities in the Communication building—will create a distinctive learning digital ecosystem capable of nurturing and sustaining our proposed program objectives.

#### **Please describe any transfer agreements with other institutions under the BOR that will become instituted as a result of the approval of this program**

There are 11 Community Colleges (listed below) that offer programs in the area of digital media. The total of students registered for these programs were 1104 during Fall 2012. A recent survey of the total enrollment for Fall 2013 yielded a total at 976. It is important to note here that there are colleges also offer English and Theater concentrations or certificates that, due to time and logistics limitations, have not had their number of students included in this table but certainly add to the potential number of students that could transfer into the NMS program.

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New Media Programs in the twelve Connecticut Community Colleges			
Comm. College	Program	F 12 # of Students	F 13 # of Students
<b>Asnuntuck</b> <a href="http://www.asnuntuck.edu">http://www.asnuntuck.edu</a>	Comm.	1	6
	Broadcasting	22	16
	Journalism	8	5
	Fine Arts	17	15
	Entrepreneurial	0	0
	Web Designer Certificate	6	3
<b>Total</b>		<b>54</b>	<b>45</b>
	Communication Media	47	
<b>Capital</b> <a href="http://www.capitalcc.edu">http://www.capitalcc.edu</a>			35
	Computer & Info. Systems: Web Publishing Certificate	12	10
	Visual Communication Certificate	1	0
	<b>Total</b>	<b>60</b>	<b>45</b>
<b>Housatonic</b> <a href="http://www.housatonic.edu">http://www.housatonic.edu</a>	Fine Arts	48	52
	Graphic Design: Multimedia	29	27
	Graphic Design	86	83
	Web Design Technology Certificate	4	7
	Graphics Design Certificate	4	1
	<b>Total</b>	<b>171</b>	<b>170</b>
<b>Manchester</b> <a href="http://www.manchestercc.edu">http://www.manchestercc.edu</a>	Graphic Designs	125	118
	Multi Media	54	60
	Computer Game Design	39	54
	Web Technology Certificate	3	5
	Media Technology Certificate	7	5
	<b>Total</b>	<b>228</b>	<b>242</b>
<b>Middlesex</b> <a href="http://www.mxcc.edu">http://www.mxcc.edu</a>	Broadcast Cinema	32	32
	Broadcast Cinema Certificate	4	3
	Communication	41	41
	Graphic Design Track	31	31
	Multi Media	36	36
	Multimedia Web Design & Development Certificate	31	4
	<b>Total</b>	<b>175</b>	<b>147</b>
<b>Naugatuck Valley</b> <a href="http://www.nv.edu">http://www.nv.edu</a>	Digital Design	2	6
	Visual Arts Degree	7	33
	Digital Arts Technology	5	3
	Multimedia/Web Authoring Option	14	23
	Graphics & Animation	80	7
<b>Total</b>		<b>106</b>	<b>66</b>
<b>Northwestern</b> <a href="http://www.nwcc.edu">http://www.nwcc.edu</a>	Graphic Communication Design	3	
	Digital Media		
	Photography	3	2

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	Fine Arts	1	1
	Graphic Communication Publishing		
	Digital Publishing (Certificate)		
	Graphic Design	3	3
<b>Total</b>		<b>10</b>	<b>6</b>
<b>Norwalk</b> <a href="http://www.norwalk.edu">http://www.norwalk.edu</a>	Communication Arts	2	6
	Design for the Web	4	2
	Graphic Design	23	13
	Graphic Design Certificate	3	2
<b>Total</b>		<b>32</b>	<b>23</b>
<b>Quinebaug Valley</b> <a href="http://www.qvcc.edu">http://www.qvcc.edu</a>	Fine Arts-Graphic Arts Option	27	22
	Fine Arts-Photography Option	18	23
	Graphic Arts Certificate	2	0
<b>Total</b>		<b>64</b>	<b>45</b>
<b>Three Rivers</b> <a href="http://www.threerivers.edu">http://www.threerivers.edu</a>	Visual Fine Arts	64	55
	E-Commerce Certificate		0
	Graphic and Communication Arts Certificate	13	14
	Web Design and Development Certificate	6	6
<b>Total</b>		<b>83</b>	<b>75</b>
<b>Tunxis</b> <a href="http://www.tunxis.edu">http://www.tunxis.edu</a>	Graphic Design	77	72
	Visual FineArts	43	48
	New Media Communication	5	8
	Certificate Program in Communication.	5	0
	Certificate Program in Graphic Design	23	7
<b>Total</b>		<b>153</b>	<b>135</b>
<b>Grand Total</b>		<b>1104</b>	<b>976</b>

Eastern's proposed BA in New Media Studies has been designed to guarantee smooth upper-division two-year full-time bachelor degree completion for CT community College transfer students graduating with associate degrees in both multi-media and general studies. To this end, an in-depth transfer analysis was completed by the Advising Center of popular associate degree transfer programs in communication, multi-media, graphic arts, computer science, liberal arts, fine arts, and general studies offered by four community colleges (Middlesex, Three Rivers, Quinebaug, and Manchester). The analysis showed that Eastern's program would clearly allow associate degree graduates in these programs to transfer to Eastern and complete their bachelor degree in New Media Studies within two years of full-time study.

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**ECSU New Media Studies Major 2 + 2 Mapping Examples**

Examples of Hypothetical Transfer Outcomes for Actual 2013 Community College Graduates

Community College	Student	Program	Number of credits students complete at their Community Colleges	Remaining New Media Core Credits	Remaining Interdisciplinary Credits	Selected Concentration	Credits to be taken at Eastern to complete New Media Studies Major	Feasible in 2-years
Middlesex	A	Associate General Studies with Broadcast Communication Certification	81	16 credits	9 credits	16 credits	60	Yes
	B	Associate Broadcast Cinema	62	19 credits	15 credits	18 credits	61	Yes
	C	Associate Multimedia	64	16 credits	9 credits	22 credits	60	Yes
Three Rivers	A	Associate Human Services	58	19 credits	15 credits	18 credits	62	Yes
	B	Associate Arts: Pathways to Teaching English	66	19 credits	15 credits	18 credits	55	Yes
	C	Associate Science: Computer	64	16 credits	12 credits	12 credits	56	Yes
Quinebaug	A	Associate Arts: Graphic Design	78	16 credits	6 credits	22 credits	50	Yes
	B	Associate Science: General Studies	83	19 credits	15 credits	18 credits	55	Yes
	C	Associate Arts: Fine Arts	61	19 credits	12 credits	18 credits	61	Yes
Manchester	A	Associate Arts: Communication	62	19 credits	15 credits	18 credits	60	Yes
	B	Associate Science: Liberal Arts	81	19 credits	15 credits	18 credits	52	Yes
	C	Associate Science: General Studies	63	19 credits	15 credits	18 credits	66	Yes

**Please indicate what similar programs exist in other institutions within your constituent unit <sup>1</sup>, and how unnecessary duplication is being avoided**

There is not a similar program within the Connecticut State Universities system focusing exclusively on new and emergent media theories and skills-acquisition with a broad interdisciplinary approach. For instance, the Department of Communication and Media Arts at Western offers a B.A degree in Communication (with options in Communication Studies and Relational Studies)—both of which are similar to Eastern’s Communication program, and a B.A. in Media Arts, which provides an overview of various traditional media forms such as Film, and Video and Radio Broadcasting. Southern offers a B.A. degree in Communication (with “specialties” in Advertising and Promotions, Interpersonal and Relational Communication, Organizational Communication and Video Production), as well as a B.A. in Media Studies, which is described as providing students with “new tools for critical analysis from economic, historical, social, aesthetic, psychological, political, and ethical perspectives. In addition, Central, Eastern, Southern, and Western Connecticut State Universities offer video production and broadcast journalism courses within their communication majors. The New Media Studies major proposed here is unique within the CSCU system because it brings together academic programs that are at a crossroads such as Communication, English, Computer Sciences, Visual Arts and Performing Arts. Each of these programs

<sup>1</sup> 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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offer specialized areas, such as advertising and public relations in communication, and theatre lighting design in performing arts among others, that are evolving (or have evolved) towards a digital domain. The program would essentially be a trans-disciplinary collaborative endeavor designed to meet the needs of students interested in the use of digital media technology and the demands of a globalized and very competitive labor market.

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

Critical information about labor market and workforce needs was presented in Section 2 under “Addressing Identified Needs.” This section presents specific figures from the Labor Office and the Mason study.

The office of Research for The Connecticut Labor Market Information lists employment projections for general areas in the Arts, Design, Entertainment, Sports and Media, all of which are closely related to the new media professions, as follows:

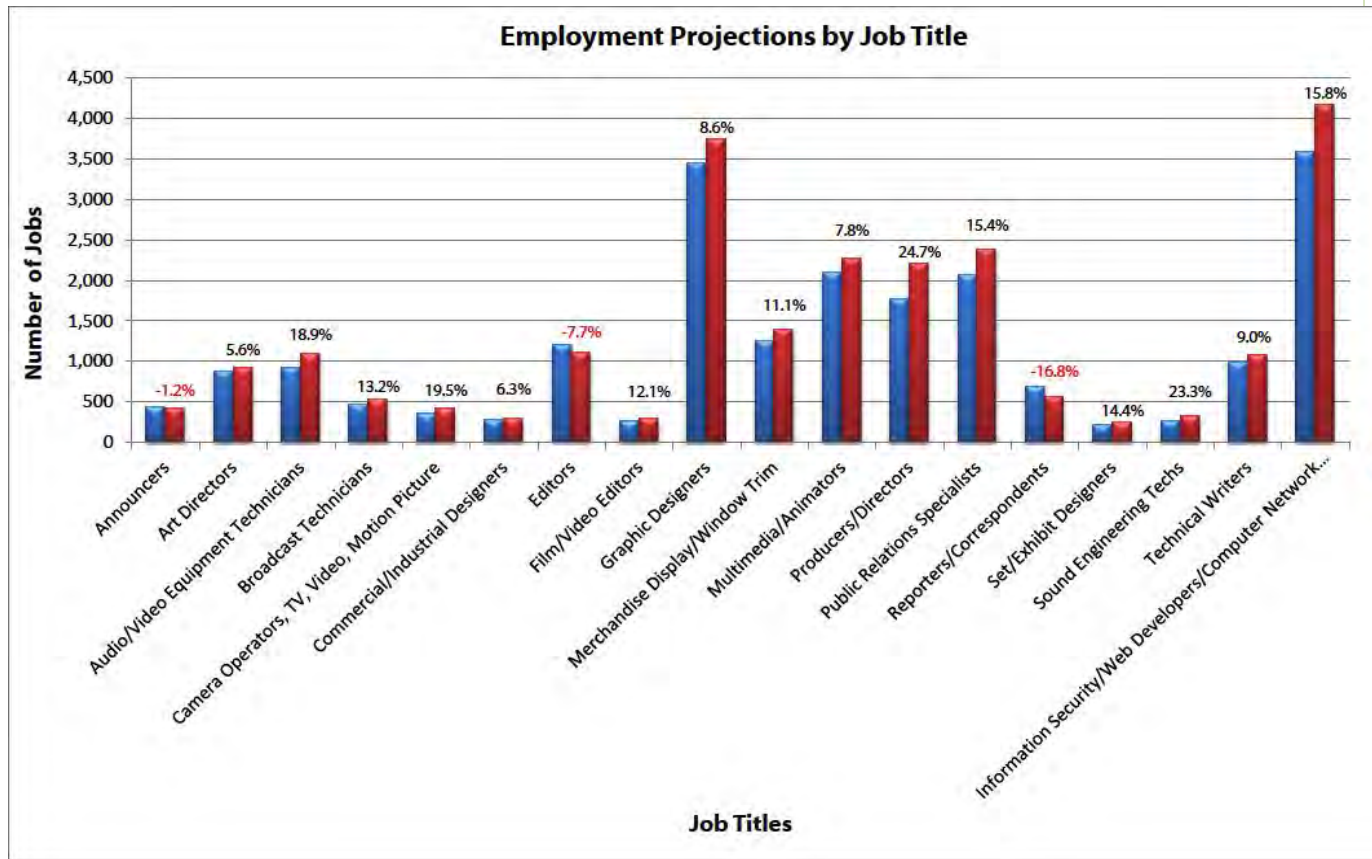
Occupation	Employment		Change	%	Annual Openings
	2010	2020			
Arts and Design Workers	11,214	12,122	908	8.1	92
Entertainers and performers and animators	11,912	14,053	2,141	18.0	214
Media and Communication Workers	7,284	7,704	420	5.8	63
Media and Comm. Equipment Workers	3,615	4,126	511	14.1	51
Totals	34,025	38,005	3,980		420

Source: CT Office of Research for labor Market information (2012)

The information presented in the table above does not account for all areas of potential employment covered by the scope of the proposed New Media Studies program nor does it account for the creation of start-ups or other potential areas, such as video and online gaming and apps developing, which are part of the program’s curriculum. Furthermore, Governor Malloy, in his December 2012 speech at the Middlesex Chamber of Commerce breakfast, stated that “these are very exciting times for new media.” He was referring to the 100 million dollars deal the city of Stamford had worked out with NBC Sports Group that is expected to bring 450 permanent jobs to the city as part of Connecticut’s “First Five” economic development program. This statement by the governor has been validated by the Mason study and the recent opening of ESPN’s \$175 M digital studio at its Bristol Campus.

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The table below shows growth into 2020 in most areas of the new and emerging media domain, especially in the graphic design and IT web development.



Source: Mason Inc. (2013)

**Cost Effectiveness and Availability of Adequate Resources**

Enrollment in the New Media Studies program is estimated to total 65-75 students with about 15 to 20 students graduating each year once the program has been in full implementation for 3-4 years. Aside from Freshmen, a potential source for a significant percentage of students in the major will be transfers from the community colleges. Because Eastern does not anticipate increasing total enrollment, a number of transfer students are expected to be those who would have selected other majors.



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**SECTION 3: PROGRAM QUALITY ASSESSMENT**

**Overall Learning Goal/Principal Learning Outcome for the Program: 7**

**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)

By the time of graduation, students will have acquired the following skills/competences that will be assessed through a combination of methodologies such as essays, exams, and digital portfolios, among others:

- 1) Acquire thorough knowledge of a variety of new media as forms of communication and expression.
- 2) Become conversant with the major theories, research, and criticism of new media from an interdisciplinary perspective.
- 3) Understand, analyze, and compare digital and analog media productions and artifacts within technological, aesthetic, and critical frameworks.
- 4) Critically analyze the emergence and applications of new media and their social, political, and cultural consequences.
- 5) Understand the legal and ethical ramifications of new media practices in a global context.
- 6) Develop the ability to conceptualize and create new media for a variety of audiences and purposes in an evolving global economy.
- 7) Demonstrate mastery of competencies and skills required in a chosen digital media professional or academic path.

**Program Administration**

The New Media Studies major will be administered by a coordinator who should be a faculty member or the chairperson from one of the four departments involved in this cross-disciplinary major. It is recommended that the coordinator receives  $\frac{1}{4}$  or  $\frac{1}{2}$  non-instructional assignment depending on the scope and the complexity of the administrative task which should include a recruitment component. The cost of this non-instructional assignment will be approximately \$22,000 by Year 3. Secretarial staff will be shared with existing programs.

**Faculty**

**How many new full-time faculty members, if any, will need to be hired for this program? 1**

The new major does not anticipate the hiring of new faculty. There could be, as the needs arise, a reallocation of existing faculty in the participating programs. Existing facilities will be sufficient to cover initial needs with new spaces coming into place with the new fine arts instructional facilities and enhancement of the ones in the Communication building.

**What percent of credits in the program will be taught by adjunct faculty?** Less than 21%.

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

A master's degree in appropriate field.

**Special Resources:** No special resources needed



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**Curriculum**

(Please provide details as available and keep in mind the summary of Program Credit Distribution completed in Section 1. Modify this format as needed)

Course Number and Name	L.O. # <sup>2</sup>	Pre-Requisite	Cr. Hrs.	Course Number and Name	L.O. #	Cr. Hrs.
<b>Program Courses</b>				<b>Other Related/Special Requirements</b>		
<b>Core Requirements</b>			<b>16-19</b>			
NMS 110 Introduction to New Media Studies	1,2,4		3			
ART 124 Digital Imaging and Online Media	1,7		3			
**CSC 110 Introduction to Computing	4,7		3			
CSC 210 Computer Science & Programming	4,7		3			
ENG 206 Multimodal Writing Workshop (Stage 2 Writing Requirement)	1,3,6		4			
THE 180 Performance in Context: (when topic is New Media)	1,2,4,6		3			
** CSC 110 may be waived for students with 600 or above on SAT-Math score..						
<b>Interdisciplinary Explorations</b>			<b>15</b>			
Students select 2 courses in 2 categories, and 1 course in a 3 <sup>rd</sup> category.						
<b>Category I: Cultural Representations</b>						
ART 233 Graphic Design History	1,2,3,4	NMS 110 & ART 124	3			
COM 215 Media Aesthetics	1,2,6		3			
COM 252 Social Media Strategies	1,2,3,4,5		3			
ENG/FLM 359 Film Theory	1,2,3,4		3			
THE 375 Contemporary World Performance	2,3,6,7		3			

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<b>Category II: Digital Applications</b>					
ART 325 2D Animation		ART 122, 124, 203, DIGI	3		
COM 220 TV II: Video Field Production	3,6		3		
CSC 220 Visualizing for Visual Thinking	3,4, 6,7		3		
CSC 249 Visual Basic .NET	1,3, 4,7		3		
EES 300 Basics of GIS	1,3, 4,7		3		
<b>Category III: Interactivity</b>					
ART 310 Web Design I	1,3, 4,7	ART 124 & DIGI	3		
ART 343 Introduction to 3D Animation	1,3, 4,7	ART 329	3		
CSC 212 Computer Game Design & Visualization	1,3, 4,7		3		
PSC 333 Constructing Political Advertisements	2,3, 4,5		3		
THE 285 Intermodal Performance Design I	1,6, 7		3		
<b>Category IV: Sound &amp; Image</b>					
ART 122 Digital Illustration and Page Layout	1,3, 4,7		3		
ART 203 Graphic Design I	1,3, 4,7	ART 122 & 124	3		
MUS 250 Electronic Music I	1,3, 4,7		3		
THE 261 Visual Storytelling	1,4, 6		3		
<b>Category V: Text &amp; Contexts</b>					
ENG 241 Critical & Creative Thinking	1,2, 3,6		3		
ENG 374 Rhetoric of Hollywood Film	1,2, 3,4, 5	ENG 200, 202 or 203	3		
PSC 325 Mass Media & Politics	2,3, 4,5		3		
THE 260 History /Theory of Performance Media	2,3, 4,5		3		
<b>III Disciplinary Concentration</b>					
Students complete 18-20 credits in one concentration, including Stage 3 Writing Intensive and Tier III LAC/capstone course. (Note: Visual					

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Art Concentration students must complete 22 credits)						
<b>Communication</b>			<b>18-20</b>			
Required: COM 350 Stage 3 writing intensive	2,3, 4,5	ENG 100,100P or 200 and COM 300	3			
<b>Select 12 Credits:</b> COM 245 Digital/Analog Audio Production: Radio/Video Internet	3,6		3			
COM 310 Digital Photography	1,2, 3	COM 210	4			
COM 320 Television Production III	1,3, 6	COM 120 and 220	3			
COM 380 Dramatic Video Single-Camera Video Production	1,3, 6	COM 220	4			
COM 352 Emergent Media Reporting	1,2, 4,5, 6		3			
COM 430 Non-Linear Editing	1,3	COM 120, 220,	3			
COM 435 Documentary Production	1,3	COM 120	3			
COM 440 Workshop in Radio and Audio	1,2, 3	COM 241	3			
<b>Required Tier III Capstone Course</b>						
COM 474 Experimental Digital Media Production	3,5, 6,7		3			
<b>English</b>			<b>18</b>			
<b>Select 15 Credits</b> ENG 230 Reading and Writing Electronic Literature	1,3, 6		3			
ENG 237 Encoding Electronic Texts	1,2, 3,6, 7		3			
ENG 306 Digital Rhetorics and Literacies	1,2, 3,4, 5,6		3			
ENG 383 Literary Publishing	1,3, 4,5, 6	ENG 100/200 and Literature Course	3			
ENG 365 Special Topics in Literature/Language (when Topic is New Media Studies)	Varies by topic	ENG 100 or 200 & Lit. Course	3			
ENG 373 Studies in Rhetoric when N.M.S topic offered	Varies by topic	ENG 200, 202 or 203	3			

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<b>Required TIER III Capstone</b>					
ENG 499 Directed Research Stage 3 Writing Intensive	1,2,3,4,5,6,7		3		
<b>Media Computation Required</b>			18		
CSC 231 Computer Science and Programming II	2,3,6,7	CSC 210	3		
<b>Select 12 credits:</b>					
CSC 230 Discrete Mathematics for Computer Science	2,3,6,7	MAT 155	3		
CSC 251 Net-centric Computing	2,3,6,7	CSC 210	3		
CSC 311 Computer & Video Games Development	2,3,6,7	CSC 210	3		
CSC 330 Data Structures and Algorithms	2,3,6,7	CSC 321	3		
CSC 335 Computer Algorithms	3,6,7	CSC 330	3		
CSC 341 Database and Information Management	2,3,6,7	CSC 330	3		
<b>Required Tier III Capstone Course</b>					
CSC 450 Senior Research (Stage 3 writing intensive)	2,4,5,6,7		3		
<b>Performance Media</b>			18		
<b>Required</b>					
THE 351 Adaptation/Media/Performance Stage 3 writing intensive	2,3,4,6		3		
<b>Select 12 Credits:</b>					
MUS 355 Music with an Edge	2,3,4,6		3		
MUS 372 Multimedia Composition	1,3,6,7		3		
THE 277 Drawing in Digital 3-D	3,6,7		3		
THE 280 Theatre Lighting Design & Technology	1,6,7		3		
THE 281 Theatre Sound Design & Technology	1,6,7		3		
<b>Required Tier III Capstone Course</b>					
THE 474 Experimental Theatre	3,5,6,7		3		
<b>Visual Arts</b>			22		
<b>Required 10 Credits</b>					
ART 329 Graphic Design II	3,6,7	ART 203 and DIGI	3		

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ART 334 Art Exhibitions: Design, Documentation, Publicity <b>OR</b> ART 335 Graphic Design III	3,6, 7	ART 329 and DIGI	3		
ART 402 Issues in Contemporary ART Stage 3 Writing Intensive	2,3, 4,5	ART 233	4		
<b>Select 9 Credits:</b>					
ART 213 Creating Information Graphics	1,6, 7		3		
ART 332 Photo Imaging: Art & the Digital Camera	1,6, 7	ART 329 and DIGI	3		
ART 403 Advanced 3D Animation	1,6, 7	ART 343 or DIGI	3		
ART 412 Web Design II	1,6, 7	ART 329 and DIGI; or ART 310	3		
ART 450 Advanced Digital Illustration	1,6, 7	ART 329 and DIGI	3		
<b>Required Tier III Capstone</b>					
ART 432 Eastern Design Group <b>Or</b> ART 436 Graphic Design IV	4,5, 6,7	ART 335 or 334 and DIGI	3		

<b>LAC courses/Electives</b>			<b>48/51</b>		
<b>Total Other Credits Required to Issue Credential</b> (e.g. GenEd/Liberal Arts Core/Liberal Ed Program)			48/51		

### Program Outline

Students in the New Media Studies major will complete 120 credits, 52 to 56 of them for the New Media Studies (NMS) major as follows:

<b>PROGRAM CREDITS:</b>	<b>Core</b>	<b>16-19</b>
	<b>Interdisciplinary</b>	<b>15</b>
	<b>Concentration</b>	<b>18</b>
<b>Except:</b>	<b>Communication</b>	<b>18-20</b>
	<b>Visual Arts</b>	<b>22</b>
<b>TOTAL CREDITS:</b>		<b>49-56</b>

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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
June Bisantz, Prof	MFA, Claremont Grad Univ.	Visual Communication Design	
Edmond Chibeu, Assoc. Prof	Ph.D., Northwestern Univ.	Media Writing & Journalism	
Anthony Cornicello, Prof	Ph.D. Brandeis U.	Electronic Music/Multimedia	
Anne Dawson, Prof.	Ph.D, Brown U.	Art History	Chair, Visual Art Dept
Stephen Ferruci, Assoc. Prof.	Ph.D., SUNY Albany	Composition Theory and Pedagogy	
Lisa Rowe Fraustino, Prof.	Ph.D. SUNY Binghamton Young	Children's Lit; Creative Writing	Chair, English Dept.
Kehan Gao,, Assoc. Prof.	Ph.D., Florida Atlantic U	Software Reliability & Data Mining	
Gail Gelburd, Prof.	Ph.D. CUNY Grad Ctr.	Art History	
Jaime Gomez, Prof.	Ph.D. U. of Utah	Media Aesthetics & Digital Media Production	Interim Dean, School of Prof. Studies
Terry Lennox, Assoc. Prof	MFA, Yale	Visual Comm. Design	
Barbara Liu, Assoc. Prof.	Ph.D., Bowling Green State U.	Composition/Rhetoric	
Jianhua Lin, Prof.	Ph.D., Brandeis U.	Software Development	
Denise Matthews, Prof.	Ph.D. U. of Florida	Video Editing & Documentary Production	
Kristen Morgan, Asst. Prof.	MFA, NYU	Scenic, Projections & Intermodal Design	
Benjamin Pauley, Assoc. Prof.	Ph.D., Northwestern U.	Digital Humanities; 18 <sup>th</sup> C. British Literature	
David Pellegrini, Prof.	Ph.D. U. of Pittsburgh	Performance/Media History-Theory	Co-Chair Performing Arts Dept.
Joel Rosiene, Assoc. Prof.	Ph.D., U. of Connecticut	Robotics, Mobile Computing. Gaming	
Chase Rozelle, Prof.	MFA, Indiana U.	Theatre Technology, Lighting & Sound	
Huan-Yu Tu, Prof.	Ph.D., Florida State U.	Computational Theory	

# Connecticut Board of Regents for Higher Education

## APPLICATION FOR NEW PROGRAM APPROVAL **PRO FORMA** <sup>1</sup> BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

Institution Eastern Connecticut State University  
Proposed Program New Media

Date 4/18/2014

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)	3	1	8	2	10	5
New Students (first time matriculating)	10	1	15	2	20	2
Continuing (students progressing to credential)	0	0	15	1	40	4
Headcount Enrollment	13	2	38	5	70	11
<b>Total Estimated FTE per Year</b>	13.5		40		75	

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) Includes Tuition and Fees at \$8951 for a full-time residential student (not including housing and board), \$8911 for a full-time non-residential student, and \$4916 for a half-time part-time student.	\$89,510	\$4,916	\$268,530	\$14,748	\$537,060	\$29,496
Program-Specific Fees	\$2,600	\$200	\$7,600	\$500	\$14,000	\$1,000
Other Rev. (Annotate in text box below)						
<b>Total Annual Program Revenue</b>	\$97,226		\$283,278		\$745,576	

PROJECTED Expenditures*	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)	One fourth	\$20,000	One fourth	\$21,000	One fourth	\$22,000
Faculty (Full-time, total for program)	1/8 of 8	\$100,000	1/6 of 8	\$133,333	1/4 of 8	\$220,500
Faculty (Part-time -total for program)						
Support Staff						
Library Resources Program						
Equipment (List as needed)						
Other (e.g. student services)						
Estimated Indirect Cost (e.g. student services, operations, maintenance)						
<b>Total ESTIMATED Expenditures</b>		\$120,000		\$154,333		\$242,500

\* 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: The faculty members hired for this position will offer courses for Eastern's Liberal Arts Core and in their specific disciplines (Theatre, English, Communication, Visual Arts, Music, Computer Science) in addition to the courses for the New Media Studies program. Overall, about 1/4 of these faculty members' teaching credits will be in New Media Studies major courses. Seats in these courses will also be filled by students who are in majors other than New Media.

<sup>1</sup> 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.

# Connecticut Board of Regents for Higher Education

APPLICATION FOR NEW PROGRAM APPROVAL PRO FORMA <sup>1</sup> BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

<sup>1</sup> 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

A New Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve a program in Health Sciences leading to a Bachelor of Science degree at Eastern Connecticut State University

A True Copy:

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

## ITEM

Approval of a Bachelor of Science degree in Health Sciences at Eastern Connecticut State University

## BACKGROUND

Summary

The proposed Health Sciences Major consists of three concentrations: Public Health Studies, Pre-Nursing and Pre-Physical Therapy. It is designed to build upon supporting courses in chemistry, mathematics, health and physical education, sociology, health informatics, healthcare management and psychology to prepare students for careers in the healthcare field. The curriculum consists of a common core group of courses followed by specific course work in a selected area of concentration.

This major provides an integrated foundation of knowledge in biological disciplines that includes morphological, cellular, molecular, physiological, developmental and evolutionary principles. Much of the coursework utilizes the scientific method and emphasizes skills in analysis, evaluation, and critical thinking. Students are prepared to demonstrate their ability to use appropriate scientific equipment and familiarity with the standard array of lab techniques. This is accomplished by offering upper level courses that are more focused, with emphasis on health-related and physiologically based topics. A capstone experience provides further opportunity for development of writing and scientific communication skills and generates interest in career prospects and community services.

The Health Sciences major prepares students for entrance into graduate schools and professional health schools (physical therapy, occupational therapy, public health, nursing, physician assistant, including preparation for national admissions examinations). It provides students with practical skills that can qualify them for entry-level positions in biology and health-related occupations. In addition, this major prepares students to demonstrate ability to integrate community service with career advising, student involvement, leadership development, recreation and other extracurricular opportunities.

Curriculum

Health Sciences majors will complete 120 credits, 49-59 of them for the Health Sciences major. Forty additional credits are required for course work that includes pre-requisites and the Liberal Arts Core. The curriculum allows for 19-31 credits of student -selected electives to fulfill the 120 credits for graduation.

In the first two years, Health Science students will develop a sound knowledge of core principles in biology, with the appropriate supporting courses in chemistry, math, health and physical education and psychology. Upper-level classes will offer a more focused emphasis on health-related and physiologically-based topics. Students in the Public Health concentration will be required to take 25 credits of courses covering public health, epidemiology, nutrition and microbiology. Additionally and dependent upon their particular interests, students will select 9 credits of coursework from areas such as public relations crisis management, drinking water management, stress management, the sociology of mental illness, substance abuse, health communications and health promotion and prevention. Students in the Pre-Nursing concentration will take 23 credits of courses in microbiology, anatomy and physiology and general chemistry. Students in the Pre-Physical Therapy concentration will take courses in anatomy and physiology, general microbiology, general chemistry, organic chemistry, general physics and exercise management. All students will take Health Science 438 *Current Topics in Health Sciences Seminar*. This course provides students with the capstone experience in writing and scientific communication skills, and meets Eastern's Liberal Arts Core Tier III requirement.

### Need for the Program

The Health Sciences major prepares students for health care positions requiring a strong health sciences background, such as Medical and Clinical Laboratory Technologist and Healthcare Technologists and for admission to graduate programs such as Physician's Assistant, Occupational Health and Safety Specialists, and Physical Therapy. The Bureau of Labor Statistics predicts that from 2010 to 2020 the healthcare and social assistance industry in the U.S. will create about 28 percent of all new jobs created in the U.S. economy. "This industry—which includes public and private hospitals, nursing and residential care facilities, and individual and family services—is expected to grow by 33 percent, or 5.7 million new jobs. Employment growth will be driven by an aging population and longer life expectancies, as well as new treatments and technologies." The Bureau estimates that "Employment among healthcare occupations is expected to increase by 29 percent. This growth, resulting in a projected 3.5 million new jobs, will be driven by increasing demand for healthcare services."

The Connecticut Department of Labor estimates that from 2008 – 2018 growth in health care support occupations would exceed that in all other occupational categories and that Healthcare Practitioners and Technical Occupations would be the fifth fastest growing occupational category in the state. The Connecticut Department of Labor estimated that from 2008 to 2018 average industry growth in the state would be 4.6% while growth in the Health Care and Social Assistance industry would grow by 14.3%.

A June 2012 Georgetown Center on Education and the Workforce report states that between 2010 and 2020 there will be over 70,000 openings in Connecticut in Healthcare Professional and Technical Occupations and Healthcare Support Occupations. Twenty-six percent of these jobs will be in Allied Health and 22% will require a bachelor's degree. Thirty-seven percent will be in healthcare support occupations.

Additionally, data collected regarding 2013 College-Bound Seniors reported by the College Board indicated that 19% of all seniors taking the SAT intended to major in the Health Professions and related Clinical Services. The Health Sciences area had the highest percentage of students compared to all other majors.

The April 2014 NACE Salary Survey, compiled from data derived from the Bureau of Labor Statistics, the U.S. Census Bureau, and a master data set developed by Job Search Intelligence, showed that for the health sciences, starting salaries for the class of 2014 averaged \$51,541, a 3.7% increase over the 2013 average salary.

### Students

Based on current enrollments in individualized majors in pre-physical therapy, pre-nursing, and pre-physician assistant programs, it is estimated that total enrollment will be approximately 60 students, with 15 to 20 students graduating each year. Over the past few months, there have been several inquiries about Eastern's proposed Health Sciences program from parents, first-time and community college students. This anecdotal evidence suggests that there are now students who are prepared to start this program in the fall of 2014.

### Faculty

Eastern currently has faculty from several disciplines with expertise to help support the Health Sciences major. Additionally, the university has reallocated several faculty lines across seven disciplines in support of the new major. We have recently completed several searches and will do four tenure track searches next year. These lines include individuals with expertise in biology, psychology, genetics,

chemistry, healthcare management and related areas who will teach courses for the major while providing additional support to all students at the university through courses designed to meet Eastern Connecticut State University's Liberal Arts Core Curriculum and existing programs in Biology and Biochemistry.

### Learning Resources

The current learning resources are adequate for the Health Sciences major. As the major becomes more established, additional resources will be acquired.

### Facilities

Eastern's 174,000 square foot Science Building includes multipurpose classrooms and laboratory space. Existing equipment will be sufficient, assuming enrollment remains at approximately 60 students. Laboratory facilities are outstanding although the program, which will highlight hands-on laboratory experiences, will need additional laboratory space for human anatomy and physiology and possibly chemistry. Goddard Hall, which formally housed the science departments, will soon be undergoing refurbishment making existing laboratory space available and appropriate for the needs of the Health Sciences major. It may also be possible to use existing shell space in the Science Building to help expand the offerings of chemistry lab courses as the demand warrants.

### Fiscal Note

With a total enrollment projection of 60 students, the projected annual program revenue is \$144,097, \$283,278 and \$745,576 for years 1, 2 and 3 respectively. The total expected expenditures for program administration, full and part-time faculty, support staff and equipment are \$400,000, \$367,000 and \$384,800 for the same time period.

### Review of Documents:

- a) Campus Review: University Senate, April 15, 2014
- b) Campus Budget and Finance: N/A
- c) Campus President: April 15, 2014
- d) Academic Council: May 14, 2014
- e) System Office

Accreditation: N/A

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

**SECTION 1: GENERAL INFORMATION** <sup>1 2</sup>

<b>Institution:</b> Eastern Connecticut State University	<b>Date of Submission to BOR Office:</b> 4/18/14
<b>Most Recent NEASC Institutional Accreditation Action and Date:</b> 2010	
<b>Program Characteristics</b> Name of Program: Health Sciences Degree: Title of Award (e.g. Master of Arts) <b>B.S.</b> Certificate: (specify type and level) Anticipated Program Initiation Date: Fall 2014 Anticipated Date of First Graduation: May 2015 Modality of Program: X On ground      Online X Combined If "Combined", % of fully online courses? < 50% Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 120	<b>Program Credit Distribution</b> # Cr in Program Core Courses: 19 + 7 pre-requisite # Cr of Electives in the Field: (26-39) # Cr of Free Electives: # Cr Special Requirements (include internship, etc.): <u>Total # Cr in the Program</u> (sum of all #Cr above): (52-65) From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: <b>48</b>
Type of Approval Action Being Sought:      Licensure OR <input checked="" 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:      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 & Sciences	
Program Accreditation: <ul style="list-style-type: none"> <li>If seeking specialized/professional/other accreditation, name of agency and intended year of review:</li> <li>If program prepares graduates eligibility to state/professional license, please identify:</li> </ul> (As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)	
<b>Institutional Contact for this Proposal:</b> Martin Levin	Title: Interim Dean, School of Arts & Science Tel.: 860-465-5295 e-mail: levin@easternct.edu

**BOR-AC REVIEW and Follow Up** (For BOR Office Use Only - please leave blank)

BOR Concept Paper Sequence Number (to be assigned):  
Summary of BOR-AC Comments and Recommendations:  
Log of Follow Up Steps:  
Expected Date of Full Proposal:

<sup>1</sup> This Concept Paper can be considered the first draft of your new program proposal. Providing accurate and concrete information will facilitate further steps. Please neglect cells that have been shaded with a pattern or text that has been crossed out. These items can be completed in the full proposal document.

<sup>2</sup> Further details and information may be required at the institution level (e.g., Academic Dean, Provost) or system level (e.g., officer in charge of a centralized programmatic database). As appropriate, this additional information should be included in this Concept Paper.

**CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**  
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**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)*

Eastern Connecticut State University is the state's designated public liberal arts university. An award-winning tiered Liberal Arts Core ensures that students in all majors develop strong analytical, information literacy and communication skills; a background of historical, scientific and cultural knowledge; and an understanding of ethical and social issues. Yet, with a history as a "Normal" school, Eastern has always offered carefully selected pre-professional programs and emphasized experiential learning. Extending the traditional model of preparing teachers through a combination of coursework and student teaching, all Eastern major programs incorporate a strong foundation in the liberal arts, rigorous coursework to develop expertise in a chosen field, and hands-on learning in a professional setting. The proposed major in Health Sciences follows this model and parallels the structure of existing majors ranging from Biochemistry and Biology to Business Information Systems and Sports and Leisure Management.

Eastern has been a leader in math and science education since its founding in 1889, with a history of graduating many math and science teachers. Since the 1970's Eastern has developed exceptional undergraduate programs in carefully selected areas of science including biology and biochemistry. Today, Eastern science and math graduates are nationally known research scientists, computer/video game designers, university professors, neurobiologists, doctors, engineers, conservation ecologists, molecular biologists, museum curators, forensic psychologists, veterinarians, ophthalmologists and economists. They have won fellowships funded by the National Aeronautics and Space Administration (NASA) and the National Institute of Health, served as consultants to the National Academy of Sciences, and been named Early Career Scientists by the Howard Hughes Medical Institute, among other honors and accolades. The proposed major in Health Sciences builds on existing areas of strength and expands opportunities for students to benefit from Eastern's outstanding faculty, facilities and hands-on approach to science. Health Science majors will be prepared for Connecticut's growing biomedical industry cluster and for graduate programs in health professions. The Health Science major provides a carefully constructed pathway for transfer students from Health Science programs at Connecticut's Community Colleges.

**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 Health Sciences major prepares students for health care positions requiring a strong health sciences background, such as Medical and Clinical Laboratory Technologist and Healthcare Technologists and for admission to graduate programs such as Physician's Assistant, Occupational Health and Safety Specialists, and Physical Therapy. The Bureau of Labor Statistics predicts that from 2010 to 2020 the healthcare and social assistance industry in the U.S. will create about 28 percent of all new jobs created in the U.S. economy. "This industry—which includes public and private hospitals, nursing and residential care facilities, and individual and family services—is expected to grow by 33 percent, or 5.7 million new jobs. Employment growth will be driven by an aging population and longer life expectancies, as well as new treatments and technologies." (<http://www.bls.gov/ooh/About/Projections-Overview.htm>). The Bureau estimates that "Employment among healthcare occupations is expected to increase by 29 percent. This growth, resulting in a projected 3.5 million new jobs, will be driven by increasing demand for healthcare services."

The Connecticut Department of Labor estimated that from 2008 – 2018 growth in health care support occupations would exceed that in all other occupational categories and that Healthcare Practitioners and Technical Occupations would be the fifth fastest growing occupational category in the state. The Connecticut Department of Labor estimated that from 2008 to 2018 average industry growth in the state would be 4.6% while growth in the Health Care and Social Assistance industry would grow by 14.3%. <http://www1.ctdol.state.ct.us/lmi/ctindustry.asp>.

A June 2012 Georgetown Center on Education and the Workforce, reports that between 2010 and 2020 there will be over 70,000 openings in Connecticut in Healthcare Professional and Technical Occupations and Healthcare Support Occupations. Twenty-six percent of these jobs will be in Allied Health and 22% will require a bachelor's degree. Thirty-seven percent will be in healthcare support occupations. Furthermore data collected regarding 2013 College-Bound Seniors reported by the College Board [www.collegeboard.org](http://www.collegeboard.org) indicated that 19% of all seniors taking the SAT intended

## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

to major in the Health Professions and related Clinical Services (Appendix A: Table 2013 Intended College Major). The Health Sciences area had the highest percentage of students compared to all other majors. In addition another 7% of the students indicated a desire to major in Biological and Biomedical Sciences. Eastern majors in this new Health Sciences program combined with our successful Biochemistry and Biology majors directly address the demands of the current student demographic. Eastern students interested in attending medical, dental or veterinary school will be encouraged to pursue Eastern's Biochemistry or Biology majors.

- 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?

Significant physical and faculty resources have been allocated to the sciences at Eastern in recent years. With outstanding equipment, laboratories and faculty Eastern is in a position to create a cross-disciplinary major that will prepare students for the expanding health care and biotechnology sectors of the state economy. Eastern's new 174,000-square foot Science Building includes multi-purpose classrooms, a 132-seat lecture hall with a floor-to-ceiling projection screen and surround-sound audio system, a modern greenhouse and an observation deck for astronomy research. Laboratory space includes a dedicated Imaging Center with a confocal microscope; a nuclear magnetic resonance facility; a plant-tissue culture lab; a DNA sequencer room; and specially built labs for sustainable energy, environmental earth sciences, advanced biochemical and biotechnology research. In addition Goddard Hall laboratory space will be refurbished to provide additional laboratory space for the new health sciences courses. The facilities in the Science Building and Goddard Hall and the equipment they house, as well as the building's wireless network, provide faculty and students with the sophisticated tools to conduct hands-on research that enhance students' analytical and problem-solving skills while allowing them to pursue scientific inquiry and observation in their chosen professional fields and to develop interdisciplinary connections.

Eastern has a cluster of faculty with the expertise to support a Health Sciences program and in Fall 2014 will reallocate eight faculty lines across seven disciplines in support of the new major. These lines will include individuals with expertise in biology, genetics, chemistry, healthcare management and related areas who will teach courses for the major while providing additional support to all students at the university through courses designed to meet Eastern Connecticut State University's Liberal Arts Core Curriculum.

- 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*)

Eastern's Health Science major is being designed to allow for seamless transfer from QVCC's new Health Care Science Program, Manchester Community College's Liberal Arts and Science associate in science degree programs, and related Allied Health programs and Healthcare Pathway programs at other community colleges.

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

Within ConnSCU there are no other Health Sciences or Allied Health Major bachelor degree programs. Western Connecticut State University offers Bachelor degree programs in Health Education and Health Promotion Studies but these have a different focus than the proposed program in Health Science. UCONN's program in Allied Health Sciences with concentration in Health Sciences is the closest public university option to Eastern's proposed Health Sciences program. Southern offers a B.S. in Public Health. Other bachelor's degree options in the state are available at the following private universities and colleges: Quinnipiac, Goodwin, Sacred Heart, the University of Hartford, and the University of Bridgeport.

- Please provide a description/analysis of employment prospects for graduates of this proposed program  
Half of the graduates from the Health Sciences program will be prepared to enter immediate employment and half will enter graduate programs. For those students who plan to enter the workforce immediately upon graduation, the

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<sup>3</sup> 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 NEW PROGRAM APPROVAL (Public Higher Education Institutions) -01/20/12*

degree with a concentration in public health will prepare students who are interested in pursuing health-related careers in areas such as health promotion and environmental and occupational health.

The World Health Organization defines health promotion as the process of enabling people to increase control over, and improve, their health. It involves a wide range of social and environmental interventions. Possible careers in health promotions include advocacy, substance abuse and control, health educator, worksite wellness manager, program coordinator, nutritionist, epidemiologist, and community health worker. A complementary minor in a discipline such as Spanish or Women's Studies could increase a student's likelihood of obtaining a position. According to the Bureau of Labor statistics, the median annual salary for health promotion specialists was \$41,831 in 2012. Employment of health educators and community health workers is projected to grow 21 percent from 2012 to 2022, faster than the average for all occupations.

Environmental health involves assessment and control of physical, chemical, and biological factors that can potentially affect health. Possible careers in environmental health include toxicologist, environmental engineer, hazardous waste inspector, water quality inspector, solid waste specialist and food waste specialist. Salaries in environmental health areas are quite variable. For example, according to the Bureau of Labor statistics, the median salary for water and wastewater treatment plant and system operators in 2012 was \$42,760. The median salary for environmental scientists and specialists was \$63,570. Projected growth from 2012 to 2022 is 15% and 8% respectively.

Occupational health refers to the identification and control of risks from physical, chemical and other hazards in the work environment. Technicians work with other safety specialists in conducting tests and measuring hazards to help prevent harm to workers, property, the environment, and the general public. According to the Bureau of Labor Statistics, the median salary for occupational health and safety technicians in 2012 was \$47,440. Projected growth from 2012 to 2022 is 11%.

The Georgetown Center on Education and the Workforce report for Connecticut anticipated the following openings before 2020: Clinical laboratory technologists and technicians (1,560 positions for graduates with bachelor's degrees), health practitioner support technologists and technicians (170 positions for graduates with bachelor's degrees), Healthcare professional and technical workers, all other (230 positions for graduates with bachelor's degrees).

The April 2014 NACE Salary Survey, compiled from data derived from the Bureau of Labor Statistics, the U.S. Census Bureau, and a master data set developed by Job Search Intelligence, showed that for the health sciences, starting salaries for the class of 2014 averaged \$51,541, a 3.7% increase over the 2013 average salary. Driving the overall increase, nursing graduates saw their average starting salary rise by 5.7 percent to \$55,800. Other health and related sciences majors saw a 0.2 percent increase to \$45,300.

### **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)*

Based on current enrollments in individualized majors in pre-physical therapy, pre-nursing, and pre-physician assistant programs, it is estimated that total enrollment will be approximately 60 students, with 15 to 20 students graduating each year. Since Eastern does not anticipate expanding enrollment, the effect on revenue will be neutral—Health Sciences majors will be students who would otherwise have selected unclassified individualized majors using similar courses or those who would have transferred out of the system. This program will support the growing demands in the health sector within our state and promote improved retention by providing a program for students who might otherwise transfer to reach their future career objectives in a health sciences field.

This program will utilize eight new faculty lines across seven in support of the new major. These lines will include individuals with expertise in biology, genetics, chemistry, healthcare management and related areas who will teach courses for the major while providing additional support to all students at the university through courses designed to meet Eastern Connecticut State University's Liberal Arts Core Curriculum and existing programs in Biology and Biochemistry. Reallocations of existing faculty lines to psychology and health and physical education will also be applied to fulfill



## **CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**

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

additional needs of the program curriculum. Existing equipment will be sufficient assuming enrollment remains at approximately 60 students. Laboratory facilities are outstanding although the program which will highlight hands-on laboratory experiences will need additional laboratory space for human anatomy and probably an additional laboratory in existing shell space in the new science building to help expand the offerings of chemistry lab courses included in the program as the demand warrants.

This program will require a coordinator who will be a faculty member on  $\frac{1}{4}$  non-instructional assignment. Secretarial staff will be shared with existing programs.

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**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)

1. Provide an integrated foundation of knowledge in biological disciplines that includes morphological, cellular, molecular, physiological, developmental, and evolutionary principles.
2. Present information on the life sciences that utilize the scientific method and emphasize skills in analysis, evaluation, and critical thinking.
3. Prepare students for entrance into graduate schools and professional health schools (physical therapy, occupational therapy, public health, nursing, physician assistant, including preparation for national admissions examination, such as the Graduate Record Examination (GRE), Medical College Admission Test (MCAT) and similar examinations, or provide students with practical skills that can qualify them for entry level positions in biology and health-related occupations.
4. Students will demonstrate scientific knowledge and skills in scientific reasoning and will be able to apply scientific principles to biology based problems.
5. Students will be able to effectively find and use resources from the literature.
6. Students will demonstrate effective oral, written and visual communication.
7. Students will demonstrate mathematical knowledge and skills in the biological sciences.
8. Student will demonstrate ability to identify ethical issues and to evaluate them rigorously from different side, specifically related to the health sciences.
9. Student will demonstrate ability to integrate student services with career advising, student involvement, leadership development and recreation and other extracurricular opportunities.

**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)

This program will be administered by a current full-time faculty member with the amount of non-instructional credit assigned a function of program enrollment. It is anticipated that this will be 1/4 of a full-time instructional load. The average yearly cost over the next three years is \$21,000.

**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? 8 All positions are reallocations of positions already filled by temporary full-time faculty.

What percentage of the credits in the program will they teach? Approximately 70%

What percent of credits in the program will be taught by adjunct faculty? 10 – 15%

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program. Master's 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)

Equipment for one new laboratory to teach Anatomy and Physiology will be required. The estimated cost is \$80,000 over the next three years with the greatest cost (\$60,000) in the first year.

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**Curriculum**

(Please provide details as available and keep in mind the summary of Program Credit Distribution completed in Section 1. Modify this format as needed)

Course Number and Name		Pre-Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
<b>Program Core Courses</b>	<b>L.O. # 4</b>		<b>26</b>	<b>Pre-Nursing Concentration</b>		<b>23</b>
HSC/HPE 215 Introduction to the Health Sciences/Lab**	1, 2, 4		4	BIO 301/302 Microbes and Your Health Lec/Lab or Bio 334 General Microbiology w/Lab <sup>∞∞</sup>	1,4	4
PSY 212 Lifespan Developmental	2		3	HSC/HPE 318 Anatomy and Physiology I Lec/Lab **	1,4	4
MAT 216 Statistical Data Analysis or HSC/HPE 430 Statistics in Health and Exercise Science	7	(T1M)	3	HSC/HPE 319 Anatomy and Physiology II Lec/Lab**	1,4	4
HSC/HPE 225 Medical Terminology**	1,2,4		3			
BIO 304/314 Genetics and Society Lec/Lab	1,4, 8		4	CHE 210/212 General Chem I w/lab	3,4	4
BIS 362 Healthcare Informatics	1,4	(T2IT)	3	CHE 211/213 General Chem II w/lab	3,4	4
HSC/ANT 302 Research Methods for Health Sciences**	1,4, 5, 6,8,9		3	BIO 380 Independent Study or SWK 330 Research for Social work I or PSY 247 Research Methods (for UCONN nursing agreement only)	1,4,5 6, 8, 9	3
HSC/HPE 438 Current Topics in Health Sciences seminar**	1,2,4		3			
<b>Public Health Concentration</b>			<b>25</b>	<b>Pre-Physical Therapy Concentration</b>		<b>35</b>
BIO/PBH 228 Introduction to Public Health (3)	1,4, 8		16	HSC/HPE 318 Anatomy and Physiology I Lec/Lab**	1,4	4
BIO/PBH 206 Epidemiology for the Liberal Arts (3)	1,3, 4			HSC/HPE 319 Anatomy and Physiology II Lec/Lab**	1,4	4
BIO/PBH 209 Nutrition and Public Health Issues (3)	1, 3, 4, 6			BIO 334 General Microbiology w/Lab <sup>∞∞</sup>	1,4	4
PBH 494 Field Internship in Public Health (3)	1,3, 4, 6,9			CHE 210/212 General Chem I w/lab		4
BIO 301/302 Microbes and Your Health Lecture/Lab (4)	1,3, 4			CHE 211/213 General Chem II w/lab	3,4	4
				CHE 216 Organic Chem I w/lab	3,4	4
<u>3 courses from the following</u>			9	PHY 204 General Physics I w/lab	3,4	4
COM 464 Public Relations Crisis Management (3)	2, 6			PHY 205 General Physics II w/lab	3,4	4
EES 323 Drinking Water Management (3)	2			HPE/SLM/HSC 375 Exercise Management for Persons with Chronic Diseases and Disabilities **	1,4	3
HPE 326 Stress Management (3) 2						
SOC 312 Sociology of Mental Illness (3) 2						
SWK 344 Substance Abuse (3) 2, 9						
HSC/COM 255 Health Communications** (3) 2, 6, 9						
SWK 365 Health Promotion & Prevention (3) 2, 9						
<sup>∞∞</sup> Requires permission from Chair and instructor <sup>∞∞</sup>						
**Currently in curriculum approval process**						
** New course name **						

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<b>Total Other Credits Required to Issue Credential</b> (e.g. GenEd/Liberal Arts Core/Liberal Ed Program)			59-71
<p><b>Program Outline</b> (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.)</p> <p>Health Sciences majors will complete 120 credits, 49-59 of them for the Health Sciences major. Forty additional credits are required for course work that includes pre-requisites and the Liberal Arts Core. The curriculum allows for 19-31 credits of student selected electives to fulfill the 120 credits for graduation. Health Sciences majors must complete HSC 438, which ensures that they have appropriate writing, research, and laboratory skills.</p> <p>In the first two years, Health Science students will develop a sound knowledge of core principles in biology, with the appropriate supporting courses in chemistry, math, health and physical education and psychology. Upper-level classes will offer a more focused emphasis on health-related and physiologically-based topics. Demonstrated competence in the laboratory will be evaluated by practical, hands-on exams and faculty assessment of skill proficiency. Students will demonstrate their ability to use appropriate equipment and familiarity with the standard array of lab techniques. All students will take HSC 438 Current Topics in Health Sciences Seminar. This course provides students with the capstone experience in writing and scientific communication skills, and meets Eastern's LAC Tier III requirement.</p>			

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**Appendix A:** College Boards Profile report 2013 Table 25: Intended College Major, Degree-Level  
Goal College Plans 2013 College-Bound Seniors

SAT Intended College Major	Test-Takers		Mean Scores		
	Number	Pct	Critical Reading	Mathematics	Writing
Agriculture, Agriculture Operations, and Related Sciences	13,378	1	469	478	457
Architecture and Related Services	23,231	2	487	530	482
Area, Ethnic, Cultural and Gender Studies	1,709	0	539	509	525
<b>Biological and Biomedical Sciences</b>	<b>93,771</b>	<b>7</b>	<b>537</b>	<b>552</b>	<b>529</b>
Business Management, Marketing, and Related Support Services	157,745	11	490	522	485
Communication, Journalism and Related Programs	38,011	3	515	498	511
Computer and Information Sciences and Support Services	36,515	3	518	547	493
Construction Trades	1,218	0	421	452	401
Education	62,119	4	481	485	476
Engineering	132,275	10	527	580	512
Engineering Technologies/Technicians	19,133	1	471	524	458
English Language and Literature/Letters	17,768	1	578	524	563
Family and Consumer Sciences/Human Sciences	4,720	0	448	452	445
Foreign Languages, Literatures, and Linguistics	9,140	1	562	539	551
<b>Health Professions and Related Clinical Services</b>	<b>262,528</b>	<b>19</b>	<b>484</b>	<b>497</b>	<b>479</b>
History	14,919	1	540	509	511
Legal Professions and Studies	36,942	3	516	509	503
Liberal Arts and Sciences, General Studies, and Humanities	12,963	1	547	530	536
Library Science And Administration	239	0	563	509	520
Mathematics and Statistics	11,361	1	523	604	522
Mechanic and Repair Technologies/Technician	3,654	0	416	444	397
Military Technologies And Applied Sciences	8,404	1	486	496	460
Multi/Interdisciplinary Studies	6,676	0	587	594	576
Natural Resources and Conservation	6,959	1	518	519	500
Parks, Recreation, Leisure and Fitness Studies	11,050	1	438	461	429
Personal and Culinary Services	6,575	0	448	449	433
Philosophy and Religious Studies	3,219	0	546	530	527
Physical Sciences	21,057	2	554	582	537
Precision Production	100	0	442	476	427
Psychology	65,319	5	502	490	492
Public Administration and Social Services Professions	5,025	0	462	454	457
Security and Protective Services	44,364	3	445	453	433
Social Sciences	24,172	2	565	553	551
Theology and Religious Vocations	2,283	0	527	509	507
Transportation and Materials Moving	700	0	451	486	438
Visual and Performing Arts	98,725	7	504	494	492
Other	26,412	2	450	460	440
Undecided	96,486	7	533	547	524
<b>Degree-Level Goal</b>					
Certificate Program	14,316	1	440	459	430
Associate Degree	19,991	1	409	414	397
Bachelor's Degree	418,253	30	478	489	466
Master's Degree	417,117	30	506	524	499
Doctoral or Related Degree	299,140	21	533	548	525
Other	9,409	1	412	445	411
Undecided	213,555	15	504	520	495

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

Institution

Eastern Connecticut State University

Date

10/30/2013

Proposed Program

Health Science

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	1	10	2	15	5
New Students (first time matriculating)	15	1	20	2	40	2
Continuing (students progressing to credential)	0	0	15	1	40	4
Headcount Enrollment	17	2	45	5	95	11
<b>Total Estimated FTE per Year</b>	17.5		47.5		100.5	

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) Includes Tuition and Fees at \$8951 for a full-time residential student (not including housing and board), \$8911 for a full-time non-residential student, and \$4916 for a half-time part-time student.	\$134,265	\$9,832	\$268,530	\$14,748	\$716,080	\$29,496
Program-Specific Fees						
Other Rev. (Annotate in text box below)						
<b>Total Annual Program Revenue</b>	\$144,097		\$283,278		\$745,576	

PROJECTED Expenditures*	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)	One fourth	\$20,000	One fourth	\$21,000	One fourth	\$22,000
Faculty (Full-time, total for program)	1/2 of 8	\$300,000	1/2 of 8	\$315,000	3/4 of 8	\$330,750
Faculty (Part-time -total for program)						
Support Staff	1/4 technician	\$20,000	1/4 technician	\$21,000	1/4 technician	\$22,050
Library Resources Program						
Equipment (List as needed)		\$60,000		\$10,000		\$10,000
Other (e.g. student services)						
Estimated Indirect Cost (e.g. student services, operations, maintenance)						
<b>Total ESTIMATED Expenditures</b>		\$400,000		\$367,000		\$384,800

\* 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: The faculty members hired for this position will offer courses for Eastern's Liberal Arts Core and in their specific disciplines (Sport and Leisure Management, Health and Physical Education, Biology, Psychology, Communication, Business, Physical Sciences) in addition to the courses for the Health Science program. Overall, about 1/2 of these faculty members' teaching credits will be in Health Science major courses. Seats in these courses will also be filled by students who are in majors other than Health Science.

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

**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. John M Toedt; Professor Physical Sciences	University of Connecticut	Ph.D. Biophysics, MS Biotechnology, BS Biochemistry, Post-Doctoral work: Center for Advanced Research in Biotechnology University of Maryland & NIST: Proteomics, Biophysical Characterization	<i>Health Sciences Major Program Coordinator,</i>  <i>Biochemistry Major Program Coordinator</i>  <u>Teaching Responsibilities:</u> CHE 210 & 211 General Chemistry I and II CHE 323 Physical Biochemistry CHE 316 Biochemistry I CHE 317 Biochemistry I Laboratory CHE 410 Physical Biochemical Techniques CHE 450 The Biochemistry Profession (Capstone course for major) CHE 205 Chemistry of Life with Lab (Non- Major course)
Mr. Timothy A. Swanson, Associate Professor of Physics	MA Boston University	Physics Education Forty Seven Years College Teaching	<i>Department Chairperson</i> PHY 204 and PHY 205
Dr. Charles M Wynn Sr. ; Professor of Chemistry	Ph.D, University of Michigan	General Chemistry/Organic Chemistry/Science Education	<i>Associate Department Head</i> <i>General Chemistry Coordinator</i> CHE 210 & CHE 211
Dr. Darrell J. Koza; Professor Physical Sciences	Ph.D. Organic Chemistry, University of Rhode Island		CHE 216
Dr. Anita Lee, Associate Professor	Springfield College	DPE Statistics, evaluation, motor learning, sports psychology	HPE/HSC 430
Dr. Nanette Tummers, Professor	Northern Colorado	School, personal and community health, stress management, yoga	HPE 326
Dr. Yaw Nsiah; Professor Biology	PhD. Howard University	Microbiology, Virology, Public Health	BIO 301, BIO 302, BIO 380, BIO/PBH

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			206, BIO/PBH 228, and supervises PBH 494
Dr. Marsha Davis		Ph.D. Statistics	MAT 216
Dr. Pete Johnson		Ph.D. Mathematics Education	MAT 216
Dr. Anthony Aidoo		Ph.D. mathematical biology	MAT 216
Dr. Bonsu Osei		Ph.D. mathematical biology	MAT 216
Catherine A. Carlson, Ph.D. Professor	PhD. Michigan State University	hydrology, hydrogeology, environmental management	EES 323
Dr. Jennifer Leszczynski, Associate Professor	Ph.D. from West Virginia University	Developmental Psychology	PSY 212
Dr. Melanie Evans, Associate Professor	Ph.D. from Syracuse University	Developmental Psychology	PSY 212
Dr. Mary Kenny	PhD Columbia University	Memory, Identity, Public Health, Child Labor	HSC/ANT 302
Dr. Nick Parsons	PhD Washington State University	Drugs and Society, Sociology of Sport	SOC 311
Melanie Savelli	ABD University of Connecticut	Health Communication	COM 464
Dr. Olugbenga Ayeni, Associate Professor	Ph.D. From U of Southern Mississippi, Hattiesburg	PR, and Advertising	COM 464
Dr. Mihyun Kang; Assistant Professor	Ph.D. From University of Texas at Austin	PR, Advertising	COM 464



**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning

A New Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve a program in Liberal Studies leading to a Bachelor of Arts degree at Eastern Connecticut State University

A True Copy:

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

## ITEM

Approval of a Bachelor of Arts in Liberal Studies at Eastern Connecticut State University

## BACKGROUND

Summary

Eastern Connecticut State University has a 125 year history of preparing teachers. Recent changes in state certification requirements have increased the need for a major that provides students with the skills and knowledge necessary to meet those requirements while still being able to graduate in four years. The Liberal Studies major is designed for students who are also Early Childhood Education (ECE) or Elementary Education (ELE) majors. It is not open to other students. The major will provide students with background and content knowledge in the natural sciences, social sciences, English and mathematics necessary to being an effective early childhood or elementary teacher and to performing well on Praxis II tests. Completed simultaneously with the requirements for the Early Childhood Education and Elementary Education majors and with Eastern's Liberal Arts Core requirements, the Liberal Studies major will prepare students for certification and enable them to graduate in 4 years within 120 credits.

Need for the Program

According to the CT Department of Labor the occupation with the most openings requiring a bachelor's degree and experience is Elementary School Teachers, Except Special Education with 600 job openings annually. The 5<sup>th</sup> occupation on the list is pre-school teachers, with 380 annual openings. The proposed program prepares students with all of the content needed to be successful early childhood or elementary teachers, thus increasing their job prospects in the State of Connecticut and beyond.

All four CSUs offer the Elementary Education major and allow students to choose a second major based on the state certification regulations. Because there are elementary schools in all areas of the state and each CSU has a long history of preparing teachers, the proposed major does not create any duplication. Moreover, Eastern produces the largest number of certified early childhood educators not only within the CSU's but also in the State of Connecticut. The proposed major is unique in such a way that it not only provides students with rigorous curriculum in liberal studies but also an opportunity for an in-depth of study of one of the four content areas: English, Mathematics, Natural or Social Sciences. It will enhance the elementary and early childhood certification programs by preparing students with the breadth and depth of content knowledge required to teach elementary grade levels.

Curriculum

Liberal Studies majors will take 37 - 39 credits of core courses (except that Math Concentration students take 31 credits of core courses), 18 to 22 credits of courses in an area of concentration (except that Math Concentration students take up to 26 credits in the area of concentration), and 3 credits of a capstone course for a total of 58 - 64 credits. Areas of concentration are Mathematics, English, Natural Science and History/Social Science. Students must also complete Eastern's Liberal Arts Core (LAC) and the requirements for either the ECE major or the ELE major. 120 credits are required for graduation.

Students

Any student who has declared pre-Elementary Education or pre-Early Childhood Education as a major or who has been admitted to one of those majors through the CARE admission process may declare a Liberal Studies major. It is not open to other students. Students enrolled in the Liberal Studies major will be dropped from the major after completing 60 credits if they are not admitted to the Early Childhood or Elementary Education certification programs through the CARE admission process. Students enrolled in the Liberal Studies major who were admitted to the Early Childhood or Elementary Education certification programs through the CARE admission process but who are afterwards dismissed from the CARE program may complete the Liberal Studies major for graduation. It is estimated that by Year 3, there will be 53 Liberal Studies majors, 50 full-time and 7 part-time.

Faculty

The program will be staffed by Eastern's current faculty in the social sciences, natural sciences, English and math and requires no additional resources. There may need to be some adjustment of specific course offerings and reallocation of faculty lines as ELE and EDU students move from existing majors to the Liberal Studies major. This can be accomplished through reassignment of temporary faculty lines from one department to another.

Learning Resources

No new learning resources will be required.

Facilities

No new facilities will be required.

Fiscal Note

Revenues of \$533,260 from tuition and fees are projected for the Liberal Studies major by Year 3 and expenses by Year 3 are projected at \$63,394 with \$41,344 for program administration and \$22,050 for clerical support.

Review of Documents:

- a) Campus Review: University Senate, April 15, 2014
- b) Campus Budget and Finance: N/A
- c) Campus President: April 15, 2014
- d) Academic Council: May 14, 2014
- e) System Office

Accreditation: N/A (The State Department of Education has been consulted to ensure that the Liberal Studies major combined with completion of ELE or EDU requirements will meet requirements for certification.)

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

**SECTION 1: GENERAL INFORMATION**

<b>Institution:</b> Eastern Connecticut State University		Date of Submission to BOR Office:	
Most Recent NEASC Institutional Accreditation Action and Date: 2010			
<b>Program Characteristics</b> Name of Program: Liberal Studies Degree: Title of Award (e.g. Master of Arts) Bachelor of Arts Certificate: (specify type and level) Anticipated Program Initiation Date: Fall 2014 Anticipated Date of First Graduation: May 2016 Modality of Program: On ground    Online    x Combined If "Combined", % of fully online courses? < 50% Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): 120		<b>Program Credit Distribution</b> # Cr in Program Core Courses: 37 - 39 # Cr of Electives in the Field: 18 - 22 # Cr of Free Electives: # Cr Special Requirements (include internship, etc.): 3 <u>Total # Cr in the Program</u> (sum of all #Cr above): 58 - 64 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 55 - 59	
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			
Other Program Accreditation: <ul style="list-style-type: none"> <li>• If seeking specialized/professional/other accreditation, name of agency and intended year of review:</li> <li>• If program prepares graduates eligibility to state/professional license, please identify:</li> </ul> (As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)			
<b>Institutional Contact for this Proposal:</b> Rhona Free		Title: Provost	Tel.: 860-465-5246 e-mail: free@easternct.edu

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

BOR Sequence Number (to be assigned):	
Approved 2010 CIP Code No. <sup>1</sup>	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)	

<sup>1</sup> 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**

Eastern Connecticut State University has a 125 year history of preparing teachers. Recent changes in state certification requirements have increased the need for a major that provides students with the skills and knowledge necessary to meet those requirements while still being able to graduate in four years. The Liberal Studies major is designed for students who are also Early Childhood Education or Elementary Education majors. It is not open to other students. The major will provide students with background and content knowledge in the natural sciences, social sciences, English and mathematics necessary to being an effective early childhood or elementary teacher and to performing well on Praxis II tests. Completed simultaneously with the requirements for the Early Childhood Education and Elementary Education majors and with Eastern's Liberal Arts Core requirements, the Liberal Studies major will prepare students for certification and enable them to graduate in 4 years within 120 credits.

**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 CT Department of Labor the occupation with the most openings requiring a bachelor's degree and experience is Elementary School Teachers, Except Special Education with 600 job openings annually. The 5th occupation on the list is pre-school teachers, with 380 annual openings.
- **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 program will be staffed by Eastern's current faculty in the social sciences, natural sciences, English and math and requires no additional resources.
- **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)** This program will be aligned with the 2012 ConnSCU Transfer Articulation Policy.
- **Please indicate what similar programs exist in other institutions within your constituent unit <sup>2</sup>, and how unnecessary duplication is being avoided** All four CSUs offer the Elementary Education major and allow students to choose a second major based on the state certification regulations. Because there are elementary schools in all areas of the state and each CSU has a long history of preparing teachers, the proposed major does not create any duplication. Moreover, Eastern produces the largest number of certified early childhood educators not only within the CSU's but also in the State of Connecticut. The proposed major is unique in such a way that it not only provides students with rigorous curriculum in liberal studies but also an opportunity for an in-depth of study of one of the four content areas: English, Mathematics, Natural or Social Sciences. It will enhance the elementary and early childhood certification programs by preparing students with the breadth and depth of content knowledge required to teach elementary grade levels.
- **Please provide a description/analysis of employment prospects for graduates of this proposed program.** According to the CT Department of Labor, the occupation with the most openings requiring a bachelor's degree and experience is Elementary School Teachers, Except Special Education with 600 job openings annually. The 5<sup>th</sup> occupation on the list is pre-school teachers, with 380 annual openings. The proposed program prepares students with all of the content needed to be successful early childhood or elementary teachers, thus increasing their job prospects in the State of Connecticut and beyond.

**Cost Effectiveness and Availability of Adequate Resources**

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

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<sup>2</sup> 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 NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12*

**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 central concepts, principles, skills, tools of inquiry and structure of disciplines in the social sciences, natural sciences, mathematics, and English.
2. Students will demonstrate competences in use of English language arts that include reading, writing, speaking, viewing, and listening.
3. Students will know, understand, and use fundamental concepts of physical, life, and earth/space sciences.
4. Students will know, understand, and use the major concepts and procedures in number and operations, algebra, geometry, measurement, and data analysis and probability.
5. Students will know, understand, and use the major concepts and modes of inquiry from the social sciences—history, geography, political science, and economics.
6. Students will demonstrate an understanding of how concepts, themes, and principles are interconnected within and across disciplines and use research and analytical skills appropriate to the social sciences, natural sciences, mathematics, or English.

**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 Liberal Studies Program will be administered by a Director who is a faculty member assigned non-instructional credits according to contractual guidelines. The estimated annual cost of this non-instructional assignment is \$41,344 (including fringe benefits) by year 3. The LSM program will be housed in the department of the Director. A Liberal Studies Advisory Board will be created, continuing the role of the Multi-disciplinary Task Force that designed the major. Liberal Studies majors will be assigned advisors from the departments that have courses included in one of the four concentration areas. The Director will monitor the status of LSM majors to ensure that only eligible students are enrolled.

**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? N/A

What percent of credits in the program will be taught by adjunct faculty? Less than 21%

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program. Master's 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)*

None

**CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**  
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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. # <sup>3</sup>	Pre- Requ isite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
<b>Program Core Courses</b>				<b>Other Related/Special Requirements</b>		
GEO 101 Geography for Education Majors (1) PSC 101 U.S. Government Basics (1) ECO 101 Introduction to Economics for Education (1) HIS 116 Intro. Modern World History (3) HIS 120 Early American 1607 To 1877 or HIS 121 Recent American 1877-Present or HIS 310 Great Issues: Survey Am. His.* (3) ENG 125 Intro. to Literature (3) ENG 328 Children's Literature (3) ENG 338 Linguistic Analysis (3) MAT 139 Number Systems (3) or MAT 139P Number Systems Plus** (4) MAT 140 Logic, Probability & Statistics (3) MAT 216 Statistical Data Analysis**(3) BIO 304 Genetics & Society (3) CHE 200 Introduction to Chemistry w/lab (4) EES 104 Dynamic Earth w/lab (4) or EES 110 Introduction to Geology (3)  * His/SS students take HIS 120 or 121 ** Math students take MAT 130 or 155/P instead of 139/P and MAT 315 instead of 216. These courses are included in the courses for the Math Concentration so Math students take 31 credits of core courses.	1,2 ,3, 4,5		37- 39**	<u><b>Natural Science Concentration</b></u> BIO 200 Ecology and Environment (3) BIO 202 Human Biology Lecture (3) AST 226 Intro. to the Solar System (3) PHY 102 Energy & the Scientific Method (3) PHY 217 Meteorology (3) ENG 200 Reading and Writing Argument (3)	3,6	18
				<u><b>History/Social Science Concentration</b></u> HIS 200 Historical Research & Writing (4) or PSC 201 Applied Qual. Methods (3) HIS 230 Western Civ. Before 1500 (3) or HIS 231 Western Civ. Since 1500 (3) HIS 3** A U.S. History course (3) His 3** A Non-U.S. History course (3) HIS 3** Any 300-level History course (3) PSC 300 Ideological Divisions in the U.S. (3)	5,6	21- 22
				<u><b>English Concentration</b></u> ENG 202 Introduction to English Studies (3) ENG 203 Writing for English Majors (3) ENG 213 American Lit. from 1865 (3) <i>Category: Creative Writing-</i> ENG 205, 206, 230, 241, 309, 380, or 353 <i>Category: Reading Culture-</i> ENG 228, 242, 250, 255, 256, 257, 258, 259, or 266 <i>Category: Elective-</i> Any 300-level ENG course.	2,6	18
				<u><b>Mathematics Concentration**</b></u> MAT 130 (4), MAT 155 (4), or MAT 155P (5) (If needed as a prerequisite for MAT 243. Other students should take a math course	4,6	25 -26

<sup>3</sup> From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

				to be determined with advisor) MAT 230 Discrete Structures (3) MAT 243 Calculus I (4) MAT 244 Calculus II (4) MAT 310 Applied Linear Algebra (3) MAT 315 Applied Probability & Statistics (4) MAT 362 Advanced Mathematics for Elementary School Teaching (3) ** Math students take MAT 130 instead of 139/P and MAT 315 instead of 216. These courses are included in the courses for the Math Concentration so Math students take 31 credits of core courses.		
LSM 400 Senior Seminar in Liberal Studies. For HIS/SS students HIS 400, 406, 407, or 420 if HIS 200 completed with C or better or PSC 460 if PSC 201 completed with C or better.	6		3			
<b>Core Course Prerequisites</b>				<b>Elective Courses in the Field</b>		
ENG 100 College Writing			3			

**Total Other Credits Required to Issue Credential (e.g. GenEd/Liberal Arts Core/Liberal Ed Program)** LSM credits plus credits required for LAC and the Education major (ELE or ECE) must total at least 120.

## 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.)

**Admission Requirements:** Any student who has declared pre-Elementary Education or pre-Early Childhood Education as a major or who has been admitted to one of those majors through the CARE admission process may declare a Liberal Studies major. It is not open to other students. Students enrolled in the Liberal Studies major will be dropped from the major after completing 60 credits if they are not admitted to the Early Childhood or Elementary Education certification programs through the CARE admission process. Students enrolled in the Liberal Studies major who were admitted to the Early Childhood or Elementary Education certification programs through the CARE admission process but who are afterwards dismissed from the CARE program may complete the Liberal Studies major for graduation.

**Program Summary:** Liberal Studies majors will take 37 - 39 credits of core courses (except that Math Concentration students take 31 credits of core courses), 18 to 22 credits of courses in an area of concentration (except that Math Concentration students take up to 26 credits in the area of concentration), and 3 credits of a capstone course for a total of 58 - 64 credits. Students must also complete Eastern's Liberal Arts Core (LAC) (many courses in the Liberal Studies major apply to the LAC) and the requirements for either the Early Childhood Education major or the Elementary Education major. 120 credits are required for graduation.



# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

**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
Faculty members in any of the relevant departments may teach the courses in their departments that are included in the LSM majors. Below is a representative sample of such faculty:			
Lisa Fraustino	Ph.D. SUNY-Binghamton	Children's literature, creative writing	Chairperson, English Department
Barbara Liu	Ph.D. Bowling Green State University	Composition/Rhetoric	Associate Chairperson, English Department
Nicole Krassas	Ph.D. University of Iowa	Political Science,	
William Cunningham	Ph.D. University of Texas at Austin,	Structural geology/tectonics, mineralogy, igneous and metamorphic petrology	
Marsha Davis	Ph.D. University of Connecticut	Statistics, developmental mathematics, mathematics education	Chairperson, Mathematics/Computer Science Department
Maryanne Clifford	Ph.D. University of Kentucky	International economics	
Jennifer Brown	Ph.D. University of California, Santa Barbara	Environmental economics	Associate Chairperson, Economics Department
Mary Curran	Ph.D. University of Kentucky	Geography	
Gloria Colurso	Ph.D. Pennsylvania State University	Human Physiology, Human Anatomy, Endocrinology	Chairperson, Biology Department
Caitlin Carenen	Ph. D History, Emory University	US Foreign Policy, US Religious history	
Elena Tapia	Ph.D. Linguistics, Indiana University	Linguistics	

# Connecticut Board of Regents for Higher Education

## APPLICATION FOR NEW PROGRAM APPROVAL **PRO FORMA** <sup>1</sup> BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

Institution Eastern Connecticut State University  
Proposed Program Liberal Studies

Date 1-Mar-14

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)	20	3	20	3	20	3
Continuing (students progressing to credential)			15	2	30	4
Headcount Enrollment	20	3	35	5	50	7
<b>Total Estimated FTE per Year</b>	21		37		53	

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)	\$187,520	\$14,508	\$337,995	\$24,905	\$497,350	\$35,910
Program-Specific Fees						
Other Rev. (Annotate in text box below)						
<b>Total Annual Program Revenue</b>	\$202,028		\$362,900		\$533,260	

PROJECTED Expenditures*	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)	one-fourth	\$37,500	one-fourth	\$39,375	one-fourth	\$41,344
Faculty (Full-time, total for program)						
Faculty (Part-time -total for program)						
Support Staff	one-fourth	\$20,000	one-fourth	\$21,000	one-fourth	\$22,050
Library Resources Program						
Equipment (List as needed)						
Other (e.g. student services)						
Estimated Indirect Cost (e.g. student services, operations, maintenance)						
<b>Total ESTIMATED Expenditures</b>		\$57,500		\$60,375		\$63,394

\* 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: Total enrollment at Eastern is not projected to increase as a result of approval of the Liberal Studies major. It is anticipated that the program will enroll students who would have chosen other majors at Eastern to take along with their Elementary Education or Early Childhood Education major. It requires no additional faculty. Students will take seats in existing courses. If needs for specific courses change, existing faculty lines will be reallocated to meet demands. The program will be administered by a faculty member on a one-course per semester non-instructional appointment with support from existing clerical staff.

<sup>1</sup> 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

A New Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve a program in Philosophy leading to a Bachelor of Arts degree at Eastern Connecticut State University

A True Copy:

---

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

## ITEM

Approval of a new Bachelor of Arts in Philosophy at Eastern Connecticut State University

## BACKGROUND

Summary

Consistent with its mission as Connecticut's designated public liberal arts university, Eastern Connecticut State University proposes a Major in Philosophy that will be unique in the state in its emphasis on Comparative Philosophy (western and non-western) and its grounding in Critical Thinking and Complex Reasoning.

Need for the Program

Eastern proposes this major based on the essential place of philosophy within the liberal arts, on interest of students as indicated by enrollment in the philosophy minor, on the positive labor market outcomes of college graduates with philosophy majors and on the increasing number of students at Eastern who are planning to attend law school.

In studying philosophy students develop intellectual abilities including analytical, critical and communication skills that are applicable to any subject matter and in any human context. Philosophy nurtures the capacity for self-expression and reflection, for exchange and debate of ideas, for life-long learning, and for dealing with problems for which there are no easy answers. The study of philosophy strengthens the ability to participate responsibly and intelligently in public life, in the workplace, and as citizens.

Eastern currently has 17 students enrolled in the philosophy minor and 1 student taking an individual major focusing on philosophy. Projections for the number of majors are modest but offering the program will meet the needs of students who wish to major in Philosophy at a mid-size residential primarily undergraduate public university in the state.

College graduates with degrees in philosophy do well in the job market and enter the full range of careers pursued by graduates with non-professional degrees. In 2011 the median starting salary for philosophy bachelor's degree graduates was \$39,800 and the median mid-career salary was \$75,600. This put it second among humanities majors (behind American studies), only slightly behind accounting majors, and ahead of several science majors (including biology and psychology) and professional majors (including business, advertising, public administration and hotel management). Average earnings of philosophy majors 15 years out of college are in the top 10%. (Forbes, 8/05/2009, The College Degrees With The Biggest Salaries)

According to the Law School Admission Council (LSAC), philosophy majors have the highest rate of admission to law school (85%). At Eastern, there are currently 40 pre-law minors. Five years ago, there were 20 pre-law minors at Eastern so interest in preparing for law school is rising significantly. Eastern currently averages about twenty students a year taking the LSAT, up dramatically from 2 in the year 2000. Between 2006 and 2013, seven Eastern graduates earned JD degrees. Seven recent graduates are currently enrolled in law school.

Curriculum

The Philosophy Major requires 39 credits including four introductory core courses for 12 credits, 24 credits of elective courses in Philosophy, and a 3-credit capstone experience course.

Students

Students who major in Philosophy are expected to be those who would otherwise have majored in a subject like History, English or Sociology and minored in Philosophy as well as those who may have gone to another university that already offered a Philosophy major. Enrollment projections are modest, rising to 20 FTE in year 3. This estimate is based on the current 17 students minoring in Philosophy and one student with an Individualized Major focusing on Philosophy.

Faculty

Existing full and part-time faculty will staff the courses for the major. All but two courses are already offered on a regular basis. Seats are available in existing courses to accommodate the anticipated number of Philosophy majors. The Political Science/Philosophy/Geography Department has two full-time Philosophy faculty members. A faculty member from the Business Department who teaches primarily Business Ethics but who has a Ph.D. in Philosophy from Yale teaches summer and intersession courses in Philosophy. A full-time faculty member from Political Science teaches courses cross-listed with Philosophy. Part-time faculty members complement the full-time faculty to offer the current Philosophy courses and will continue to do so with the percentage of credits offered by part-time faculty remaining within the contractual limit.

Learning Resources

The library's print and electronic resources meet the current teaching and research needs of Philosophy faculty and those of students taking Philosophy courses for a minor or for the Liberal Arts Core. They will meet the needs of Philosophy majors. No additional learning resources will be required.

Facilities

No special facilities are required and the major will not place increased demands on existing classroom space.

Fiscal Note

By Year 3 the Philosophy major is expected to generate \$180,542 in tuition and fee revenue and \$135,167 in expenses. Expenses consist of \$12,000 for program administration, \$100,000 for compensation for half the time of two full-time faculty (with the balance of their time offering courses for the Liberal Arts Core), \$18,000 for part-time faculty, and \$4,667 for clerical support.

Review of Documents:

- a) Campus Review: University Senate, April 22, 2014
- b) Campus Budget and Finance: N/A
- c) Campus President: April 22, 2014
- d) Academic Council: May 14, 2014
- e) System Office

Accreditation: N/A

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

**SECTION 1: GENERAL INFORMATION** <sup>1 2</sup>

<b>Institution:</b> Eastern Connecticut State University	<b>Date of Submission to BOR Office:</b> May 5, 2014	
<b>Most Recent NEASC Institutional Accreditation Action and Date:</b> Fall 2010		
<b>Program Characteristics</b> Name of Program: Philosophy Major Degree: Title of Award ( <i>e.g. Master of Arts</i> ) <b>Bachelor of Arts</b> Certificate: ( <i>specify type and level</i> ) <b>N/A</b> Anticipated Program Initiation Date: Fall 2014 Anticipated Date of First Graduation: Spring 2017 Modality of Program: X On ground    Online    Combined If "Combined", % of fully online courses? Total # Cr the Institution Requires to Award the Credential ( <i>i.e. include program credits, GenEd, other</i> ): 120	<b>Program Credit Distribution</b> # Cr in Program Core Courses: 15 # Cr of Electives in the Field: 21 # Cr of Free Electives: # Cr Special Requirements ( <i>include internship, etc.</i> ): 3 <u>Total # Cr in the Program</u> ( <i>sum of all #Cr above</i> ): 39 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: <b>33</b>	
<b>Type of Approval Action Being Sought:</b> Licensure   OR   X Licensure and Accreditation <b>Suggested CIP Code No. (<i>optional</i>)</b> 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 ( <i>e.g. School of Business</i> ) and Location ( <i>e.g. main campus</i> ) Offering the Program:		
Program Accreditation: <ul style="list-style-type: none"> <li>If seeking specialized/professional/other accreditation, name of agency and intended year of review:</li> <li>If program prepares graduates eligibility to state/professional license, please identify:</li> </ul> ( <i>As applicable, the documentation in this request should address the standards of the identified accrediting body or licensing agency</i> )		
<b>Institutional Contact for this Proposal:</b> Dr. Martin Levin	Title: Dean, School of Arts & Sciences	Tel.: 55295 e-mail: levin@easternct.edu

**BOR-AC REVIEW and Follow Up** (*For BOR Office Use Only - please leave blank*)

BOR Concept Paper Sequence Number (to be assigned):  
Summary of BOR-AC Comments and Recommendations:  
Log of Follow Up Steps:  
Expected Date of Full Proposal:

<sup>1</sup> 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 in BOR Review Only)**

**Alignment of Program with Institutional Mission, Role and Scope**

*(Please provide objective and concise statements)*

Objective: Consistent with its mission as Connecticut's designated public liberal arts university, Eastern Connecticut State University proposes a Major in Philosophy that will be unique in the state in its emphasis on Comparative Philosophy (western and non-western) and its grounding in Critical Thinking and Complex Reasoning.

Alignment: Philosophy continues to be an essential discipline in a liberal education and the proposed major is in alignment with Eastern's mission, role and scope. Critical thinking and problem solving, important for all college graduates are the essential skills of philosophy. In addition to these skills, Eastern's Philosophy majors will be encouraged to think creatively. This will be enhanced by the program's emphasis on comparative philosophy (western and non-western). The program builds on core courses in aesthetics, existentialism and phenomenology as well as applied philosophy courses including philosophy of science, philosophy of law, philosophy of literature and the philosophy and psychology of religion.

**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)*

College graduates with degrees in philosophy do well in the job market and enter the full range of careers pursued by graduates with non-professional degrees. In 2011 the median starting salary for philosophy bachelor's degree graduates was \$39,800 and the median mid-career salary was \$75,600. This put it second among humanities majors (behind American studies), only slightly behind accounting majors, and ahead of several science majors (including biology and psychology) and professional majors (including business, advertising, public administration and hotel management). Average earnings of philosophy majors 15 years out of college are in the top 10%. (Forbes, 8/05/2009, The College Degrees With The Biggest Salaries)

Philosophy majors are very well-prepared for graduate study. According to the Law School Admission Council (LSAC), philosophy majors have the highest rate of admission to law school (85%) of all majors. At Eastern, there are currently 40 pre-law minors. Five years ago, there were 20 pre-law minors at Eastern so interest in preparing for law school is rising significantly. Eastern currently averages about twenty students a year taking the LSAT, up dramatically from two in 2000. Between 2006 and 2013, seven Eastern graduates earned JD degrees. Seven recent graduates are currently enrolled in law school. Many pre-law minors are expected to major in Philosophy or choose it as a second major given its relatively low total credit requirement.

- 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 Philosophy Major being proposed will not only make use of Eastern's strengths, but it will fulfill the expectations of the university's distinctive character. This is the case because our university is a liberal arts institution and, as such, a Philosophy Major is essential to such an institution, because it is philosophy, especially comparative philosophy that broadens and deepens students' *weltanschauung*, i.e., world perspective or world view.

The proposed major is largely composed of existing courses. The only new courses added for the major are "Critical Thinking and Complex Reasoning" and "Seminar in Philosophical Research and Reflection." Existing full and part-time faculty will staff courses required for the major.

If enrollments are not sufficient to support offering of upper-level courses, students will be allowed to take them online or on-ground from other ConnSCU campuses or UCONN.

- 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)*

Eastern will participate in the development of transfer agreements that are currently being worked on throughout the Connecticut State University system. Eastern's introductory Philosophy courses already align with courses taught at the

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

community colleges. Every effort to accommodate students transferring from other institutions will be made to promote timely graduation.

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

In the Connecticut State University System, only Southern and Central offer Philosophy Majors. The University of Connecticut offers a Philosophy Major. Charter Oak State College does not offer a Major in Philosophy. Also, Community Colleges do not offer such a major. Of the schools that do offer a Philosophy Major for a Bachelor's Degree none offer Critical Thinking and Complex Reasoning, not only as a course, but as the very foundation of the program, nor do they focus on Comparative Philosophy.

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

Philosophy majors are well-prepared to enter most careers pursued by graduates with degrees in the humanities and social sciences and as noted earlier, while their starting salaries may be moderate they eventually move into the top decile of earnings. The 2009 American Community Survey reported an 8.1% unemployment rate for individuals with Philosophy Bachelor Degrees between the ages of 25-30, at a time when the national rate was 10.2%. .

As noted earlier, a major in philosophy prepares students well for graduate school, especially for admission to law school and for employment in the legal profession.

#### **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)*

Eastern has adequate faculty and staff support to offer a Philosophy major without any additional department or administrative costs. In the existing minor, there are two full time philosophy professors, three adjuncts, a political science professor who teaches two courses which are cross-listed with philosophy, and an assistant professor of business who teaches business ethics in the Business Department, but will teach at least one Philosophy course in the summer. Although philosophy will be a new major, it will be housed in the the Department of Political Science, Philosophy and Geography as is the Philosophy minor. Thus, no additional department or administrative costs will be needed.

Students who major in Philosophy are expected to be those who would otherwise have majored in a subject like History, English or Sociology and minored in Philosophy as well as those who may have gone to another university that already offers a Philosophy major. Enrollment projections are modest, rising to 20 FTE in year 3. This estimate is based on the current 17 students minoring in Philosophy and one student with an Individualized Major focusing on Philosophy.

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<sup>3</sup> 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 NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12*

**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)*

1. To have an understanding of comparative philosophy, i.e., western and non-western, involving the skills of CTRC.
2. To have the abilities of problem solving and taking initiative. These are based, in large part, on CTRC and are enhanced by the study of comparative philosophy. (These abilities are of supreme importance to those who are considering an assessment of student learning in colleges and universities.)
3. To be able to think creatively as well as critically which will be greatly enhanced by the study of comparative philosophy.
4. To develop moral character and judgment by studying ethics, i.e., the study of morality both western and non-western. One's CTRC skills directly affect one's ability to make sound judgments. The study of comparative philosophy can enlarge one's understanding of morality and, thus, enhance the development of moral character.
5. To expand one's "horizons" as to the wonders and meaning of life and, in doing, be inspired to explore the many possibilities open to people.
6. To explore the connections between philosophy of science and philosophy of religion as explanations of "the scheme of things entire."

**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 Philosophy minor is housed in the Political Science, Philosophy and Geography Department and that department will house the major program. Faculty load credits granted to the department for the chairperson will be distributed to a faculty member for administering the Philosophy major with tasks including developing the schedule for philosophy courses to ensure timely completion of the degree, program assessment, preparing the annual report for the Philosophy major, communications with the registrar regarding substitutions or waivers, and other administrative tasks. The Administrative Cost in terms of faculty reassigned time as Department Chair is estimated at \$12,500.

**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? N/A

What percent of credits in the program will be taught by adjunct faculty? 20%

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program. Master's of Science in Philosophy

**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)*

The program requires no special resources.

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

## Curriculum

(Please provide details as available and keep in mind the summary of Program Credit Distribution completed in Section 1. Modify this format as needed)  
(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. # <sup>4</sup>	Pre- Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
<b>Program Core Courses</b>				<b>Other Related/Special Requirements</b>		
PHI 120: Perspectives in Philosophy (Introductory Course)	1,3,4, 5,6	None	3	PHI 460: Philosophical Research and Reflection (New Capstone Course)	1,2, 3,4, 5,6	<b>3</b>
PHI 250: Critical Thinking and Complex Reasoning (New Course)	1,2, 3,4, 5,6	None	3			
PHI 210 Asian Philosophies	1,3,4 5,6	None	3			
PHI 220 Ethics	1,2,3, 4,5	None	3			
<b>Core Course Prerequisites</b>			<b>12</b>	<b>Elective Courses in the Field</b>		
				PHI 215: Logical Inquiry	2,3	3
				PHI/PHR 200: Peace and Human Rights	1,2,3, 4	
				PHI 230: History of Early Western Philosophy	3,4, 5,6	3
				PHI 231: History of Modern Western Philosophy	3,4, 5,6	3
				PHI 235: Islam	1,2, 3,5	3
				PHI 265: Topics in Philosophy	1,2, 3,4, 5,6*	3
				PHI 310: Philosophy and Psychology of Religion	1,2, 3,5	3
				PHI 312: Comparative Mysticism	1,2, 3,5	3
				PHI/PSC 314: Modern Social and Political Thought	3,4, 5,6,7	3
				PHI/PSC 316: Ancient Political Thought	3,4, 5,6	3
				PHI 330: Existentialism and Phenomenology	3,4, 5,6	3
				PHI 340: Philosophy of War	1,2,3 4, 5	3
				PHI 365: Topics in Philosophy	1,2, 3,4,	3

<sup>4</sup> From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application

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

			5,6*	
		PHI 371: Jainism	1,2, 3,5	3
		PHI 400: Peace and Human Rights Seminar	1,2,3, 4	3
		PHI 420: Philosophy of Science	3,4, 5,6,	3
		PHI 480: Independent Study		3
<b>Total Other Credits Required to Issue Credential</b> (e.g. GenEd/Liberal Arts Core/Liberal Ed Program) *will depend on topic which learning outcomes the course meets.			1,2, 3,4, 5,6*	81

**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.)

Major Program will consist of 39 credits:

A. 4 Required Introductory Courses: PHI 120, PHI275, PHI 210, PHI 220

B. 24 Credits of Electives: Chosen from list above.

C. One Capstone Course: Chosen from PHI/PHR 400, PHI 460, PHI 471

Students in the major must maintain a 2.0 (C) Grade Point Average overall and cannot have more than two courses below 2.0 count in the major.

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

**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]

# Connecticut Board of Regents for Higher Education

## APPLICATION FOR NEW PROGRAM APPROVAL PRO FORMA <sup>1</sup> BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

Institution Eastern Connecticut State University  
Proposed Program Philosophy

Date 4/25/2014

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)	3	1	3	1	5	1
New Students (first time matriculating)	3	1	3	1	5	1
Continuing (students progressing to credential)	0	0	5	1	8	2
Headcount Enrollment	6	2	11	3	18	4
<b>Total Estimated FTE per Year</b>	7		12		20	

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) Includes Tuition and Fees at \$8951 for a full-time residential student (not including housing and board), \$8911 for a full-time non-residential student, and \$4916 for a half-time part-time student.	\$53,666	\$9,822	\$98,381	\$14,748	\$160,878	\$19,664
Program-Specific Fees	\$0	\$0	\$0	\$0	\$0	\$0
Other Rev. (Annotate in text box below)						
<b>Total Annual Program Revenue</b>	\$63,488		\$113,129		\$180,542	

PROJECTED Expenditures*	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)	One eighth	\$12,500	One eighth	\$12,500	One eighth	\$12,500
Faculty (Full-time, total for program)	1/2 of 2	\$100,000	1/2 of 2	\$100,000	1/2 of 2	\$100,000
Faculty (Part-time -total for program)	2	\$18,000	2	\$18,000	2	\$18,000
Support Staff	One Fifteenth	\$4,667		\$4,667		\$4,667
Library Resources Program						
Equipment (List as needed)						
Other (e.g. student services)						
Estimated Indirect Cost (e.g. student services, operations, maintenance)						
<b>Total ESTIMATED Expenditures</b>		\$135,167		\$135,167		\$135,167

\* 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: The faculty members will also offer courses for Eastern's Liberal Arts Core, (LAC), the Philosophy Minor and the Peace and Human Rights Minor. Many of the courses in the proposals as electives/requirements are already in the LAC. Seats in these courses will also be filled by students who are in majors other than Philosophy. There are currently two full time faculty and part-timers teaching 4 courses a semester. We can offer the major with those faculty and have an adequate distribution of courses without any additional budgetary impact to the university.

<sup>1</sup> 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

A New Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve a program in “Firefighting  
1 & 2 Certification Academy” leading to a Certificate for Gateway Community College

A True Copy:

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

## ITEM

New Stand Alone Certificate proposal, 'Firefighting 1 & 2 Certification Academy' for 25 credits at Gateway Community College.

## BACKGROUND

### Summary

Fire Department applicants who have post-secondary firefighting education have a clear advantage over other candidates. This technical certificate program will help graduates secure employment in the highly desirable firefighter profession. The fire services in serving Connecticut struggles with diversity recruitment. This is a problem for fire departments across the United States. GCC's program will help CT fire departments find qualified minority candidates especially from cities where no opportunities exist to secure training as a firefighter through a volunteer fire department. Finally our proposed program instills a sense of community in students through public service in the core values of firefighting.

### Need for the Program

Every urban municipal fire department in the State of Connecticut utilizes some form of civil service testing procedure during the selection process to hire firefighters. Firefighting position tests run by municipalities often attract hundreds of applicants. Suburban and rural fire departments seek candidates who have prior firefighting knowledge, skills, and certifications do to limited fire department operating budgets that do not allow newly hired firefighters to attend necessary training that can last for up to a year. Applicants who live in suburban communities with access to volunteer fire departments often volunteer as firefighters to gain necessary skills and knowledge to be a competitive applicant. Through volunteering these firefighter candidates have the opportunity to receive a significant amount of training that includes obtaining sought after certifications and skills that are tested on the civil service exam. Applicants from the cities or those returning from the armed services often do not have this benefit and are placed at a disadvantage during the testing process. Barriers exist to prevent a person who is not a volunteer firefighter from taking the Firefighter I and II programs. Smaller Connecticut communities also struggle with effective cost efficient methods to train new volunteer firefighters. Many communities have attempted to work together to form joint classes however a regional entity would greatly reduce the financial burden on smaller communities. Providing Fire Fighting I and II training through the community college system ensures open access to residents of all communities. Emergency medical services represent over 70% of the work most fire departments perform. The minimum entry level skill for a job as a firefighter is Emergency Medical Technician.

### Curriculum

The Firefighting 1 & 2 Certification Academy program is designed for a cohort of no more than 25 students will attend all courses together from start to finish. Waivers or credit will not be granted to students who have previously acquired equivalent training or certifications. Doing so could reduce course enrollments and jeopardize the team building goal of the program and courses offering could be put at risk due to low enrollment. The majority of the program is intended to be conducted off campus at either the City of New Haven Regional Training Academy or at a fire department's local training site within the Greater New Haven Region.

### Required Courses

EMT\* 100 Emergency Medical Technician

FTA* 101 Fundamentals of Firefighting 1	9	
FTA* 100 Fitness and Health for Firefighters	3	
FTA* 102 Firefighting Civil Service Test Preparation	1	
FTA* 102 Fundamentals of Firefighting 2	3	
FTA* 110 F Hydraulics		3
Total Certificate Credits	25	

### Students

Students will be required to meet the current admissions requirements to attend Gateway Community College. Initially students will be accepted on a first-come-first served bases. They must meet the basic mathematics and English requirements by taking the college's AccuPlacer exam, and who have M.D. physical and clearance to participate in physical activities, lifting, bending, and carrying up to 30lbs prerequisite requirements to register for FTA 101 Fundamentals of Firefighting 1.

### Faculty

Paul Silberquit, Engineering Division Director, will oversee the day-to-day operations of the proposed certificate program. Adjunct faculty will teach approximately 100% of the credits in this program

### Learning Resources

There are sufficient funds through the Health-Life Science Career Initiative Grant to provide for adequate resources such as specialized software, full-time faculty member and development of online tutorials.

### Facilities

The majority of the Firefighting 1 & 2 Certification Academy program is intended to be conducted off campus at either the City of New Haven Regional Training Academy or at a fire department's local training site within the Greater New Haven Region.

### Fiscal Note

The program is designed to pay for itself based on a full enrollment cohort of 25 students. Cost savings options will continuously be pursued to reduce operating costs to include utilizing existing college resources.

### Review of Documents:

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

### Accreditation:

The Firefighting 1 & 2 Certification Academy program will meet the current accreditation required of CT firefighters. Several municipalities with in the state have statutes requiring that there newly hired firefighters attend the State Firefighting Academy in Windsor Locks, CT. In Our graduates who seek employment with these municipalities will be hired having already completed the state required training that will place these students at the top of their class when attending the resident academy that is conducted in a military style training environment.



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

**SECTION 1: GENERAL INFORMATION**

<b>Institution:</b> Gateway Community College	<b>Date of Submission to BOR Office:</b>		
<b>Most Recent NEASC Institutional Accreditation Action and Date:</b>			
<b>Program Characteristics</b> Name of Program: Engineering Department: Firefighting 1 & 2 Certification Degree: Title of Award (e.g. Master of Arts): Certificate Certificate: (specify type and level) Anticipated Program Initiation Date: Fall 2014 Anticipated Date of First Graduation: Spring 2015 Modality of Program: On ground <input checked="" 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): 25	<b>Program Credit Distribution</b> # Cr in Program Core Courses: 25 # Cr of Electives in the Field: 0 # Cr of Free Electives: 0 # Cr Special Requirements (include internship, etc.): <u>Total # Cr in the Program</u> (sum of all #Cr above): 25 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 0		
<b>Type of Approval Action Being Sought:</b> Licensure <input checked="" type="checkbox"/> OR Licensure and Accreditation <b>Suggested CIP Code No. (optional)</b> <b>Title of CIP Code</b>			
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      NA			
<b>Institution's Unit</b> (e.g. School of Business) and <b>Location</b> (e.g. main campus) Offering the Program: Main Campus – Downtown NH			
<b>Other Program Accreditation:</b> <ul style="list-style-type: none"> <li>If seeking specialized/professional/other accreditation, name of agency and intended year of review:</li> <li>If program prepares graduates eligibility to state/professional license, please identify: CPAT certification</li> </ul> (As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)			
<b>Institutional Contact for this Proposal:</b> Paul Silberquit	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;"> <b>Title:</b> Engineering Division Director         </td> <td style="width: 50%;"> <b>Tel.:</b> 203-285-2368  <b>e-mail:</b> psilberquit@gatewayct.edu         </td> </tr> </table>	<b>Title:</b> Engineering Division Director	<b>Tel.:</b> 203-285-2368 <b>e-mail:</b> psilberquit@gatewayct.edu
<b>Title:</b> Engineering Division Director	<b>Tel.:</b> 203-285-2368 <b>e-mail:</b> psilberquit@gatewayct.edu		

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

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

<sup>1</sup> Final CIP assignment will be done by BOR staff in consideration of suggested number (if provided) and in consultation with academic 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)*

Providing a vocational path to students who wish to serve as firefighters is clearly within the scope of Gateway's mission. Fire Department applicants who have post-secondary firefighting education have a clear advantage over other candidates. This technical certificate program will help graduates secure employment in the highly desirable firefighter profession. The fire service in Connecticut struggles with diversity recruitment. This program will help fire departments find qualified minority candidates especially from the cities where no opportunities exist to secure training as a firefighter through a volunteer fire department. Finally the proposed program instills a sense of community in the students as public service in the core value of firefighting.

**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)* Every municipal fire department in the State of Connecticut utilizes some form of civil service testing procedure to hire firefighters. Firefighting position tests run by municipalities often attract hundreds of applicants. Applicants who live in suburban communities with access to a volunteer fire departments often volunteer as firefighters and have the opportunity to receive a significant amount of training prior to taking the civil service exam. Applicants from the cities or those returning from the armed services often do not have this benefit and are placed at a disadvantage during the testing process. Barriers exist to prevent a person who is not a volunteer firefighter from taking the Firefighter I and II programs. Smaller Connecticut communities also struggle with effective cost efficient methods to train new volunteer firefighters. Many communities have attempted to work together to form joint classes however a regional entity would greatly reduce the financial burden on smaller communities. Providing Fire Fighting I and II training through the community college system ensures open access to residents of all communities. Emergency medical services represent over 70% of the work most fire departments perform. The minimum entry level skill for a job as a firefighter is Emergency Medical Technician.
- 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? Gateway Community College is strategically located several blocks from the New Haven Regional Fire School. The regional school is operated by the City of New Haven Fire Department with funding assistance from the Connecticut Commission of Fire Prevention and Control. The purpose of the school is to provide fire service training to the greater New Haven Region. There is currently no organizational structure to run programs on a regional basis at the school. Training at the school is conducted by individual fire departments only for their own members. This proposed program will utilize Gateway's ability to register, insure, and collect tuition from students. Gateway will also hire and supervise the adjunct instructors necessary to run a firefighter training program.

In order for Gateway to provide an affordable, sustainable, essential community-based program we began the planning by gathering a team composed of experts that could build the Firefighter 1 & 2 Certification Program including the needed skills. Our planning team includes Assistant Fire Chiefs, area firefighters, faculty, the Academic Dean, and Student Services:

Adam Piskura	Director, CT Fire Academy
Anthony Moscato	Fire Marshal/Deputy Chief, East Haven (teaches at Gateway)
Bill Garraty	Hillhouse High School administrative intern, Career & Tech program
Celia Carvalho	HLS Grant Assistant
Chuck (Charles) Licata	Assistant Chief, East Haven Fire Dept
Daniel Laffin	Veteran's Employment Representative, DOL
David Marcarelli	Deputy Chief, North Haven (teaches at Gateway)
Eric Yuhas	Assistant Principal, New Haven Sound School
Erika Lynch	Career Advisor, Workforce Develop & Cont Ed at GWCC
Fred Pratt	Recruitment and Placement Coordinator at CT Works
Janet Hayes	HLS Grant Coordinator
Kellie Byrd-Danso	Director of Career Services & VA Affairs
Kenneth Morgan	Fire Chief, Meriden Fire & Emergency Services
Leigh Roberts	Recruitment and Placement Coordinator

## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

Mark Kosinski	Dean of Academic Affairs at GWCC
Mary Ann O'Brien	Coordinator, Career & Technical Education Services at MBA
Paul Silberquit	Division Director of Engineering Technologies at GWCC
Peter Struble	Former Fire Chief, Wallingford and faculty at UNH
Ralph Black	Assistant Chief, New Haven Fire Department 203-946-6300 (chief Michael Grant)
Rick Palinko	Veterans Affairs Associate
Steve Alsup	Deputy Chief, Wallingford
Steven Pynn	Career & Technology Coord for New Haven Schools, Hillhouse High School
Vicki Bozzuto	Dean of Workforce Develop & Continuing Education at GWCC

With the guidance of the planning team, Gateway's FireFighter 1 & 2 program will be aligned directly to the skills and knowledge requested by employers

- 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)* N/A
- Please indicate what similar programs exist in other institutions within your constituent unit<sup>2</sup>, and how unnecessary duplication is being avoided: There are three programs in Connecticut for the education of firefighters. Gateway Community College, Naugatuck Community College, and Three Rivers Community College all offering a 2 year associate degree programs in fire science. These programs do not teach basic certification in vocational firefighting skills. The curriculum is designed around college level fire sciences and administrative skills.
- Please provide a description/analysis of employment prospects for graduates of this proposed program: Employment of firefighters is expected to grow 9 percent. Continued population growth will increase the number of emergency calls requiring firefighter responses. The majority of situations that firefighters respond to are medical—rather than fire—emergencies, and the aging of the population will lead to an increased demand for emergency responders. In addition, jobs will be created as volunteer firefighters are converted to paid positions in areas where population growth creates the need for a full-time workforce. An increase in urban populations, where full-time firefighters are more common, also is expected to increase the demand for firefighters. (Bureau of Labor Statistics, 2012)
- Please provide a description/analysis of employment prospects for graduates of this proposed program , jobs will be created as volunteer firefighters are converted to paid positions in areas where population growth creates the need for a full-time workforce. An increase in urban populations, where full-time firefighters are more common, also is expected to increase the demand for firefighters. (Bureau of Labor Statistics, 2012)

We are aligning our Firefighter 1 & 2 Certificate Program with the industry and area employers and firefighters through direct input, skill requests, and from employees and employers. Our new campus in downtown New Haven better positions Gateway to partner with local area businesses and fire departments. Many of the area fire departments will provide internships in current programs often leading to employment.

### Cost Effectiveness and Availability of Adequate Resources

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

There are sufficient funds through the Health-Life Science Career Initiative Grant to provide for adequate resources such as specialized software, full-time faculty member and development of online tutorials.

## 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)*

**Learning Outcomes - L.O.** *(Please list up to seven of the most important student learning outcomes for the program and concisely*

<sup>2</sup> 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 NEW PROGRAM APPROVAL (Public Higher Education Institutions) - 01/20/12

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. Meet the minimum academic training requirements of the National Fire Protection Association's (NFPA) Standard 1001, Standard for Fire Fighter Professional Qualifications Fire Fighter I and Fighter II.
  - Assessment Methodologies – NFPA 1001 Job Performance Requirements
  - Professional/occupational license – State of Connecticut Fire Fighter II Certification
  - Curriculum Map - FTA 100 Firefighter I & II Certification Academy
2. Demonstrate knowledge of modern fire service strategies, tactics, and management for both structural and wildland fire incidents.
  - Assessment Methodologies – NFPA 1001 Job Performance Requirements
  - Professional/occupational license – State of Connecticut Fire Fighter II Certification
  - Curriculum Map - FTA 100 Firefighter I & II Certification Academy
3. Meet the requirements for National Fire Protection Association's (NFPA) 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents for the for the Awareness and Operational Levels.
  - Assessment Methodologies – NFPA 472 Job Performance Requirements
  - Professional/occupational license – State of Connecticut Fire Fighter II Certification
  - Curriculum Map - FTA 100 Firefighter I & II Certification Academy
4. Apply the principles of interpersonal communication, cooperative teamwork, supervision and management for leadership in the fire service
  - Assessment Methodologies – NFPA 1001 Job Performance Requirements
  - Professional/occupational license – State of Connecticut Fire Fighter II Certification
  - Curriculum Map - FTA 100 Firefighter I & II Certification Academy
5. Apply the theoretical principles of the chemistry of fire, and hydraulics to solve water supply problems.
  - Assessment Methodologies – NFPA 1001 Job Performance Requirements
  - Professional/occupational license – State of Connecticut Fire Fighter II Certification
  - Curriculum Map - FTA 100 Firefighter I & II Certification Academy
6. Describe principles and techniques of emergency medical care as performed by the EMT-Basic in accordance with national and state curriculum
  - Assessment Methodologies – National Registry of Emergency Medical Technicians Job Performance Requirements
  - Professional/occupational license – National Registry of Emergency Medical Technicians Certification
  - Curriculum Map – CRN 3157 Emergency Medical Technician
7. Demonstrate academic knowledge and physical readiness for entry employment in the Fire Service field.

**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)

Paul Silberquit, Engineering Division Director, will oversee the day-to-day operations of the proposed certificate 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? 0

What percentage of the credits in the program will they teach? N/A

Adjunct faculty will teach approximately 100% of the credits in this program

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

The minimal qualifications of adjunct faculty teaching in this program will be determined by course requirements.

**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)*

## 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
<b>Program Core Courses</b>				<b>Other Related/Special Requirements</b>		
FTA 101 Fundamentals of Firefighting 1		Acceptance into the program	9			
EMT 100 Emergency Medical Technician		FTA 101	6			
FTA 102 Fundamentals of Firefighting 2		FTA 101	3			
FTA 100 Fitness and Health for Firefighters		Co-req FTA 101	3			
FTA 103 Civil Service Test Preparation		FTA 101	1			
FTA 110 Fire Ground Hydraulics		FTA 101	3			
				<b>Total Program Credits</b>		<b>25</b>
				<b>Total Credits</b>		<b>25</b>
<b>Core Course Prerequisites</b>						
		<b>Elective Courses in the Field</b>				
<b>Total Other Credits Required to Issue Credential</b> <i>(e.g. GenEd/Liberal Arts Core/Liberal Ed Program)</i>						
<b>FALL SEMESTER</b>						
<u>COURSE</u>			<u>CREDIT</u>			
FTA 101 Fundamentals of Firefighting 1			9			
FTA 100 Fitness and Health for Firefighters			3			
Semester Total			12			
<b>SPRING SEMESTER</b>						
<u>COURSE</u>			<u>CREDIT</u>			
EMT 100 Emergency Medical Technician			6			
FTA 102 Firefighting Civil Service Test Preparation			1			
FTA 102 Fundamentals of Firefighting 2			3			
FTA 110 F Hydraulics			3			

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

Semester Total	13		
Total Certificate Credits 25			

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

**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]

## Connecticut Board of Regents for Higher Education

### APPLICATION FOR NEW PROGRAM APPROVAL PRO FORMA <sup>1</sup> BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

Institution: Gateway Community College Date: 2/24/2014

Proposed Program: Firefighter 1 & 2 Certificate

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 Transfer (from other programs)	2	0	2	0	2	0
New Students (first time matriculating)	23	0	23	0	23	0
Continuing (students progressing to credential)	0	0	0	0	0	0
Headcount Enrollment	25	0	25	0	25	0
Total Estimated FTE per Year						

PROJECTED Program Review	Year 1 (2014-15)		Year 2 (2015-2016)		Year 3 (2016-17)	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Tuition* (Do not include internal transfer)	\$89,950	\$0	\$89,950	\$0	\$89,950	\$0
Program-Specific Fees (lab fee / 4 courses)	\$8,200		\$8,200		\$8,200	
lab fee = \$82 / student * 4 courses						
Total Annual Program Revenue	\$98,150		\$98,150		\$98,150	

\* Tuition is calculated using 2014-15 rates as follows. Full time: in-state, \$1899 /semester (\$1799 fee) for two semesters.

PROJECTED Expenditures**	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)	2 terms		2 terms		2 terms	
Faculty (Full-time, total for program)	(Fall 2014, Sp 2015)		(Fall 2015, Sp 2016)		(Fall 2016, Sp 2017)	
Faculty (Part-time, total for program, (Internship course for 3 credits)***	2	\$46,425	2	\$46,425	2	\$46,425
Support Staff (Assistant faculty)	2	\$28,000	2	\$28,000	2	\$28,000
Facility Rental		\$6,000		\$6,000		\$6,000
Library		\$0		\$0		\$0
Equipment (List as needed) rental equipment for fire training in FTA 100		\$17,250		\$17,250		\$17,250
Other (e.g. student services) Facilities rental						
Estimated Indirect Cost (e.g. student services, operators, maintenance)	calculated at \$100 per FTE per year	\$0		\$0		\$0
Total ESTIMATED Expenditures		\$97,675		\$97,675		\$97,675

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

Please provide any necessary annotations:

\*\*\* \$1435/WLU plus 38% fringe, with annual 3% inflation adjustment

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

<sup>1</sup> 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

A New Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve licensure of a program in  
Ophthalmic Medical Assisting leading to a Certificate at Middlesex Community College

A True Copy:

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

**ITEM**

Licensure of a program in Ophthalmic Medical Assisting leading to a Certificate at Middlesex Community College

**BACKGROUND**Summary of the Proposal: Background for the Program

Middlesex Community College is proposing a new, 16-credit, one-semester Certificate in Ophthalmic Medical Assisting (OMA). This Certificate will have a direct relationship with the college's existing Associate Degree program in Ophthalmic Design and Dispensing (OD&D), which began in 1988. The two programs will share facilities and faculty; and, the OD&D Program Coordinator will be responsible for all aspects of the Certificate's administration. The college expects to enroll a minimum of 16 students in each program cohort.

The OMA Certificate will replace an existing non-credit certificate that had an equivalent curriculum. One advantage to the credit program is that students in the non-credit certificate were ineligible for traditional financial aid toward the \$1,300 program cost. We expect the credit certificate to qualify for financial aid.

Much like its non-credit predecessor, the college plans to offer all OMA Certificate courses within one academic semester, and require students to take all of the courses simultaneously. This will allow a cohort of students to complete program requirements within four month's time. The Certificate will prepare graduates for immediate employment in a field that has growing job opportunities and higher-than-average wages for occupations with similar education and training preparation. By operating the Certificate in cohort format, the College anticipates efficient use of its resources by running the program only when a minimum number of students have enrolled.

The OMA Certificate will prepare graduates for immediate entry into the workplace, while providing a fully articulated pathway to National Certification by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) as a Certified Ophthalmic Assistant. Once a student attains this certification, he or she can attempt higher-level certifications as a Certified Ophthalmic Technician (COT) and Certified Ophthalmic Medical Technologist (COMT). *(Note: the college will begin the process of seeking national accreditation once the program is approved by the Board of Regents for Higher Education.)*

Middlesex has state of the art ophthalmic and contact lens laboratories already in place for its OD&D degree program, and currently owns most of the equipment necessary to run this new Certificate. The college has identified capacity within existing classrooms and specialized laboratories when they are not in use by the parent Associate Degree program.

The OMA Certificate is one result of intensive curriculum development happening at the college, brought about by its participation in a consortium of CSCU institutions known as the Health & Life Sciences Initiative. This initiative has been funded by a \$12 million Trade Adjustment Assistance Community College and Career Training (TAA-CCCT) grant, with an implementation period of October 2012 through September 2015. Consortium members are Capital, Gateway, Manchester, Middlesex, and Norwalk Community Colleges; Eastern Connecticut State University, and Charter Oak State College. The consortium will provide targeted certifications, industry-recognized

credentials, and Associate degrees to prepare veterans, TAA impacted, dislocated, and other under-employed workers statewide for careers in health and life sciences.

### Need for the Program:

The healthcare sector is one of the nation's largest employers. The federal Patient Protection and Affordable Care Act of 2010 requires all healthcare plans to include coverage for "well" eye exams and access to preventive eye care. As a result, there will be an increase in the number of Connecticut residents availing themselves of these covered services. Over the past 20 or so years, ophthalmic assistants have played an increasingly important role in assisting ophthalmologists with a number of important administrative and clinical duties. Ophthalmic assistants provide patients with important medical screening tests and often play a significant role in the pre-exam testing process.

According to Education-Portal.com, "The Bureau of Labor Statistics predicted that open positions for medical assistants, which include ophthalmic assistants, would increase by 31% in the decade of 2010-2020. Available jobs in the medical assistance industry are expected to grow quickly due to a steadily growing population requiring more medical care" ([http://education-portal.com/ophthalmic\\_assistant.html](http://education-portal.com/ophthalmic_assistant.html)). In May 2012, the BLS reported that ophthalmic medical technicians made median annual earnings of \$34,240. Generally, allied health professionals in Connecticut, New York and the adjoining states are compensated at a rate above the national median wage.

The Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) stated, "Employment of Medical Technicians in fields such as Ophthalmology ranks 3rd on the list of the 30 Fastest-Growing Occupations in the U.S. The aging population (65 or older) is projected to double by 2030, the need for Ophthalmic Medical Technicians will continue to increase. There is an estimated need for approximately an additional 3,500 Ophthalmic Medical Technicians in the U.S. and Canada. Ophthalmic Medical Technicians are paid very competitive above average salaries. Most receive basic benefits like health/dental insurance and paid vacations."

According to the National Salary and Benefits Report for Ophthalmic Medical Personnel, salaries for an Ophthalmic Medical Technician include:

Entry/COA Level = \$42,500 annual salary  
Intermediate/COT Level = \$52,500 annual salary  
Advanced/COMT Level = \$60,200 annual salary

*(\* In order to clarify what might be a bit confusing to reviewers of this section of the proposal, we would like to make note of the fact that many ophthalmologists refer to the ophthalmic medical personnel that work with or for them as "techs or technicians." The generic use of the term technician may be describing a non-certified individual, or someone certified at any of the three levels of certification by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) ; Certified Ophthalmic Assistant (COA), Certified Ophthalmic Technician (COT) or Certified Ophthalmic Medical Technologist (COMT). In the employment statistics listed below, the term technician is being used generically in most cases.)*

### Curriculum

The OMA Certificate consists of five courses totaling 16 academic credits:

- CSC\* 101, “Introduction to Computers” (3 credits) – Existing Course
- OMA 101, “Introduction to Ophthalmic Medical Assisting” (3 credits) – New Course
- OMA 102, “Ocular Anatomy, Physiology and Pathology” (3 credits) – New Course
- OMA 103, “Ophthalmic Clinical Skills and Procedures” (4 credits) – New Course
- OMA 104, “Healthcare Policies and Procedures” (3 credits) – New Course

Students who wish to pursue the OMA Certificate must be prepared for courses that require basic, college-level proficiency in the English language. Students must demonstrate proficiency at the level which would otherwise qualify them to enroll in the college’s introductory-level English course, ENG\* 101 “Composition” or ENG\* 101-E “Composition with Embedded Support.” Evidence may include SAT, ACT, Accuplacer, or MxCC English Department Challenge Essay scores; successful completion of the college’s one-semester remedial English course; or, previous college coursework. Please note that ENG\*101 / ENG\*101-E is NOT a prerequisite for this program, nor is it a program requirement.

Upon completion of the Certificate, a student will be able to:

1. Communicate verbally, non-verbally and in writing with members of health care team in an appropriate, culturally sensitive, effective and capable manner.
2. Apply knowledge of office procedures within an ophthalmic medical practice.
3. Identify the structure, function, and pathology of the human eye
4. Maintain accurate electronic patient records in accordance with local, state, and federal guidelines.
5. Conduct pre-assessment screenings and ocular preparations using appropriate equipment and tools.
6. Work within Occupational Safety and Health Administration (OSHA) standards that govern Ophthalmology and within the guidelines of the Health Insurance Portability and Accountability Act of 1996 (HIPAA).
7. Conduct him/herself in an ethical and professional manner at all times.
8. Sit for certification examination for Ophthalmic Assistants.
9. Apply knowledge of office procedures within an ophthalmic medical practice.
10. Identify the structure, function, and pathology of the human eye
11. Maintain accurate electronic patient records in accordance with local, state, and federal guidelines.
12. Conduct pre-assessment screenings and ocular preparations using appropriate equipment and tools.
13. Work within safety (OSHA) standards that govern Ophthalmology and within the guidelines of HIPAA.
14. Conduct him/herself in an ethical and professional manner at all times.
15. Sit for certification examination for Ophthalmic Assistants.
16. Communicate verbally, non-verbally and in writing with members of health care team in an appropriate, culturally sensitive, effective and capable manner.

### Students

Middlesex Community College's location is ideal for this program, as it is surrounded by more than one hundred eye care providers. The Connecticut Society of Eye Physicians (CSEP) has offered marketing and promotional assistance, which will help us draw students from the entire State as this will be a one-of-a-kind program in Connecticut. Additionally, the college plans to offer Certificate courses in hybrid format (combination of online/on campus) to make it possible for students to complete a substantial percentage of the required coursework online, with the remaining on-campus classes on Saturdays. This will permit individuals that are currently employed in optometric and ophthalmological practices to work during the week and still participate in the program. The campus is located at the geographical center of the state making it possible for students to access the campus for the Saturday clinical classes in a reasonable amount of time.

As mentioned above, the college expects to enroll a minimum of 16 students in each program cohort. The program will not run during a given semester if insufficient enrollment warrants.

### Faculty:

Raymond P. Dennis, Professor and Program Coordinator of Ophthalmic Design & Dispensing.

Prof. Dennis is a licensed Optician in the state of Connecticut and is certified by the National Contact Lens Examiners and the American Board of Opticianry. He is also credentialed as a Certified Ophthalmic Technician by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO). He is a member of numerous professional organizations including the Connecticut Opticians Association, the Contact Lens Society of America, is an Honored Fellow of the Opticians Association of America, and is a Fellow of the National Academy of Opticianry. Prof. Dennis received his Masters of Arts degree in Education from Saint Joseph College in West Hartford, his Bachelor of Science degree in Community Health from Saint Joseph's College in Patchogue, New York, and his Associate of Applied Science degree in Ophthalmic Dispensing from New York City Community College in Brooklyn, New York.

René "Skip" Rivard, Professor of Ophthalmic Design & Dispensing

Prof. Rivard is a licensed Optician in Connecticut and is certified as an ABO Master of Ophthalmic Optics. He is an Honored Fellow of the Contact Lens Society of America; an Honored Fellow of the Opticians Association of America and a Fellow of the National Academy of Opticianry. He is A.B.O. and N.C.L.E.-Advanced certified and has held faculty positions at medical schools, colleges, and teaching hospitals in Connecticut and Massachusetts. He was Director of Technical Services of University Contact Lens Service located at the Yale University, School of Medicine, Yale Eye Center. Prof. Rivard was first appointed by the Governor to the Connecticut (Licensing) Board of Examiners for Opticians in 1984. He served as Chair from 1990 through 1997. Reappointed in 2009, he currently serves on the Board. Rivard was a member of the Board of Directors on both the National Committee of Contact Lens (NCLE) Examiners and the American Board (ABO) of Opticianry and completed two terms on the Board of the National Academy of Opticians..

### Learning Resources & Facilities

As mentioned above, the OMA Certificate will have a direct relationship to the college's Associate Degree program in Ophthalmic Design and Dispensing (OD&D). Middlesex has state of the art ophthalmic and contact lens laboratories already in place for its OD&D degree program, and currently owns most of the equipment necessary to run this new Certificate. The college has identified capacity within existing classrooms and specialized laboratories when they are not in use by the parent Associate Degree program.

In the past year, MxCC has purchased 12 new lensometers which are used to read the power of lenses and contact lenses, six new biomicroscopes which are used to evaluate the integrity of the eye and to evaluate contact lenses, a corneal topography unit which creates a topographic map of the surface of the eye, a video biomicroscope for teaching purposes, new ophthalmoscopes used to view the retina, retinoscopes to do objective refraction, and other equipment, instruments and devices that will be used for both programs as well. These devices were purchased using a combination of capital equipment bond funds, and grants from community agencies.

The college's Jean Burr Smith Library maintains adequate books and electronic resources to support the Certificate. Some of the ophthalmic instruments and devices that will be utilized by the students are available through an existing agreement at Middlesex Eye Physicians, a short distance away.

### Fiscal Note:

As indicated in the attached Pro-Forma Budget, the college anticipates: 1) a minimum of 16 students per cohort, enrolled as full-time students for one semester; 2) expenses including salary and fringe benefits for part-time lecturers (including full-time faculty teaching an "overload" course), consumable supplies, and an allowance for indirect costs; and, 3) income to slightly exceed expenses on a cohort basis. As stated previously, the college will not run the program with insufficient enrollment.

### Review of Documents:

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

### Accreditation:

The OMA Certificate will be carefully reviewed by OD&D Program Coordinator Prof. Raymond Dennis, who maintains JCAHPO - COT certification. The college plans to seek accreditation from JCAHPO for this Certificate later this year. All of the new courses have been aligned with JCAHPO's required curriculum in order to facilitate the accreditation at the earliest possible date.

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

**SECTION 1: GENERAL INFORMATION**

<b>Institution:</b> Middlesex Community College	<b>Date of Submission to BOR Office:</b> 05/10/14
<b>Most Recent NEASC Institutional Accreditation Action and Date:</b> April 22, 2014 – Reaccredited; Next Evaluation Fall 2022	
<b>Program Characteristics</b> Name of Program: <b>Ophthalmic Medical Assisting</b> Degree: Title of Award (e.g. Master of Arts) <b>Certificate</b> Certificate: (specify type and level) <b>Ophthalmic Medical Assisting Certificate</b> Anticipated Program Initiation Date: <b>Fall 2014</b> Anticipated Date of First Graduation: <b>December 2014</b> Modality of Program: On ground    Online    X Combined If "Combined", % of fully online courses? 0%  Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other): <b>16</b>	<b>Program Credit Distribution</b> # Cr in Program Core Courses: <b>13</b> # Cr of Electives in the Field: 0 # Cr of Free Electives: 0 # Cr Special Requirements (include internship, etc.): <b>3</b> <u>Total # Cr in the Program (sum of all #Cr above): <b>16</b></u> From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: <b>3</b>
Type of Approval Action Being Sought: X 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: <b>Main campus</b>	
Other Program Accreditation: <ul style="list-style-type: none"> <li>If seeking specialized/professional/other accreditation, name of agency and intended year of review <b>CoA-OMP: 2014</b></li> <li>If program prepares graduates eligibility to state/professional license, please identify:</li> </ul> (As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)	
<b>Institutional Contact for this Proposal:</b> <b>Dr. Steven Minkler</b>	<b>Title:</b> Dean of Academic Affairs <b>Tel.:</b> 860.343.5706 <b>e-mail:</b> sminkler@mxcc.edu

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

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

<sup>1</sup> Final CIP assignment will be done by BOR staff in consideration of suggested number (if provided) and in consultation with academic 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**  
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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)*

To meet the statewide workforce needs in the emerging health field, the new Ophthalmic Medical Assisting (OMA) Certificate program at Middlesex Community College will help train ophthalmic assistants to assist ophthalmologists throughout the State of Connecticut. Consistent with the community college mission, the proposed certificate in OMA will both prepare graduates for immediate entry into the workplace and also provide a fully articulated pathway from the certificate granted at Middlesex Community College to a National Certification by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) as a Certified Ophthalmic Assistant (COA). Attaining this entry-level certification generally results in an increase in both compensation and responsibility in the workplace. After the graduates complete the COA certification, they can continue their training on the job, and through continuing education programs to prepare for two higher levels of certification, Certified Ophthalmic Technician (COT, the level Professor Dennis is certified at), and Certified Ophthalmic Medical Technologist (COMT). These certifications will also provide the certificants with increased compensation and career opportunities.

Connecticut's community colleges are part of the Connecticut State College and University (CSCU) system and share a "mission to make excellent higher education and lifelong learning affordable and accessible to all Connecticut citizens. The colleges enrich the intellectual, civic, cultural and social environments of the communities they serve through a wide range of credit transfer and career programs leading to associate degrees and certificates and non-credit life-long learning opportunities and job skills training programs. The colleges support the economic growth of the state and its citizens through programs and partnerships that supply business and industry with a skilled, well-trained work force."

The Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant program awarded \$12 million to a consortium of ConnSCU institutions to develop academic programming and instructional content in support of health and life science career pathways. Consortium members are Capital, Gateway, Manchester, Middlesex, and Norwalk Community Colleges; Eastern Connecticut State University, and Charter Oak State College. The consortium will provide targeted certifications, industry-recognized credentials, and Associate degrees to prepare veterans, TAA impacted, dislocated, and other under-employed workers statewide for careers in health and life sciences.

**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)*

In creating this new certificate program, Professor Raymond P. Dennis has worked closely with the Connecticut Society of Eye Physicians (CSEP), a statewide organization that represents ophthalmologists, ophthalmologic surgeons, and their patients. This collaboration ensures that the program content and requirements are adequately preparing MxCC students for the jobs that many of the CSEP practices have available

Middlesex Community College's (MxCC) location is ideal for this program as it is surrounded by more than one hundred eyecare providers. CSEP's marketing and promotional assistance will help us draw students from the entire state as this will be a one-of-a-kind program in Connecticut. MxCC already has arranged for the use of a nearby ophthalmology practice for the use of their clinical facilities. It is also important to note that there is a direct relationship between this new Certificate and our Ophthalmic Design and Dispensing (OD&D) Associate Degree program that has existed at MxCC since 1988. In support of the college's existing OD&D degree, the College already has state of the art ophthalmic and contact lens labs already in place, and currently owns the equipment necessary to run this new program.



## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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### Employment Trends:

Nationally:

(\* In order to clarify what might be a bit confusing to reviewers of this section of the proposal, we would like to make note of the fact that many ophthalmologists refer to the ophthalmic medical personnel that work with or for them as “techs or technicians”. The generic use of the term technician may be describing a non-certified individual, or someone certified at any of the three levels of certification by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) ; Certified Ophthalmic Assistant (COA), Certified Ophthalmic Technician (COT) or Certified Ophthalmic Medical Technologist (COMT). In the employment statistics listed below, the term technician is being used generically in most cases.)

“The Bureau of Labor Statistics predicted that “open positions for medical assistants, which include ophthalmic assistants, would increase by 31% in the decade of 2010-2020. Available jobs in the medical assistance industry are expected to grow quickly due to a steadily growing population requiring more medical care.”

( [http://education-portal.com/ophthalmic\\_assistant.html](http://education-portal.com/ophthalmic_assistant.html) )

The Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO) states that – “Employment of Medical Technicians in fields such as Ophthalmology ranks 3rd on the list of the 30 Fastest-Growing Occupations in the U.S. The aging population (65 or older) is projected to double by 2030, the need for Ophthalmic Medical Technicians will continue to increase. There is an estimated need for approximately an additional 3,500 Ophthalmic Medical Technicians in the U.S. and Canada. Ophthalmic Medical Technicians are paid very competitive above average salaries. Most receive basic benefits like health/dental insurance and paid vacations” In May 2012, the BLS reported that ophthalmic medical technicians made median annual earnings of \$34,240. Generally, allied health professionals in Connecticut, New York and the adjoining states are compensated at a rate above the national median wage.

National Salary and Benefits Report for Ophthalmic Medical Personnel, salaries for an Ophthalmic Medical Technician:

Entry/COA Level = \$42,500 annual salary

Intermediate/COT Level = \$52,500 annual salary

Advanced/COMT Level = \$60,200 annual salary

State-wide: Conversations held between Professor Dennis and the leadership of CSEP, the statewide ophthalmology organization indicate that there are dozens of practices statewide that would hire an additional ophthalmic assistant, especially one trained to become certified, if they were available. At this time most practices are training them on the job, a process that is both costly and takes an important experienced technician away from their normal day-to-day responsibilities. In the past, when our non-credit ophthalmic medical assisting program was offered all of the students that completed the course were employed within a month of completion. The CSEP group has offered to assist with both recruitment and placement of students for the program.

These employment services currently list available positions for ophthalmic assistants/technicians

<http://www.indeed.com/q-Ophthalmology-l-Connecticut-jobs.html> currently lists 5 available positions

<http://us.jobrapido.com/?w=ophthalmic+technician&l=ct&r=40> currently lists 5 available positions

<http://www.ihireoptometry.com/jobs/search?ct=627&loc=Connecticut&o=5> currently lists ten positions

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- 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?

Middlesex Community College (MxCC) in Middletown is ideal for this program with its location in the center of the state, making it accessible for all state residents. Additionally, the hybrid (combination of online/on campus) nature of the program makes it possible for students to complete a substantial percentage of the required coursework online, with the remaining on-campus classes on Saturdays. This will permit individuals that are currently employed in optometric and ophthalmological practices to work during the week and still participate in the program. The campus is located at the geographical center of the state making it possible for students to access the campus for the Saturday clinical classes in a reasonable amount of time.

The existence of the companion Ophthalmic Design and Dispensing (OD&D) associate degree program which prepares graduates for a career as a Licensed Optician, provides significant support for the OMA program in a variety of ways. Opticians and ophthalmic assistants often work side by side in the same offices. The OD&D program has been training opticians for over 25 years. Professor Dennis has established close relationships with eyecare professionals statewide as well as nationally. The OD&D program is the only accredited opticianry program in the state and has earned a reputation of doing an excellent job of preparing graduates for good-paying professional opportunities. The OD&D program facilities and equipment will provide a first class training facility for the new program and an agreement with Middlesex Eye Physicians of Middletown will expand our clinical facilities to cover training on ophthalmic equipment that MxCC does not own. Recent bond fund purchases and grant funds have provided MxCC with new high-tech equipment for use by both the OMA Certificate and the OD&D degree program. Professor Dennis is licensed as an optician and also certified as a Certified Ophthalmic Technician, which is a level above the certification that our students will be working to complete.

- 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)* None
- Please indicate what similar programs exist in other institutions within your constituent unit <sup>2</sup>, and how unnecessary duplication is being avoided None, there are no other programs in existence in our constituent unit.

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

As was discussed above, we anticipate no problem placing students. In addition to past success in finding jobs for ophthalmic assistants, we are expecting that the recent requirement of well eye exams as a part of all healthcare plans compliant with the federal Affordable Care Act will further expand the need for ophthalmic assistants as more people will be availing themselves of covered eyecare services. According to the U.S. Department of Labor, ophthalmic technicians, the level of certification above the Certified Ophthalmic Assistant (COA) that we are preparing students for, rank third on the list of fastest growing occupations in the country. In the coming decade, it's estimated that there will be a need for an additional 6,000 ophthalmic assistants and technicians. The yearly national median salary for a certified ophthalmic technician is \$43,316. They are skilled healthcare professionals, who perform ophthalmic procedures under the direction of a licensed ophthalmologist. Their tasks range from taking patient medical history and administering basic tests, to dispensing drugs, supervising patients and assisting in minor surgical procedures. Ophthalmic assistants and technicians often have managerial responsibilities, with leadership roles over other ophthalmic personnel. People skills are mandatory, so it's important to have a caring demeanor and the ability to communicate well. This job is not exclusive to doctors' offices. OMTs find work at pharmaceutical companies, research institutes,

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<sup>2</sup> 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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hospitals and clinics. - See more at: <http://career-news.healthcallings.com/2012/06/12/job-outlook-ophthalmic-medical-technicians/#sthash.rOUHxpbO.dpuf>

### Cost Effectiveness and Availability of Adequate Resources

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

Based on the above-referenced labor market analyses and local employer interest the program, the college anticipates enrollment and thus tuition revenues will exceed program expenditures. MxCC has assigned an existing full-time faculty member with the task of developing of the program in concert with a DOL grant-funded Curriculum Innovation Coordinator. The DOL grants will fund the certificate program development costs. New adjunct faculty will be hired to teach the new OMA courses in the program, with initial course offerings funded by the DOL grant. The graduation and licensure rates for Middlesex's health-related programs in both credit and credit-free offerings are high, suggesting that an infrastructure is in place to foster a similar outcome for these programs. There are no anticipated additional cost for hardware and software. Most of the new courses being developed for the OMA certificate will be offered online in a "hybrid" format.

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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)*

Upon completion of the Certificate, a student will be able to:

1. Communicate verbally, non-verbally and in writing with members of health care team in an appropriate, culturally sensitive, effective and capable manner.
2. Apply knowledge of office procedures within an ophthalmic medical practice.
3. Identify the structure, function, and pathology of the human eye
4. Maintain accurate electronic patient records in accordance with local, state, and federal guidelines.
5. Conduct pre-assessment screenings and ocular preparations using appropriate equipment and tools.
6. Work within safety (OSHA) standards that govern Ophthalmology and within the guidelines of HIPAA.
7. Conduct him/herself in an ethical and professional manner at all times.

**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)*

Faculty Name and Title	Institution of Higher Degree	Area of Specialization/Pertinent Experience	Other Administrative or Teaching Responsibilities
Raymond P. Dennis Professor/Coordinator	M.A. – Education St. Joseph College West Hartford, CT  (now called the University of Saint Joseph)	Education – Curriculum and Instruction	Program Coordinator for Ophthalmic Design and Dispensing degree program  Extensive experience in curriculum development

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To be hired			
Adjunct Instructors			

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

How many new full-time faculty members, if any, will need to be hired for this program? **None**

What percentage of the credits in the specialized program requirements will they teach? **N/A**

What percent of credits in the specialized program requirements will be taught by adjunct faculty? **(81%)**

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program **Bachelor's degree in appropriate discipline; JCAHPO national certification preferred**

**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)

The equipment and resources needed for the OMA Certificate program are currently available for use by the OD&D program at MxCC, or at our off-campus site at Middlesex Eye Physicians. Our library maintains adequate books and electronic resources to support the certificate. Some of the ophthalmic instruments and devices that will be utilized by the students are available for our use at Middlesex Eye Physicians, a short distance away. The Saturday classes that will be a part of ODD 101,102,103 and 104 will alternate between our MxCC OD&D lab facilities and the Middlesex Eye Physicians offices. In the past year, MxCC has purchased 12 new lensometers which are used to read the power of lenses and contact lenses, six new biomicroscopes which are used to evaluate the integrity of the eye and to evaluate contact lenses, a corneal topography unit which creates a topographic map of the surface of the eye, a video biomicroscope for teaching purposes, new ophthalmoscopes used to view the retina, retinoscopes to do objective refraction, and other equipment, instruments and devices that will be used for both programs as well.

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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. # <sup>3</sup>	Pre- Requisite	Cr Hrs
<b>Certificate Core Courses</b>			
CSC 101 - Introduction to Computers	4	None	3
OMA 101 - Introduction to Ophthalmic Medical Assisting	2,4,5,7,8	Eligible for ENG 101 or ENG 101E	3
OMA 102 - Ocular Anatomy, Physiology and Pathology	3,6,8	Eligible for ENG 101 or ENG 101E	3
OMA 103 - Ophthalmic Clinical Skills and Procedures	1,7,8	Eligible for ENG 101 or ENG 101E	4
OMA 104 - Healthcare Policies and Procedures	7, 8	Eligible for ENG 101 or ENG 101E	3
<b>Total</b>			<b>16</b>

## Course Descriptions for OMA Certificate Courses:

CSC\*101, Introduction to Computers (3 credits) An introductory course presenting the business uses of computer hardware and software. It will teach the fundamentals of the Windows environment and use of popular business software using word processing, spreadsheet, database and presentation applications. E-mail communication skills will be developed, and the use of the Internet as a communication and research tool. An overview of web page design will be covered. Students taking this course should possess hands-on familiarity with computers.

OMA\*101, Introduction to Ophthalmic Medical Assisting (3 credits)

This course introduces the role, scope, and duties of the ophthalmic assistant, including medical history-taking, preliminary patient examination, assessing visual fields, ophthalmic equipment, and office efficiency. Topics included will be the comprehensive eye exam and supplemental tests, lensometry and basic opticianry skills. It also introduces theoretical, clinical, physical and geometric optics, and provides an introduction to the types of vision loss and corrective devices used in Low Vision care. Prerequisite: Eligible for ENG\*101 or ENG\*101E

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<sup>3</sup> From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application

## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

### OMA\*102, Ocular Anatomy, Physiology and Pathology (3 credits)

This course provides the learner with a detailed study of normal ocular anatomy, physiology and pathology. Topics to include; medical terminology and vocabulary commonly used in health care field, the origin of words with emphasis on suffixes, prefixes, roots, abbreviations and terminology pertinent to body systems. It includes the fundamentals of common external and internal diseases of eye and the orbital region, emphasizing the ocular effects of systemic diseases, identification of ocular emergencies, triage and the appropriate response. Topics will also include common ocular surgical procedures, first aid treatment and physician referral procedures.

Prerequisite: Eligible for ENG\*101 or ENG\*101E

### OMA\*103, Ophthalmic Clinical Skills and Procedures (4 credits)

This course emphasizes basic skills in patient care and examination techniques to include medical history taking and the assessment of the pupils. Additional clinical training will include tonometry, first aid treatment, retinoscopy, biomicroscopy, objective and subjective refractometry, measuring vital signs, clinical equipment maintenance and visual field analysis. Other topics include an overview of ophthalmic pharmacology, comparing drug delivery systems and administering and recording topical and oral medications at a physician's direction. A safety component of the course covers office and clinic safety, microbiology, disinfection/sterilization and control of infections and prevention of contamination in a medical facility, Prerequisite: Eligible for ENG\*101 or ENG\*101E

### OMA\*104, Healthcare Policies and Procedures (3 credits)

This course is designed to serve as an introduction to the health care delivery system and health information management functions for allied health professionals. The students will be introduced to the types of health care delivery organizations and professionals, HIPAA, medical record content, reimbursement methodology and electronic health record use. Important topics of the course will include developing oral and written communication skills, patient education, patient services and relations, medical ethics, regulatory and legal issues, community health eyecare and ophthalmic assistant administrative duties. Prerequisite: Eligible for ENG\*101 or ENG\*101E

**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
Raymond P. Dennis, Professor	M.A. Education – University of St. Joseph	Specialization: Curriculum and Instruction	Program Coordinator for Ophthalmic Design and Dispensing program Extensive experience in curriculum development

# Connecticut Board of Regents for Higher Education

APPLICATION FOR NEW PROGRAM APPROVAL PRO FORMA <sup>1</sup> BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

<b>Institution</b>	Middlesex Community College	<b>Date</b>	5/6/2014
<b>Proposed Program</b>	NAME OF PROGRAM Ophthalmic Medical Assisting		

PROJECTED Enrollment	Fall 2014		Spring 2015		Fall 2015	
	Full Time (12+ cr.)	Part Time (<12 cr.)	Full Time (12+ cr.)	Part Time (<12 cr.)	Full Time (12+ cr.)	Part Time (<12 cr.)
Internal Transfers <i>(from other programs)</i>	0	0	0	0	0	0
New Students <i>(first time matriculating)</i>	16	0	16	0	16	0
Continuing <i>(students progressing to credential)</i>	0	0	0	0	0	0
Headcount Enrollment	16	0	16	0	16	0
Estimated "Credits Sold" to Students all students will enroll in the full 16-credit certificate in one semester	256	0	256	0	256	0
<b>Total Estimated FTE per Year (Credits Sold / 15)</b>	17.1		17.1		17.1	

PROJECTED Program Revenue	Fall 2014		Spring 2015		Fall 2015	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Tuition & fees*	\$30,928	\$0	\$31,547	\$0	\$32,177	\$0
Lab Fees	\$0	\$0	\$0	\$0	\$0	\$0
Other Rev. <i>(Annotate in text box below)</i>						
<b>Total Annual Program Revenue</b>	\$30,928		\$31,547		\$32,177	

\*Tuition is calculated using 2014-15 rates, with 2% added in each subsequent year

PROJECTED Expenditures*	Fall 2014		Spring 2015		Fall 2015	
	Number <i>(as applicable)</i>	Expenditure	Number	Expenditure	Number	Expenditure
Administration <i>(Chair or Coordinator)</i>	EXISTING Level 3 Program Coordinator; no new expenses	\$0		\$0		\$0
Faculty <i>(Full-time, total for program)</i>	0	\$0	0	\$0	0	\$0
Faculty <i>( Workload Units of Part-time Lecturers - total for program-specific courses)**</i>	13	\$26,816	13	\$28,159	13	\$28,159
Support Staff - Existing Lab Assistant	Define, if needed	\$0		\$0		\$0
Library Resources Program		\$0		\$0		\$0
Equipment		\$0		\$0		\$0
Other (e.g. student services)	Consumable supplies	\$500		\$500		\$500
Estimated Indirect Cost <i>(e.g. student services, operations, maintenance)</i>	calculated at \$100 per FTE per semester	\$1,707		\$1,707		\$1,707
<b>Total ESTIMATED Expenditures</b>		\$29,023		\$30,366		\$30,366
<b>NET New Revenue</b>		\$1,905		\$1,181		\$1,812

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

\*\* average PTL rate plus 35% fringe

<sup>1</sup> 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

A New Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve licensure of a program in Health Information Management leading to a Certificate at Middlesex Community College

A True Copy:

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

**ITEM**

Licensure of a program in Health Information Management leading to a Certificate at Middlesex Community College

**BACKGROUND**Summary of the Proposal: Background for the Program

Middlesex Community College is proposing a new 27-credit Certificate in Health Information Management (HIM) to complement its existing Associate Degree program in HIM. The two programs will share facilities, courses, and faculty; and, the HIM Program Coordinator will be responsible for all aspects of the Certificate's administration.

The HIM Certificate was developed to meet the needs of students who are seeking to acquire a core set of skills that will enable them to transition to the field of HIM and who are not interested in pursuing an Associate Degree. Students may already have degrees in other disciplines and therefore are not looking to gain that level of training. Instead, they simply want to have credentials that will validate for a prospective employer that they possess the requisite skills in HIM sufficient to enter the field at an entry level. Having a certificate option offers our students a choice and thus allows them to choose the path that best meets their career and educational goals. Having said that, for students who do wish to continue their education beyond the Certificate, all of the courses are also required in the HIM Associate Degree program, which itself is articulated with the Bachelor's Degree program in HIM at Charter Oak State College.

Since these courses already exist as part of a degree program, no new courses or laboratories are required to implement the HIM Certificate. In addition, Middlesex has been collaborating with Capital Community College and Northwestern Connecticut Community College to jointly offer HIM courses in online format. Students from two or all three colleges are combined into one online Blackboard course site under a single instructor. Doing so has allowed for students to learn and collaborate across campuses while also making efficient use of faculty time and budget. The three colleges also anticipate offering multi-campus synchronous face-to-face courses using the proposed "Genius Classrooms" and their enhanced video conferencing capabilities.

The HIM Certificate and its parent Associate Degree program are the result of intensive curriculum development happening at the college, brought about by its participation in a consortium of CSU institutions known as the Health & Life Sciences Initiative. This initiative has been funded by a \$12 million Trade Adjustment Assistance Community College and Career Training (TAA-CCCT) grant, with an implementation period of October 2012 through September 2015. Consortium members are Capital, Gateway, Manchester, Middlesex, and Norwalk Community Colleges; Eastern Connecticut State University, and Charter Oak State College. The consortium will provide targeted certifications, industry-recognized credentials, and Associate degrees to prepare veterans, TAA impacted, dislocated, and other under-employed workers statewide for careers in health and life sciences.

Need for the Program:

The healthcare sector is one of the nation's largest employers. With the federally-required

implementation of electronic health records nationally, the need for HIM professionals and expanded educational opportunities for them will grow. The demand for health information technologists that the proposed certificate will produce is expected to grow by 21% in the coming decade, a rate faster than most professions. State-wide, the need for HIM/HIT workers in Connecticut mirrors that seen on the national level. In its 2011 report to the legislature, the Connecticut Allied Health Workforce Policy Board highlighted the complexity of the transition to electronic medical records in Connecticut and the need for additional skilled workers in the field.

HIM career pathways can vary widely by both job and setting. Graduates could code medical records or manage entire health information divisions in government agencies and healthcare facilities. The American Health Information Management Association (AHIMA) website offers a comprehensive map of the career trajectories in the field ranging from entry to senior levels in: 1) compliance/risk management, 2) education/communications, 3) informatics/data analysis, 4) IT/Infrastructure, 5) operations: medical records administration and 6) revenue management: coding and billing. All areas anticipate demand both within the state and nationally, as detailed above. In addition, the state is currently educating few workers with no active associate degrees, one bachelor's degree and one degree option at the university level.

Candidates in the certificate program will be required to complete courses in medical coding, billing, insurance, as well as an internship which required 150 hours of experiential learning. The training received in these courses can be leveraged to position students to set for industry-recognized certificates, including the ones listed below.

- Certified Coding Associate (CCA®)
- Certified Coding Specialist- Physician-based (CCS-P®)
- Certified Professional Coder – Outpatient Hospital (CPC-H®)
- Certified Professional Coder – Payer (CPC-P®)
- Certified Professional Coder (CPC®)
- Certified Professional Biller (CPB™)

Additionally, students may be able to use their internship placement as a doorway to employment. Insurance companies such as CIGNA and Nurtur Health have responded positively when asked about the potential to hire someone with a 1 year certificate in HIM.

### Curriculum

The HIM Certificate consists of nine existing courses, totaling 27 academic credits. All of them are also required in the Associate Degree program:

- HIM\* 102, "Introduction to Healthcare Systems"
- HIM\* 156, "Electronic Health Records"
- HIM\* 201, "Health Information Management Principles"
- HIM\* 205, "Medical Coding I"
- HIM\* 206, "Medical Coding II"
- HIM\* 256, "Legal and Ethical Issues in HIM"
- HIM\* 295, "Health Information Management Internship" (150 hours of supervised work)

- MED\* 112, “Medical Insurance and Billing”
- MED\* 125, “Medical Terminology”

Upon completion of the Certificate, graduates will be able to:

1. Employ computer-based health information systems while managing existing paper-based health information systems utilizing EHR software. Utilize ONC-Certified computer-based EHR industry-standard software (SpringCharts) – Course: HIM\*156 – Electronic Health Records
2. Compare and contrast reimbursement methodologies, procedure based payment systems such as Resource based Relative Value (RBRV) and Evaluation and Management and Ambulatory Payment Classification (APC). Examination that requires definition of key terms such as APC, RBRV. Course: HIM\*201 – Health Information Management Principles
3. Apply coding knowledge utilizing coding guidelines from ICD-9-CM, ICD-10, CPT-4 and HCPCS. Comprehensive coding exam administered in two courses: HIM\*205 – Medical Coding 1 and HIM\*206 – Medical Coding 2
4. Interpret diagnostic based perspective payment groups such as DRG; recognize the Systematized Nomenclature of Medicine (SNOMED) – Research paper. Course: HIM\*201 – Health Information Management Principles
5. Utilize medical coding software and clinical classification systems as they relate to the human body and disease processes Comprehensive coding exam administered in two courses: HIM\*205 – Medical Coding 1 and HIM\*206 – Medical Coding 2
6. Identify and discuss healthcare delivery fundamentals and the technology used to gather healthcare information in a variety of settings.-Research paper on healthcare delivery systems HIM\*102 – Introduction to Healthcare Systems
7. Utilize appropriate terminology including abbreviations related to pathological conditions, diagnostic procedures, surgical interventions, and therapeutic procedures. Terminology review exam. Course: MED\*125 – Medical Terminology

### Students

Middlesex Community College’s location in the center of the state is ideal for this program, as is its collaboration with Capital and Northwestern. As stated above, the HIM Certificate was developed to meet the needs of students who are seeking to acquire a core set of skills that will enable them to transition to the field of HIM and who are not interested in pursuing an Associate Degree. Students may already have degrees in other disciplines and therefore are not looking to gain that level of training. Instead, they simply want to have credentials that will validate for a prospective employer that they possess the requisite skills in HIM sufficient to enter the field at an entry level. The Program Coordinator has fielded numerous inquiries from students who fit this profile.

### Faculty:

Faculty Name and Title	Institution of Higher Degree	Area of Specialization/Pertinent Experience	Other Administrative or Teaching Responsibilities
Donna Hylton, Professor	M.S. Computer Information Technology CCSU	Specialization: MIS	Program Coordinator for Information Systems degree program

	2006		Faculty Advisor – MxCC Computer Club.  Extensive experience in curriculum development
Clifford Deane, Adjunct Instructor	M.S. Management (Health Care), Hartford Graduate Center, 1996	Health Care Administration	
Barbara Rutigliano, Adjunct Instructor	M.S. Education, Southern Connecticut State University, 1976	Professional Certifications: <ul style="list-style-type: none"> <li>• Certified Professional Coder (CPC)</li> <li>• Specialty Certification (CIRCC)</li> <li>• Radiologic Technologist (RT-R)</li> </ul>	
Adrienne Doughty, Adjunct Instructor	B.A. Political Science, Central Connecticut State University, 1979; later coursework in Medical Coding, Licensed Practical Nurse, Nursing Theory, Health Care Ethics	Professional Certifications: <ul style="list-style-type: none"> <li>• Certified Professional Coder (CPC)</li> <li>• Certified Health Informatics Systems Professional (CHISP)</li> </ul>	

### Learning Resources & Facilities

As mentioned above, the HIM Certificate will have a direct relationship to the college's Associate Degree program in Health Information Management. The two programs will share facilities, courses, and faculty; and, the HIM Program Coordinator will be responsible for all aspects of the Certificate's administration.

The college has adequate learning resources and facilities to support this program, as it is subordinate to the parent degree program.

### Fiscal Note:

As indicated in the attached Pro-Forma Budget, the college anticipates: 1) program enrollment to increase from 7.7 FTE to 17 FTE within the next two years, especially as it will attract students who may already hold a degree and are seeking career-changing skills; 2) an allowance for indirect costs but no additional expenses for instruction, since enrollment will fill unused capacity in existing courses consumable supplies, and, 3) income to exceed expenses on an annual basis.

### Review of Documents:

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

### Accreditation:

This program is not separately accredited, but rather falls under the general accreditation of the college by the New England Association of Schools and Colleges.

**CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**  
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**SECTION 1: GENERAL INFORMATION**

<b>Institution:</b> Middlesex Community College	<b>Date of Submission to BOR Office:</b> 05/14
<b>Most Recent NEASC Institutional Accreditation Action and Date:</b> April 22, 2014 – Reaccredited; Next evaluation Fall 2022	
<b>Program Characteristics</b> <b>Name of Program:</b> Health Information Management <b>Degree:</b> Title of Award (e.g. Master of Arts) <b>Certificate:</b> (specify type and level) Health Information Management Certificate <b>Anticipated Program Initiation Date:</b> Fall 2014 <b>Anticipated Date of First Graduation:</b> Spring 2015 <b>Modality of Program:</b> On ground    Online    X Combined If "Combined", % of fully online courses? 55% <b>Total # Cr the Institution Requires to Award the Credential (i.e. include program credits, GenEd, other):</b> 27	<b>Program Credit Distribution</b> <b># Cr in Program Core Courses:</b> 18 <b># Cr of Electives in the Field:</b> 9 <b># Cr of Free Electives:</b> 0 <b># Cr Special Requirements (include internship, etc.):</b> 3 <b>Total # Cr in the Program (sum of all #Cr above):</b> 27 From "Total # Cr in the Program" above, enter #Cr that are part of/belong in an already approved program(s) at the institution: 27
<b>Type of Approval Action Being Sought:</b> X Licensure    OR    Licensure and Accreditation <b>Suggested CIP Code No. (optional)</b> <b>Title of CIP Code</b> <b>CIP Year:</b> 2000    or    2010	
If establishment of the new program is concurrent with discontinuation of related program(s), please list for each program: <b>Program Discontinued:</b> <b>CIP:</b> <b>DHE# (if available):</b> <b>Accreditation Date:</b> <b>Phase Out Period</b> <b>Date of Program Termination</b>	
<b>Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program:</b> Main campus	
<b>Other Program Accreditation:</b> <ul style="list-style-type: none"> <li>If seeking specialized/professional/other accreditation, name of agency and intended year of review: CAHIM 2015</li> <li>If program prepares graduates eligibility to state/professional license, please identify:</li> </ul> (As applicable, the documentation in this request should addresses the standards of the identified accrediting body or licensing agency)	
<b>Institutional Contact for this Proposal:</b> Dr. Steven Minkler	<b>Title:</b> Dean of Academic Affairs <b>Tel.:</b> 860.343.5706 <b>e-mail:</b> sminkler@mxcc.edu

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

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

<sup>1</sup> Final CIP assignment will be done by BOR staff in consideration of suggested number (if provided) and in consultation with academic 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)*

The Health Information Management certificate is being developed to meet the needs of students who are seeking to acquire a core set of skills that will enable them to transition to the field of HIM and who are not interested in pursuing an Associate's degree. Students may already have degrees in other disciplines and therefore are not looking to gain that level of training. Instead, they simply want to have credentials that will validate for a prospective employer that they possess the requisite skills in HIM sufficient to enter the field at an entry level. Having a certificate option offers our students a choice and thus allows them to choose the path that best meets their career and educational goals.

**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 healthcare sector is one of the nation's largest employers. With the federally-required implementation of electronic health records nationally, the need for HIM professionals and expanded educational opportunities for them will grow.

The demand for health information technologists that the proposed certificate will produce is expected to grow by 21% in the coming decade, a rate faster than most professions.<sup>2</sup>

State-wide:

The need for HIM/HIT workers in Connecticut mirrors that seen on the national level. In its 2011 report to the legislature, the Connecticut Allied Health Workforce Policy Board highlighted the complexity of the transition to electronic medical records in Connecticut and the need for additional skilled workers in the field.

- **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?**

Middlesex Community College's (MxCC) location is ideal for this program as it is surrounded by two major hospitals in Middletown and one in Meriden, multiple healthcare providers and insurance businesses that are in need of qualified health information management personnel. These institutions will provide necessary externship locations in close proximity to the college. MxCC already has internship placements at the local hospitals and healthcare facilities for students in allied health programs. In support of the college's existing degrees, state of the art computer and science labs are also already in place.

An additional advantage is that Middlesex's Continuing Education area has a successful Medical Billing & Coding Certificate program. Faculty from the Credit-Free program will be able to provide foundational courses that are components of the HIM program. The MxCC program has been carefully reviewed by the Program Coordinator of the HIM program of Charter Oak State College. The courses that are being designed at MxCC have been aligned with Charter Oak's curriculum in order to facilitate the articulation of courses between both schools.

The program of study will also capitalize on the learning management system within ConnSCU. The

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<sup>2</sup> Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition, Medical Records and Health Information Technicians, on the Internet at <http://www.bls.gov/ooh/healthcare/medical-records-and-health-information-technicians.htm> (visited September 16, 2012).



## CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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proposed pathway will incorporate innovative distance learning opportunities along with face-to-face instruction. A recently announced Department of Labor grant will allow Middlesex to offer much of the program on-line and will also provide funding for MxCC to assess its non-credit HIT program for collegiate credit and articulate that credit into the proposed programs.

- 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 HIM certificate will be designed so that all of the courses are principally aligned with the three participating community colleges and all transfer to Charter Oak State College. Courses have been developed in collaboration with Charter Oak State College. Any additional changes required as the ConnSCU Transfer/Articulation Policy is implemented will be made. The consortium statewide advisory board will oversee the updating and coordinating of the programs and their articulation going forward.

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

A consortium of three community colleges, Middlesex, Northwestern, and Capital, were approved to offer Associate's degree in HIM. This certificate is being developed to serve the central region of the state, and would not be duplicated within our service area. No ConnSCU community college outside the consortium offers an active HIM degree and therefore is not likely to offer a certificate.

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

Health information management career pathways can vary widely by both job and setting. Graduates could code medical records or manage entire health information divisions in government agencies and healthcare facilities. The American Health Information Management Association (AHIMA) website offers a comprehensive map of the career trajectories in the field ranging from entry to senior levels in: 1) compliance/risk management, 2) education/communications, 3) informatics/data analysis, 4) IT/Infrastructure, 5) operations: medical records administration and 6) revenue management: coding and billing. All areas anticipate demand both within the state and nationally, as detailed above. In addition, the state is currently educating few workers with no active associate degrees, one bachelor's degree and one degree option at the university level.

Candidates in the certificate program will be required to complete courses in medical coding, billing, insurance, as well as an internship which required 150 hours of experiential learning. The training received in these courses can be leveraged to position students to set for industry-recognized certificates, including the ones listed below.

- Certified Coding Associate (CCA®)
- Certified Coding Specialist- Physician-based (CCS-P®)
- Certified Professional Coder – Outpatient Hospital (CPC-H®)
- Certified Professional Coder – Payer (CPC-P®)
- Certified Professional Coder (CPC®)
- Certified Professional Biller (CPB™)

Additionally, students may be able to use their internship placement as a doorway to employment. Insurance companies such as CIGNA and Nurtur Health have responded positively when asked about the potential to hire someone with a 1 year certificate in HIM.

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<sup>3</sup> 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

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### Cost Effectiveness and Availability of Adequate Resources

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

Based on the above-referenced labor market analyses and local employer interest the program, the college anticipates enrollment and thus tuition revenues will exceed program expenditures. MxCC has assigned an existing full-time faculty member to the development and management of the program. The DOL grants will fund the degree program and certificate development costs. New adjunct faculty will be hired to teach the new HIM courses in the program.

The graduation and licensure rates for Middlesex's health-related programs in both credit and credit-free offerings are high, suggesting that an infrastructure is in place to foster a similar outcome for these programs. There are no anticipated additional cost for hardware and software. Many of the new courses being developed for the HIM degree and certificate will be offered online.

### Faculty Resources:

Faculty Name and Title	Institution of Higher Degree	Area of Specialization/Pertinent Experience	Other Administrative or Teaching Responsibilities
Donna Hylton, Professor	M.S. Computer Information Technology CCSU 2006	Specialization: MIS Cisco CCNA certificate	Program Coordinator for Information Systems degree program Program Coordinator for Health Information Management Faculty Advisor – MxCC Computer Club. Extensive experience in curriculum development

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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. Employ computer-based health information systems while managing existing paper-based health information systems utilizing EHR software. *Utilize ONC-Certified computer-based EHR industry-standard software (SpringCharts) – Course: HIM\*156 – Electronic Health Records*
2. Compare and contrast reimbursement methodologies, procedure based payment systems such as Resource based Relative Value (RBRV) and Evaluation and Management and Ambulatory Payment Classification (APC). *Examination that requires definition of key terms such as APC, RBRV. Course: HIM\*201 – Health Information Management Principles*
3. Apply coding knowledge utilizing coding guidelines from ICD-9-CM, ICD-10, CPT-4 and HCPCS. *Comprehensive coding exam administered in two courses: HIM\*205 – Medical Coding 1 and HIM\*206 – Medical Coding 2*
4. Interpret diagnostic based perspective payment groups such as DRG; recognize the Systematized Nomenclature of Medicine (SNOMED) – *Research paper. Course: HIM\*201 – Health Information Management Principles*
5. Utilize medical coding software and clinical classification systems as they relate to the human body and disease processes *Comprehensive coding exam administered in two courses: HIM\*205 – Medical Coding 1 and HIM\*206 – Medical Coding 2*
6. Identify and discuss healthcare delivery fundamentals and the technology used to gather healthcare information in a variety of settings. *-Research paper on healthcare delivery systems HIM\*102 – Introduction to Healthcare Systems*
7. Utilize appropriate terminology including abbreviations related to pathological conditions, diagnostic procedures, surgical interventions, and therapeutic procedures. *Terminology review exam. Course: MED\*125 – Medical Terminology*

**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)

Faculty Name and Title	Institution of Higher Degree	Area of Specialization/Pertinent Experience	Other Administrative or Teaching Responsibilities
Donna Hylton, Professor	M.S. Computer Information Technology CCSU 2006	Specialization: MIS	Program Coordinator for Information Systems degree program  Faculty Advisor – MxCC Computer Club.  Extensive experience in curriculum development

**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?

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

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

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program **Master's in related discipline**

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**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)*

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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. # <sup>4</sup>	Pre- Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
<b>Program Core Courses</b>				<b>Other Related/Special Requirements</b>		
MED*125 Medical Terminology	7	Eligible for ENG*101	3	MED*112 Medical Insurance and Billing	4	3
HIM*102 Introduction to Healthcare Systems	6	Eligible for ENG*101	3	HIM*295 Health Information Management Internship	7	3
HIM*156 Electronic Health Records	1	MED*125, HIM*102	3	HIM*256 Legal and Ethical Issues in HIM	7	3
HIM*201 Health Information Management Principles	4	HIM*102	3			
HIM*205 Medical Coding 1	3, 5	MED*125, MED*112	3			
HIM*206 Medical Coding 2	3, 5	HIM*205	3			
<b>Total</b>			<b>18</b>			<b>9</b>
<b>Core Course Prerequisites</b>				<b>Elective Courses in the Field</b>		
HIM*156 Prerequisite MED*125, HIM102						
HIM 205 Prerequisites: MED 125 and MED 112						
HIM 206 Pre-requisites: HIM 205						
HIM 295 Pre-requisites: HIM*102, HIM*201, HIM*205, HIM*206						
HIM 201 Prerequisites: HIM 156						
<b>Total Other Credits Required to Issue Credential</b> (e.g. GenEd/Liberal Arts Core/Liberal Ed Program)						<b>0</b>

**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.")

<sup>4</sup> From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## Health Information Management Certificate

The Health Information Management (HIM) program provides an understanding of the many aspects of the emerging field of healthcare technology and information management. HIM professionals are involved in the design, collection, storage, utilization, and transmission of data required to meet the professional, legal, and administrative record-keeping requirements of healthcare delivery systems. They also work with clinical, financial, epidemiological, administrative, and coded healthcare and insurance data. This certificate is designed to provide students with the core skills of the HIM degree. Students may apply credits towards the associate's degree in Health Information Management or pursue employment in the field.

+HIM*102 Introduction to Healthcare Systems	3
+HIM*156 Electronic Health Records	3
+HIM*201 Health Information Management Principles	3
+HIM*205 Medical Coding 1	3
+HIM*206 Medical Coding 2	3
+HIM*256 Legal and Ethical Issues in HIM	3
+HIM*295 Health Information Management Internship	3
+MED*112 Medical Insurance and Billing	3
+MED*125 Medical Terminology	3
	27 Credits

+ Indicates courses with prerequisites.

### Program Core Course Descriptions:

#### **HIM\*102, 3 credits, Introduction to Healthcare Systems**

This course introduces the student to the field of health information technology. Topics to be covered include the healthcare delivery system, medical records format and content, various filing systems, the environment where the information is gathered, by whom the information is used, and the technology behind health information systems. In addition, the course will cover retention policies and procedures, documentation, confidentiality issues and legal and regulatory aspects of the medical record.

*Prerequisite: Eligible for ENG\*101*

#### **HIM\*156, 3 credits, Electronic Health Records**

This course is meant to give students an inside look at electronic documentation that is an essential component of healthcare recordkeeping. It offers students fundamental knowledge of health information systems and introduces the use of electronic health record systems and health information exchanges (HIE). This course includes rules, regulations, and innovations in electronic health records, as well as hands-on exercises that use real EHR software to transform theoretical EHR concepts into practical understanding.

*Prerequisite: MED\*125 and HIM\*102*

#### **HIM\*201, 3 credits, Health Information Management Principles**

This course covers health information management and patient record practices. Students will learn of the requirements of managing HIM departments. Topics will include electronic data management, document and repository systems, retention and destruction of medical records, production and accuracy of patient information, analysis and reporting for decision-making and strategy development, and HIPAA regulations concerning medical records and the uses of medical records.

*Prerequisite: HIM\*102*

#### **HIM\*205, 3 credits, Medical Coding 1**

This course covers ICD-9-CM and ICD-10 medical coding procedures and is designed to help students meet the challenge of today's changing government regulations and healthcare reporting. Included in the course are in-depth coding content and practice in PCS and HCPCS Level II coding.

*Prerequisite: MED\*112 and MED\*125*

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

## **HIM\*206, 3 credits, Medical Coding 2**

This course covers CPT medical coding procedures and is designed to help students meet the challenge of today's changing government regulations and healthcare reporting. Included in the course is detailed information on health reform, ethical, legal, and compliance issues that relate to coding and reimbursement.

*Prerequisite: HIM\*205*

## **HIM\*256, 3 credits, Legal & Ethical Issues of HIM**

In this course "Legal and Ethical Issues of Health Information Management", students will learn about the legal and ethical issues affecting healthcare today, including legislative and regulatory processes and legal terminology. Special attention will be devoted to issues of electronic record systems from the legal and ethical perspective. Students will study health information/record laws and regulations (such as retention, patient rights/advocacy, advanced directives, privacy). Confidentiality, privacy, and security policies, procedures and monitoring along with release of information policies and procedures, professional and practice-related ethical issues will also be studied. Students will investigate and recommend solutions to privacy issues and problems.

*Prerequisites: ENG\*101, HIM\*102, MED\*112*

## **HIM\*295, 3 credits, Health Information Management Internship**

This course will give students the opportunity to apply the concepts and skills acquired in the Health Information Management Program in an on-the-job experience. Students will concentrate their time developing knowledge of the HIM department and related tasks such as coding. One hundred and fifty hours of supervised work and participation in online assignments will be required.

*Prerequisite: HIM\*102, HIM\*201, HIM\*205, and HIM\*206*

## **MED\*112, 3 credits, Medical Insurance and Billing**

This course will teach the important issues regarding healthcare today, clerical and administrative skills, medical health insurance and claims processing, insurance terminology, types of insurance, and the eligibility and benefit structure of the insurance plan. This knowledge readies students to work in a private physician's office, a multi-specialty clinic, or a hospital setting. Topics discussed will include the Health Insurance Portability and Accountability Act (HIPAA), Medicare, Medicaid, Managed Care, TRICARE, and Workers' Compensation. Students will learn to generate and manage billing claim forms for the medical office and other organizations. Students will be prepared to analyze and accurately decipher complicated medical claims and oversee the entire billing and reimbursement process. In particular, as the industry is currently updating from ICD-9 to ICD-10, the latest system will be taught to students.

*Pre- or Co-Requisite: MED\*125*

## **MED\*125, Medical Terminology (3 credits)**

This course is an introduction to basic medical terminology including origins of scientific terms, suffixes and prefixes which will enhance student ability to interpret and discuss scientific and clinical concepts. Concentration is on medical terminology which facilitates the student's comprehension of materials in patient records, medical reports and scientific articles. Clinical cases including diagnostic reports are utilized for discussion in this course.

*Prerequisite: Eligible for ENG\*101 or 101E.*

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

[illegible]



# Connecticut Board of Regents for Higher Education

APPLICATION FOR NEW PROGRAM APPROVAL **PRO FORMA** <sup>1</sup> BUDGET - RESOURCES AND EXPENDITURE PROJECTIONS

<b>Institution</b>	Middlesex Community College	<b>Date</b>	5/8/2014
<b>Proposed Program</b>	Health Information Management (Certificate)		

PROJECTED Enrollment	2014-15		2015-16		2016-17	
	Full Time (12+ cr.)	Part Time (<12 cr.)	Full Time (12+ cr.)	Part Time (<12 cr.)	Full Time (12+ cr.)	Part Time (<12 cr.)
Internal Transfers (from other programs)						
New Students (first time matriculating)	3	10	3	10	3	10
Continuing (students progressing to credential)			1	8	2	15
Headcount Enrollment	3	10	4	18	5	25
Estimated "Credits Sold" to Students assumes Full-Time Student = avg. of 13.5 credits Part Time Student = avg. of 7.5 credits	40.5	75	54	135	67.5	187.5
<b>Total Estimated FTE per Year (Credits Sold / 15)</b>	7.7		12.6		17.0	

PROJECTED Program Revenue	2014-15		2015-16		2016-17	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Tuition & fees*	\$5,799	\$25,908	\$7,887	\$47,567	\$10,055	\$67,387
Lab Fees	\$252	\$840	\$343	\$1,542	\$437	\$2,185
Other Rev. (Annotate in text box below)						
<b>Total Annual Program Revenue</b>	\$32,799		\$57,339		\$80,064	

\*Tuition is calculated using 2014-15 rates, with 2% added in each subsequent year

PROJECTED Expenditures*	2014-15		2015-16		2016-17	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)	EXISTING Level 2 Program Coordinator; no new expenses	\$0		\$0		\$0
Faculty (Full-time, total for program)	0	\$0	0	\$0	0	\$0
Faculty (Workload Units of Part-time Lecturers - total for program-specific courses)**	existing as part of HIM degree; no new expenses	\$0	0	\$0	0	\$0
Support Staff	existing; no new expenses	\$0		\$0		\$0
Library Resources Program	existing as part of HIM degree; no new expenses	\$0		\$0		\$0
Equipment	existing as part of HIM degree; no new expenses	\$0		\$0		\$0
Other (e.g. student services)	existing as part of HIM degree; no new expenses	\$0		\$0		\$0
Estimated Indirect Cost (e.g. student services, operations, maintenance)	calculated at \$200 per FTE per year	\$1,540		\$2,520		\$3,400
<b>Total ESTIMATED Expenditures</b>		\$1,540		\$2,520		\$3,400
<b>NET New Revenue</b>		\$31,259		\$54,819		\$76,664

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

\*\* average PTL rate plus 50% fringe

<sup>1</sup> 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

A New Program

[date]

RESOLVED: That the Board of Regents for Higher Education approve licensure of a program in Computer Aided Design (CAD) leading to a Certificate at Quinebaug Valley Community College

A True Copy:

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

**ITEM**

Licensure of a new program in Computer Aided Design (CAD) leading to a certificate at Quinebaug Valley Community College

**BACKGROUND**Summary

This credential will create a new certificate of emphases for the College of Technology, providing an area of specialty for students who wish to go into a (CAD) design career directly and / or pursue an associates or baccalaureate degree through the Pathways program at QVCC (A.S.) or Central Connecticut State University (B.S.) in Industrial Technology.

Need for the Program

Currently there is a shortage of qualified designers with the requisite CAD skills both in Connecticut and nationally. Furthermore, with the development of Advanced Manufacturing techniques and virtual machining software developments, the need for qualified designers and skilled software personnel will certainly grow

Curriculum

18 credits:

MFG\* 126 Drafting

CAD\* 110 Intro to CAD

CAD\* 133 Mechanical CAD

CAD\* 271 CAD Solids Mechanical Pro-Engineer

2 CAD\* electives

Students

Projected enrollment summary (details on application)

Year 1: 18

Year 2: 22

Year 3: 30

Faculty

Mark Vesligaj: Professor of Engineering Science and Technology Studies Program Coordinator

Jakob Spjut, Instructor of Engineering and Technology

Learning Resources

Site licenses for software, rapid prototyping equipment. Budget neutral as QVCC already has this equipment

Facilities

Existing lab facilities

Fiscal Note

Projected Revenue over three years \$75,558

Projected Expenditures over three years \$72,000

Review of Documents:

- a) Campus Review: 3.18.12
- b) Campus Budget and Finance
- c) Campus President: 2.19.13
- d) Academic Council: 5.14.13
- e) System Office: pending

Accreditation:

NEASC April 2010

**CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**  
*APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions)- 01/20112*

**SECTION 1: GENERAL INFORMATION**

Institution: QVCC Date of Submission to BOR Office:  
Most Recent NEASC Institutional Accreditation Action and Date:  
Program Characteristics Program Credit Distribution  
Name of Program: Computer Aided Design (CAD) Certificate # Cr in Program Core Courses: 18  
Degree: Title of Award (e.g. Master of Arts) N/A # Cr of Electives in the Field: 0  
Certificate: (specify type and level) CAD # Cr of Free Electives: 0  
Anticipated Program Initiation Date: S'13 # Cr Special Requirements (include internship, etc.): N/A  
Anticipated Date of First Graduation: S'14 Total # Cr in the Program (sum of all #Cr above): 18  
Modality of Program: x On ground Online Combined From "Total# Cr in the Program" above, enter #Cr that are  
If 'Combined', % of fully online courses? part of/belong in an already approved program(s) at the  
Total # Cr the Institution Requires to Award the Credential (i.e. institution: 18  
include program credits, GenEd, other): 18  
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: QVCC, Danielson Campus and  
Willimantic Center  
Other Program Accreditation:  
• If seeking specialized/professional/other accreditation, name of agency and intended year of review: N/A  
• If program prepares graduates eligibility to state/professional license, please identify: N/A  
(As applicable, the documentation in this request should address the standards of the identified accrediting body or licensing agency)  
Institutional Contact for this Proposal: Mark Vesligaj Title: Professor and  
PC of Engineering Tel.: 860 412 7230 e-mail:  
Science and mvesligaj@qvmc.commnet.edu  
Technology Studies

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

BOR Sequence Number (to be assigned):  
Approved 2010 CIP Code No. <sup>1</sup> 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)

<sup>1</sup> 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)- 01120112*

**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 Certificate in CAD will be a direct feed into the College of Technology's (COT) degree program of Technology Studies: CAD Option. The certificate exists in the system and has been performing well as a gateway to the degree program. The content of the certificate will contain the Technology Management and Specialization Core classes of the Technology Studies: CAD Option degree. These courses include specified "CAD" prefixed classes utilizing software such as Chief Architect, AutoCAD, Solids Mechanical/ Pro-Engineer, plus key technology classes in Rapid Prototyping which take the electronic software data and translates into a physical prototype via Additive Manufacturing equipment which we employ at QVCC. Furthermore, coursework in manufacturing (MFG) will also provide classes that the student can select from to customize the certificate towards his/her academic goal. The MFG courses include Drafting, Blueprint Reading I and II, Geometric Design & Tolerancing, and the aforementioned Rapid Prototyping. Students will select up to 12 credits of CAD /MFG courses (not already required) to complete the 18 credits. Finally, a three credit EGR course in Material Science is required.

**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}*

CAD designers are in high demand. Many big employers in eastern CT have posted jobs for people with CAD skills. Many times, companies are more interested in the skills obtained in a certificate than a candidate who has earned an associate degree.

- 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?

No additional resources are necessary at this time. This new certificate will directly feed our associate degree in CAD.

- 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}*

All COT articulations already in place for the associate degree graduate with requisite GPA.

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

Many if not all institutions that have the COT CAD degree also offer the certificate. This would align us with that standard and better serve our students.

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

This Certificate in CAD will first serve students interested in design and development (this term is broad referring to product, tooling, fixtures, building spaces, etc.) The landscape of this field is an every evolving process with new software and technology released at a rapid pace. The demand in industry for workers with knowledge of current software and their implementation in advanced manufacturing practices are evident by job placement of graduates, students still in the program completing coursework, and student enrollment from companies sending personnel to get this knowledge back to the company. The Technology Studies: CAD Option degree is one of the highest enrolled programs under the COT umbrella and with QVCC just recently launching this option, the next logical step to serve the students would be to offer this certificate.

**Cost Effectiveness and Availability of Adequate Resources**

*{Please provide a one-paragraph narrative on the attached MSExcels Pro-Forma Budget} see attached.*

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<sup>2</sup> 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 NEW PROGRAM APPROVAL (Public Higher Education Institutions)- O/i2012*

**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. Demonstrate a good working knowledge of state-of-the-art hardware and software in support of design and development-project work, equipment utilization, modelbuilding, reverse engineering testing, etc.
2. Demonstrate an understanding of manufacturing /engineering blueprint principles – project work, exams, etc.
3. Demonstrate an understanding of drafting /CAD conventions-project work, exams, portfolios, etc.
4. Demonstrate teamwork skills -team projects and 360 degree feedback with peer evaluation
5. Demonstrate good communication skills-presentations,project work, exams,portfolios, etc.
6. Demonstrate an understanding of design for manufacture and rapid prototyping techniques- project work, etc.
7. Transition seamlessly into a COT associate degree with CAD Option – enrollment tracking

**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)*

Falls under role of existing Program Coordinator (PC) of COT for QVCC (Mark Vesligaj). The existing PC has ten+ years of experience in private manufacturing /engineering industry and nine years of experience as a faculty and PC for COT.

**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? N/A

What percent of credits in the program will be taught by adjunct faculty? – 25%

Describe the minimal qualifications of adjunct faculty, if any, who will teach in the program – Ten+ years in industry working with the latest CAD software and/ or ten+ years of teaching CAD.

**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)*

The principle resources for this certificate include the site licenses for all existing and future software, rapid prototyping equipment maintenance and consumables, etc. All of these resources already exist for the associate degree option in CAD, and therefore do not add any cost to QVCC's budget.

**CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**  
*APPLICATION FOR NEW PROGRAM APPROVAL (Public Higher Education Institutions)- 01120112*

**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. #	Pre- Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
Program Core Courses				Other Related/Special Requirements		
MFG*126 Drafting	2,3,4,5,7	none	3			
CAD*110 Intro to AutoCAD	1,2,3,4,5,7	MFG*126	3			
EGR*118 Material Science	2,4,5,6,7	MAT*137	3			
CAD* xxx(to be selected by student)	Varies	CAD*110		These CAD courses plus the MFG Course credits will total 15 credits		
MFG* xxx (to be selected by student)	Varies	Varies				
Core Course Prerequisites				Elective Courses In the Field		
MAT*137 Intermediate Algebra			3			

Total Other Credits Required to Issue Credential (e.g. GenEd/Liberal Arts Core/Liberal Ed Program)

**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.'}*

This 18 credit certificate will create a new area of emphasis for the College of Technology, providing an area of specialty for students who wish to go into a (CAD) design career and /or pursue an associate or baccalaureate degree through the COT Pathways program. The certificate can also serve as a career-oriented credential for students wishing to obtain employment as a designer. Currently there is a shortage of qualified designers with the requisite CAD skills both in Connecticut and nationally. A survey conducted of over forty companies in Connecticut verifies this demand. Furthermore, with the development of advanced manufacturing techniques and virtual machining software developments, the need for qualified designers and skilled software personnel will certainly grow. All credits (18) for this certificate are in the Technology & Management and Specialized electives portions of the Technology Studies – CAD Option associate degree.

<sup>3</sup> From the Learning Outcomes enumerated list provided at the beginning of Section 3 of this application



# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

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

**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
Mark Vesligaj, Professor and PC COT	Carnegie Mellon University (MSMechE)	Jakob Engineering, Manufacturing, Design	PC COT and COT coursework and Mathematics coursework
Spjut, Instructor	University of California-Berkeley (MSChemE)	Engineering, Manufacturing, Design	COT coursework

# Connecticut Board of Regents for Higher Education

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

<i>Institution</i>	QVCC	<i>Date</i>	9/4/2012
	Computer Aided		
<i>Proposed Program</i>	Design (CAD)		
	Certificate		

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)	5	5	6	6	8	8
New Students (first time matriculating)	5	5	6	6	8	8
Continuing (students progressing to Credential)	5	5	6	6	8	8
Headcount Enrollment	15	15	18	18	25	25
Total Estimated FTE per Year	18		22		30	

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)	\$35,980	\$8,995	\$43,176	\$10,794	\$60,446	\$15,112
Program-Specific Fees	\$0	\$0	\$0	\$0	\$0	\$0
Other Rev. (Annotate in text box below)	\$0		\$0		\$0	
Total Annual Program Revenue	\$44,975		\$53,970		\$75,558	

PROJECTED Expenditures <sup>1</sup>	Year 1		Year 2		Year 3	
	Number (as applicable)	Expenditure	Number	Expenditure	Number	Expenditure
Administration (Chair or Coordinator)		\$0		\$0		\$0
Faculty (Full-time, total for program)		\$0		\$0		\$0
Faculty (Part-time, total for program)		\$12,000		\$12,000	2	\$24,000
Support Staff (IT)		\$0		\$0	1	\$0
Library Resources Program	0	\$0	0	\$0	0	\$0
Equipment (nothing new)		\$0		\$0		\$0
Other (e.g. student services)	0	\$0	0	\$0	0	\$0
Estimated Indirect Cost (e.g. student services, operations, maintenance)		\$38,000		\$38,000		\$48,000
Total ESTIMATED Expenditures:		\$50,000		\$50,000		\$72,000

• 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; the cost for this program is effectively \$0 as all costs are already incurred by the CAD Option associate degree.

<sup>1</sup> 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.

**Connecticut Board of Regents for Higher Education**  
*APPLICATION FOR NEW PROGRAM APPROVAL* PRO FORMA BUDGET-RESOURCES AND EXPENDITURE PROJECTIONS

<sup>1</sup> 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.

**CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION**  
**BELOW-THRESHOLD NEW ACADEMIC OFFERING INFORMATION REPORT FORM - 01/20/12**

**SECTION 1: BELOW-THRESHOLD GENERAL PROGRAM INFORMATION<sup>1</sup>**

<b>Institution:</b> Quinebaug Valley Community College	<b>Date of Submission to BOR Office:</b> May 14, 2014		
<b>Most Recent NEASC Institutional Accreditation Action and Date:</b>			
<b>Characteristics of Below-Threshold Offering</b> Name of Offering: Business Administration Type of Offering (e.g. Grad Certificate, Minor, Option) <b>Degree</b> Anticipated Initiation Date: Fall 2014 Anticipated Date of First Completion (if applicable): Spring 2016 Modality of Program: On ground    Online    X Combined If "Combined", % of fully online courses? Varies*		<b>Credit Distribution of the Offering</b> # Cr in Core Courses: 3 # Cr of Electives: 15 BUS/ACC, 6 OPEN ELE # Cr of Other: 36/38 # Cr Special Requirements (e.g. internship): 0 Total # Cr the Institution Requires to Award the Credential 60/62	
<b>Suggested CIP Code No. (if applicable)</b>		<b>Title of CIP Code</b>	
<b>Institution's Unit (e.g. School of Business) and Location (e.g. main campus) Offering the Program:</b> Business/Main Campus			
<b>Description of Offering, Context and Justification</b> (Please provide a concise description of the proposed offering and learning objectives, including a list a list of courses if necessary for clarity. In one paragraph, please address need and anticipated benefits of the offering)  The Business Administration Degree was designed with flexibility in mind. The degree is structured to provide room for specific classes that meet the transfer requirements for our receiving schools. It is also by nature a general business degree, and can be used by students that come to QVCC with significant transfer or life experience credits. Because of our foresight in its creation, the degree served as the basis for discussions to formulate the new Business TAP. Since the TAP requires students to take a 4 credit lab science and suggests a 4 credit math class (MAT* 186), the BA as we initially designed it would balloon to as many as 65 credits. It should also be noted that the new TAP does not require a foreign language (many students have met this requirement in HS.)  We are making two modifications: 1) eliminate one of the electives to bring the required number of credits down to a required range of 60-62 credits. 2) Replace the foreign language requirement with a second HUM ELE. (Students that need a foreign language can still take it.) With these small proposed modifications, the QVCC degree will be 100% compliant with the new requirements of the Business TAP. (It should also be noted that based upon preliminary discussions with Accounting TAP members, this revised BA degree will also yield the flexibility required to meet the needs of that program.)  *Most of the courses in the program are offered on-line periodically. There are no courses that are offered exclusively on-line.			
<b>Cost Effectiveness and Availability of Adequate Resources</b> (As applicable, please provide a one paragraph narrative addressing resources, financial aspects of the program and how it will be sustained) No additional resources will be needed to support the program beyond those already in place.			
<b>Institutional Contact for this Proposal:</b>		<b>Title:</b>	<b>Tel.:</b> <b>e-mail:</b>

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

BOR Sequence Number (to be assigned):

<sup>1</sup> This information report pertains to academic programs not reaching the threshold requiring Board of Regents action. Information is shared with the BOR-Academic Council and included in the BOR-Academic and Student Affairs Committee meetings. Most CSUS and COSC cases will only require the completion of Section 1. **All Community College programs require the completion of detailed course information in Section 2.**

# CONNECTICUT BOARD OF REGENTS FOR HIGHER EDUCATION

*BELOW-THRESHOLD NEW ACADEMIC OFFERING INFORMATION REPORT FORM - 01/20/12*

Approved 2010 CIP Code No. (if applicable) <sup>2</sup>

Title of CIP Code

Log of BOR Steps:

Date for Inclusion in BOR-ASA Meeting Package:

Comments

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<sup>2</sup> If needed, CIP assignment will be done by BOR staff in consideration of suggested number and in consultation with academic 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**  
**BELOW-THRESHOLD NEW ACADEMIC OFFERING INFORMATION REPORT FORM - 01/20/12**

**SECTION 2: DETAILS OF NEW OFFERING (Community Colleges)**

**Curriculum**

*(Please provide details of the courses for the proposed offering. Mark any new courses with an asterisk \* and attach descriptions. Mark any courses that are delivered fully online with a double asterisk \*\*. Please modify this format as needed for each case)*

Course Number and Name	L.O. #	Pre- Requisite	Cr Hrs	Course Number and Name	L.O. #	Cr Hrs
<b>Core Courses</b>				<b>Other Requirements</b>		
ACC* 113	1,2,3		3	BMG* 210 (Critical Analysis)	1,2,3	3
ACC/BUS ELE	1,2,3		15**	BBG* 115 (Info Tech)	1,2,3	3
				OPEN ELE**		6
				Comm ELE (rec BMG* 204)		3
				ENG* 101		3
				HUM ELE**		6
<b>Prerequisites</b>						
				ECN* 101		3
				ECN* 102		3
				ANT* 105, HSE* 213, PSY* 111,		
				PSY* 112 or SOC* 101**		3
				HIS ELE		3
				MAT ELE**		3/4
				SCI ELE**		3/4
<b>Total Other Credits Required to Issue Credential</b>						<b>60/62</b>

**Other Details**

**Learning Outcomes - L.O.** *(Please list up to three of the most important student learning outcomes for the offering and concisely describe assessment methodologies to be used in measuring the outcomes. If the program will seek external accreditation or qualifies the completer to opt for a professional/occupational license, please frame outcomes in attention to such requirements.)*

1. Demonstrate relevant content knowledge in required core business disciplines and apply concepts in problem solving through identifying and evaluating alternative solutions and offering a well-supported conclusion.
2. Demonstrate an understanding of the interrelationships between accounting and business courses.
3. Apply concepts in core business disciplines and critical thinking skills to make sound financial decisions.

(Additional program outcomes will be dependent upon the specific elective courses chosen to complete the degree.)

\*\*Students wishing to participate in the new ConnSCU TAP are encouraged to take ACC\* 117, BMG\* 220, BBG\* 234, BMK\* 201, BMG\* 202, BFN\* 201 (ACC/BUS ELE, OPEN ELE), MAT\* 146 or higher (MAT ELE), PSY\* 111, ENG\* 102 or 110 (HUM ELE) a 4 credit lab science (SCI ELE) and MAT\* 167 (OPEN ELE.)



MANCHESTER  
COMMUNITY  
COLLEGE

Office of the President  
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## **MEMORANDUM**

DATE: April 30, 2014

TO: Dr. Gregory W. Gray  
President, Board of Regents

FROM: Dr. Gena Glickman  
President

SUBJECT: Manchester Community College Recommendation for Promotion & Tenure

I am recommending the following individuals for promotion and/or tenure for the 2014-2015 academic year.

<b><u>Name</u></b>	<b><u>Current Faculty Rank</u></b>	<b><u>Promotion to Rank of:</u></b>
Ricardo Aragon	Instructor	Assistant Professor
Sarah Cieglo	Instructor	Assistant Professor
Katherine Kern	Instructor	Assistant Professor
Pauline Lizotte	Instructor	Assistant Professor
Christopher Hamelin	Assistant Professor	Associate Professor
Pamela McManus	Assistant Professor	Associate Professor
Fatma Salman	Assistant Professor	Associate Professor
Jeanine DeRusha	Associate Professor	Professor
Paul Edelen	Associate Professor	Professor
Kimberly Hamilton-Bobrow	Associate Professor	Professor
Daniel Long	Associate Professor	Professor
Tanya Millner-Harlee	Associate Professor	Professor
Steven Moore	Associate Professor	Professor
Rebecca Townsend	Associate Professor	Professor

Page Two

**Promotion continued:  
Community College Professionals**

**Name**

Paula Cook  
Regina Ferrante  
Barry Grant  
Julie Greene  
Raymond Kingston  
Heather Li  
Darlene Mancini-Brown  
Patricia Ronalter  
Catherine Seaver  
Carleigh Schultz  
Robert Turner, Jr.  
Umesh Vig

**Tenure**

Susan Barzottini  
David Caldwell  
Patricia Carrigan  
Martin Hart  
Steven Moore  
Catherine Seaver  
Rebecca Townsend  
Susan VanNess  
Brittany Zavaski

c: Laurie Dunn  
Holly Foetsch



**Item: Academic Program Review Policy and Guidelines****Background**

Academic program review is integral to academic planning and assessment efforts at the institutional level and the Connecticut State College and University (ConnSCU) System . The program review process is a campus-based review that is intended to examine, assess, and strengthen academic programs offered at the seventeen (17) institutions within the ConnSCU System. Program reviews are a means of ensuring continuous quality improvement by involving a comprehensive assessment of goals, infrastructure, operations and outcomes in relationship to the institution's mission. The program review process also facilitates dialogue among the Board of Regents, the System President, and the campus Presidents. The process provides an organized and structured opportunity for all parties to reflect on educational practices, and to review the role of the program in the context of all academic offerings at the institutional level.

**RECOMMENDATION**

It is recommended that the Board of Regents consider approving the following resolution:

5/14/2014 – Academic Council

6/6/2014 – BOR-Academic and Student Affairs Committee

## **CT BOARD OF REGENTS FOR HIGHER EDUCATION**

### **RESOLUTION**

concerning

#### **Academic Program Review Policy**

**June 18, 2014**

RESOLVED: That the Board of Regents for Higher Education approve the following Academic Program Review Policy, and be it further

RESOLVED: The Academic Program Review Policy rescinds all prior System and Board of Regents program review policies.

A True Copy:

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

### **ACADEMIC REVIEW POLICY**

The Connecticut State College and University System recommends that all academic programs undergo a comprehensive review on a periodic basis. At a minimum, each degree and certificate granting program is subject to review at least once every seven-years. The Provost and Senior Vice President for Academic and Student Affairs collaborates with the institution's president and chief academic officer to establish an academic program review annual schedule. All Centers and Institutes are also subject to the same seven-year periodic program review.

The evaluative, directional and planning judgments resulting from program reviews are oriented within the context of disciplinary/professional norms and institutional mission. The areas in which program quality is evaluated may include, but are not limited to:

1. Student enrollment, retention, graduation and transfer (as appropriate).
2. Student advisement, engagement, and support.
3. The quality of educational programs including assessment of student learning.
4. Curricula and curricular contributions to college/university programs.
5. Faculty and department contributions in teaching, research, creative activity, scholarly work and service.
6. Diversity and cultural proficiency.
7. The quality of outreach activities and service to the institution, the profession and the community.
8. Alumni and business and industry fundraising.

9. The contribution or importance to General Education and other campus programs.
10. Collaborations with other ConnSCU institutions and other CT colleges/universities.
11. Program governance and administrative support.
12. Program operations and resources.
13. Facilities, library and other educational resources available to and utilized by the schools.
14. Safety and adequacy of physical facilities.
15. The sustainability of human and financial resources to maintain a quality program.
16. The strengths and weaknesses of the program.

#### **ConnSCU Process:**

An initial process of setting a schedule for Academic Program Reviews on each campus will be completed. Annually, thereafter (February/March), the ConnSCU Provost and Senior Vice President for Academic and Student Affairs will confirm with the institution's President and Chief Academic Officer the list of academic programs to be reviewed over the next three years. The means of review (internal and/or with external reviewers) will be determined in collaboration with the institution's Chief Academic Officer.

The academic program review schedule will be presented to the Board of Regents Academic and Student Affairs Committee for consideration. Upon approval, the academic program review schedule will be presented to the full Board for ratification.

Annually, the results from the academic program review process will be presented to the Board of Regents at a September/October meeting. If warranted, appropriate Board action which may include further study will ensue.

#### **General Recommended Standards:**

The System encourages that each institution's Bylaws or campus policies indicate that the faculty, deans, department chairs, program coordinators, curriculum and general education committees and other duly constituted college/university committees have the primary responsibility for curriculum design, development, management, evaluation and the authority to enact curricular change in accordance with institution specific accreditation standards. Changes may include, but are not limited to, credit hours (or alternative measurement methodology), curriculum objectives, learning outcomes, course content, integration and linkages across program components, as well as, teaching methodology, component and/or overall programmatic evaluations and learning outcomes.

#### **Curriculum Management:**

Upon completion of the academic program review process, the primary factors that often shape change to the academic program may include but are not limited to the following:

1. Continuous faculty review of the curriculum.
2. Competency based curriculum and assessment of competency.
3. Alignment and adequate assessment of course and program student learning outcomes.
4. Adequate assessment of student learning outcomes that indicate a need to modify existing curricula or pedagogy (NEASC Series E reports).
5. Excess credit hours.
6. Student feedback.
7. Peer feedback including external reviewers.
8. Professional accreditation.
9. Research.
10. National trends.
11. Program involvement of Business and industry
12. Economic impact to the State of Connecticut.

**Program Review Committee:**

The diverse degree programs offered throughout the System require that external advisory committees, external reviewers and/or campus based committees with discipline specific knowledge participate in the academic program review process. The institution's curriculum committee or appropriate institutional committee is encouraged to be included in the evaluative process in the following ways:

1. Oversee the evaluation, review, and recommendation for curriculum and content.
2. Conduct a periodic needs assessment of courses and programs on various criteria including projected changes in learning content from national or regional accreditors, student interest, employers or industry forecasts, and program completion data.
3. Ensure each program has student learning outcomes that are appropriate for the program, including assessment measurement, targets, and benchmarks; indicate and demonstrate how data and assessment are used in program improvement.
4. Assess the duplication of courses and/or programs within the institution.
5. Ensure that each Dean or campus designee is appropriately assessing data to determine whether modifications and/or changes to the curriculum are needed.
6. Ensure the curriculum has adequate hours and courses to meet the student learning outcomes based on local, regional, and/or national standards as appropriate.
7. Initiate a curriculum mapping process to determine course sequencing breadth and depth of course content, student learning outcomes, degree and transfer requirements.
8. Determine that program credit hours or equivalent school specific accreditation standard of measurement are adequate and appropriate based on accreditation and state requirements.
9. Review student course evaluation trends, trends in student concerns and issues, and recommend solutions.
10. Review student recruitment publications for accuracy in representing the institution's practices and policies.

**Item: Normalize Credit Hours for Associate and Baccalaureate Degree Programs****Background**

In the past few years, there have been extensive studies on the topic of excessive credits and efforts to normalize associate and baccalaureate degree credit hours. The studies include: Complete College America, *Wasting Time: Costs, Consequences, and Causes of Excess Credits and Time to Degree*; Georgetown University report *The High Price of Excess Credits: How New Approaches Could Help Students and Schools*; and the State University System of Florida, Office of Academic Programs Review; *Hours to Graduation: A National Survey of Credit Hours Required for Baccalaureate Degrees*. These studies have documented wide disparities in academic credits for degree completion. All three reports identified the importance for system and institutional leadership to begin a systemic review of degrees' credit requirements.

Thus, it is appropriate for the Connecticut State College and University System, that the campus presidents and chief academic officers consider the benefits to normalize associate degree programs to 60 credits and baccalaureate degree programs to 120 credits except in cases where accreditation requirements require additional credits for degree completion.

A thorough review of academic credits for associate and baccalaureate degree programs within the ConnSCU System will:

1. Validate that the credits required for graduation meet the national standard;
2. Provide for a campus based review and appropriate action to reduce and/or eliminate unnecessary credit hours;

The process to review academic credit hours and to consider normalizing the number of credits for an associate and/or baccalaureate degree is campus-based and campus managed. The process will not infringe upon faculty governance or institutional management of the degree program. All decisions on curriculum and course content remain within the campus decision-making authority.

**RECOMMENDATION**

It is recommended that the Board of Regents consider approving the following resolution:

**CT BOARD OF REGENTS FOR HIGHER EDUCATION**

**RESOLUTION**

concerning

**Normalize Credit Hours for Associate and Baccalaureate Degree Programs**

**June 18, 2014**

**Whereas**, the Board of Regents believes that public postsecondary education institutions must be concerned with issues and practices affecting access and affordability; and

**Whereas**, the Board of Regents' efforts to advance affordability could be enhanced by the institutions normalizing the credit required for completing an associate and baccalaureate degree; and

**Whereas**, the Board of Regents recognizes that normalizing associate and baccalaureate degree credit hours could significantly reduce the time to obtain a degree for many students; and

**Whereas**, the Board of Regents endorses a rigorous system-wide review of academic programs to be undertaken in collaboration between the institution's president and chief academic officer to determine if there are any excess credit requirements within their degree programs; now

**Therefore, Be It Resolved** that the Board of Regents authorizes and instructs the ConnSCU System President to require each President and Chief Academic Officer of a college offering an Associate and/or a Baccalaureate degree to:

- 1) Develop and implement a review process for each Associate and Baccalaureate degree program with the goal of normalizing the number of credits at 60 and 120 credit hours respectfully without compromising accreditation and certification requirements. The review should also include the identification of institution and department policies that might contribute to excess credit hours required for graduation.
- 2) Provide compelling rationale to maintain Associate and/or Baccalaureate degree programs with more than 60 or 120 credit hours following the completion of a campus-based review, and

**Be It Further Resolved** that each affected campus is directed to present its findings and recommendations to the System President and the Board of Regents no later than completion of the fall semester, December 2015, and.

**Be it Further Resolved** that approved recommendations to normalize Associate and Baccalaureate degree programs to 60 and 120 credits be implemented, no later than with the entering freshmen class for fall 2016 or the entering class of students appropriate for the campus.

A True Copy:

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

## **Transfer and Articulation Progress Report 5/26/2014**

### **Overview**

Public Act 12-31 charges the regional community-technical college system and the Connecticut State University System to develop and implement a general education core of courses for which no fewer than thirty academic credits shall be offered by each such constituent unit a part of its liberal arts and sciences programs and any other degree program designated as a transfer program. To better understand our transfer population it is interesting to note that “while more than 80 percent of all entering community college students indicate their intention to earn a baccalaureate nationally, only 15 percent end up doing so within six years” (CCRC, April 23, 2014). In Connecticut, the CSCU’s graduated 5,424 associate degrees in spring of 2013, which equates to 814 students possibly transferring a year to our state universities. This report endeavors to outline the progress of the TAP initiative to date.

### **TAP Update**

Policy - Competency approval

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

In compliance with both NEASC Standard 4 and the BOR TAP Policy, the Common, Competency-based Core Curriculum was developed and approved by all 17 institutions. The Competencies are:

Written Communication in English  
Oral Communication in English  
Historical Knowledge/Understanding  
Quantitative Reasoning  
Social Phenomena Knowledge/Understanding  
Critical Analysis and Logical Thinking  
Scientific Reasoning  
Scientific Knowledge/ Understanding  
Aesthetic Dimensions

The TAP Steering Committee was charged with:

- Develop timeline and periodic benchmarks for work that meets the TAP requirements

- Review relevant literature including resources offered by the Coordinating Council
- Identify parameters of the TAP policy competencies for the sub-committees
- Provide agreed-upon learning outcomes for each competency through sub-committees
- Support and serve as resource for sub-committees
- Coordinate sub-committees' efforts as needed
- Function as liaison between campus committees and coordinating council
- Determine goals and learning outcomes for the competency framework
- Communication and definition of the competency based framework to constituency

## **Program Manager**

In order to facilitate the progression of the TAP policy and compliance with House Bill 5030 Public Act No. 12-31 a new position was created at the Board of Regents. The TAP Program Manager was hired on January 15, 2014 to oversee the implementation of TAP and facilitate communication among all groups about TAP, with special focus on pathways creation and approval. The majority of the past four months has been spent determining the status of the pathways groups, learning the history of TAP and interpreting the law and BOR policy. Visiting campus general education committees, pathway group co-chairs, and meeting with the chief academic affairs officers provided insight to the litmus of TAP at the local level. The TAP Implementation and Review Committee was formed, charged, and has agreed upon the next five pathways to be convened in fall 2014. The next pathways are:

- English
- Sociology
- Mathematics

The program manager also created a BOR website shell for the TAP-IRC group to share documentation for dissemination. This is a site that is protected as the documentation are working drafts. The website has been greatly utilized and shows the progression of the group's involvement having only been formed two months previously. The link to the website is provided at the end of this document. The majority of the research done to support the pathways groups and to determine the next pathways to be chosen was facilitated by the planning documentation that the pathways groups utilized via a Blackboard pathways shell for which the TAP program manager is the administrator. The shell is similar to the website although the major difference is the ability to share, edit, and comment upon the documents posted in blackboard. The BOR website is for review purposes only. Blackboard allows the program manager a much more intimate involvement with the pathways process, conversations, and document construction. The TAP IRC Committee also vote to waive College of Technology programs from TAP and to table the nursing pathway until the General Education Core at the community colleges is determined.



### **General Education Framework Work to Date:**

- NVCC – has adopted TAP as their gen ed core and are fully implementing
- TXCC - has fully aligned their BA curriculum with the TAP model. Competencies were finished last spring. All courses have been mapped to one of the TAP competencies
- NWCC – is in the process of mapping the TAP competencies to the gen ed competencies. NWCC has begun working on assessing the gen ed competencies.
- HCC - academic Departments have cross referenced all active individual course outcomes with the TAP Competencies. A task force is now being put in place to clarify and coordinate the TAP process on the campus.
- Asnuntuck - is establishing a General Education Committee
- Capital - has 80-90 of their courses mapped to the framework
- MCC – is integrating the TAP framework into pre-existing gen ed core
- TRCC - has agreed to the TAP learning outcomes but has yet to map courses to the competencies. Gen education Committee established
- QVCC – general Education Committee established some mapping to date
- MXCC – program modification to align with TAP also are debating the transfer silos to comply with the initiative
- NCC – in the process of overlaying TAP framework onto Gen Ed Core
- GWCC – Is currently mapping courses to framework

### **Pathways:**

All 17 CSCU System institutions have agreed on the General Education Core Competencies and are currently mapping courses or aligning current General Education Cores with TAP. Assessment of student learning outcomes has been established via proposed rubrics and a system-wide committee has begun discussing a platform for assessment of learning outcomes. The campus review and approval process for the General Education Core, learning outcomes and assessment includes faculty council or similar faculty curriculum committees, faculty senate or similar campus wide faculty governance body, Deans, the chief academic officer and the campus president.

### **Biology:**

All 17 CSCU System institutions have considered the pre-major (30 credits) courses for the Biology discipline. The pathways work group approved the Biology Pathway in Spring of 2014.

All 17 CSCU System chief academic officers have reviewed the biology discipline courses. ECSU, WCSU, and SCSU have approved. CCSU is in the review process.

While the general education framework has not been established at all the community colleges, the biology pathway dictated a robust general education framework so specific in its design that the approval of this pathway is in keeping with both the law and the policy. (see attachment)

Biology has not gone through curriculum committees at the individual institutions.

**Anticipated completion: Fall 2014.**

**Psychology:**

The psychology pathways group had determined coursework for both the psy pre-major at the community colleges and the remaining third and fourth years at the CSU's and COSC. They have not approved the pathway due to the inconsistency of the general education committee core framework. Psychology has overlap with the general education framework and thus is concerned that offerings in the core would be in keeping with the pre-major requirements (see attachment). Due to the length of time since they were last convened they are interested in reinstating the work group to update new members and make sure that the pathway is still relevant.

Psychology has been presented to the Chief Academic Affairs Officers

CCSU – pending review

ECSU – no information

WCSU – no information

SCSU- Approved the psychology pathway

Psychology has not gone through curriculum committees at the individual institutions.

**Anticipated completion: Fall 2014.**

**Communication:**

The Communication Pathway was approved internally at the November 15, 2013 (see attachment) meeting and is awaiting institutional approval. It is a solid pathway which is prescriptive in nature and is anticipated to pass through approval processes smoothly.

CCSU –

ECSU –

WCSU – Approved

SCSU-

Communication has not gone through curriculum committees at the individual institutions.

**Anticipated completion: Fall 2014.**

**Business/Management:**

In May of 2013 the framework of the Business/Management pathway was established but the additional 30 credits were still in discussion. The pathway has resumed communication and has isolated three issues for discussion and resolution so that the pathway can be approved. Once accomplished, the pathway will follow approval processes on the campus level and through the TAP hierarchy.

CCSU –  
ECSU –  
WCSU –  
SCSU-

Business/Management has not gone through curriculum committees at the individual institutions. Nor has the pathway been reviewed or approved by the Chief Academic Officers.

**Anticipated completion: Fall 2014.**

**Questions regarding the TAP Policy:**

As presently constituted, the ConnSCU institutions are a composite of diverse institutions which, while maintaining this valued diversity, will now require a measure of system-wide curricular coherence to implement the transfer policy.

1. *The common general education core should be general enough to allow for significant campus level creativity in determining how to develop institutional core curricula consistent with the framework and also responsive to differing student populations and institutional missions.*
2. *The common general education core should facilitate student transfer among ConnSCU institutions.*

One challenge with the TAP policy is the general education core philosophy. How do we implement a gen ed core that allows “significant campus level creativity in determining how to develop institutional core curricula” while supporting a “general education core which facilitates student transfer among ConnSCU institutions”? We are finding a significant variance with the determination of which courses correspond to which competency at the local level. Utilizing this method we will have twelve different general education cores which makes seamless student transfer among ConnSCU institutions challenging.

## Timeline:

Sept	<p>TAP Framework Implementation and Review Committee reviews general education portion of each pathway for consistency with TAP Framework</p> <p>TAP Program Manager conducts orientation meetings with new pathways groups</p> <p>(Ongoing) Pathways work groups complete their templates and provide to TAP Program Manager, who forwards to Provost and SVP as well as the TAP Framework Implementation and Review Committee</p> <p>Convene Coordinating Council</p> <p>Convene Implementation and Review Committee monthly meetings</p> <p>Convene Assessment and Planning Committee</p> <p>State colleges and universities approve pathways articulations following their local process</p> <p>ASA to approve Business/ Management and Media Pathways</p>
October	<p>Determination of Pathways in need of waivers/2+2 institutional agreements</p>
November	<p>Assign Pathways for spring 2015</p>
December	<p>ASA approves final transfer pathway programs for fall 2014. The Board of Regents affirms transfer associates degrees and major pathway programs</p> <p>Assess process/progress to date and make adjustments for Spring 2015</p> <p>Plan pathways orientations for Spring 2015</p>

BOR Website shell - <http://www.ct.edu/initiatives/irc>

**Attachments to include:**

**Biology Pathway Template**

**Psychology Pathway Template**

**Communication Pathway Template**

**Business Management Pathway Template**

**Competency Matrix**

Connecticut State College and University System

Report to the Academic and Student Affairs Committee of the Board of Regents

June 6, 2014

**2+2 Program Report**

The Connecticut State College and University System (CSCU) of colleges and universities provides multiple options for students to transfer from a two year college to a four year university. The intent of all transfer student options is to ensure a seamless transfer and for the receiving institution to accept all college-level academic credits earned at the home institution towards a baccalaureate degree.

The 12 two-year colleges and the 4 four-year universities participate in a Dual Admission program that provides students with easy transfer. The CSCU System Dual Admission website provides an interactive course equivalency to assist students with course/degree transfer. In addition, the two year colleges, four year universities, and Charter Oak participate in a comprehensive Transfer Compact and a Guaranteed Admission program.

One of the CSCU System primary student transfer options is the 2+2 program. The traditional 2+2 transfer model is a specific academic program transfer agreement between two institutions. The following report indicates business, criminal justice, social work, liberal arts, communication, psychology, and childhood education as the most common 2+2 programs.

**Eastern Connecticut State University:**

Participates in the Dual Admission program

Participates in the Guaranteed Admission program

**Central Connecticut State University:**

Participates in the Dual Admission program

Participates in the Guaranteed Admission program

Insurance and Financial Services with Capital Community College

Business articulation with Capital Community College

Communication with Briarwood College

**Page 2**

**2+2 Programs**

Hospitality Management with Manchester Community College

Computer Science/Mathematics with Tunxis Community College

Mathematics for Secondary Teaching Certification with Tunxis Community College

Computer Science with Tunxis Community College

Interpreting for the Deaf with Northwestern Community College

Biology Concentration with Northwestern Community College

BSN with Goodwin College

**Southern Connecticut State University:**

Participates in the Dual Admission program

Participates in the Guaranteed Admission Program

AA and AS degree articulation with Community College of Rhode Island

Secretarial Program with Katherine Gibbs

Nursing/ACE Program with Eastern Connecticut State University

Therapeutic Recreation with Manchester Community College

Pre-Pharmacy with UCONN

Exercise Science with Northwestern Community College

Physical Therapy with Housatonic Community College

Fitness Specialist with Gateway Community College

Teaching (Public Health) with Gateway Community College

**Western Connecticut State University:**

Participates in the Dual Admission program

Participates in the Guaranteed Admission program

**Page 3**  
**2+2 Programs**

**Asnuntuck Community College:**

Business Management with Albertus Magnus College

Joint Admission with American International College

Joint Admission with Bay Path

Guaranteed Admission with Sacred Heart

Liberal Arts & Sciences with UConn

Agriculture and Natural Resources with UConn

Business with UConn

Accounting with University of St. Joseph

Psychology with University of St. Joseph

Management with University of St. Joseph

Social Work with University of St. Joseph

Nursing with University of St. Joseph

**Capital Community College:**

Architectural Engineering with University of Hartford

Communication Media with Central Connecticut State University

Communication Media with University of Hartford

Criminal Justice with Central Connecticut State University

Criminal Justice with Springfield College

Criminal Justice with University of Hartford

Criminal Justice with University of New Haven

Early Childhood Education with Charter Oak

Early Childhood Education with Eastern Connecticut State University

Early Childhood Education with University of Hartford



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**2+2 Programs**

Early Childhood Education with St. Joseph University

Fire Technology with University of New Haven

Insurance and Financial Services with Central Connecticut State University

Management with UConn

Management with Central Connecticut State University

Management with University of St. Joseph

Music Industry with University of New Haven

Engineering with UConn

Engineering with University of Hartford

Technology Studies with Central Connecticut State University

Nursing with Central Connecticut State University

Nursing with Charter Oak

Nursing with Eastern Connecticut State University

Nursing with Southern Connecticut State University

Nursing with UConn

Nursing with University of Hartford

Nursing with University of St. Joseph

Nursing with Western Connecticut State University

Pharmacy with UConn

Pharmacy with University of St Joseph

Psychology with Charter Oak

Psychology with Central Connecticut State University

Psychology with Eastern Connecticut State University

Psychology with University of St Joseph

**Page 5**  
**2+2 Programs**

Psychology with UConn

Psychology with University of Hartford

Psychology with Western Connecticut State University

Psychology with Southern Connecticut State University

Public Safety Administration with Charter Oak

Radiological Technology with University of Hartford

Radiological Technology with Quinnipiac University

Social Services with Charter Oak

Social Services with UConn

Social Services with Eastern Connecticut State University

Social Services with Central Connecticut State University

Social Services with University of St Joseph

Social Services with Springfield College

**Charter Oak College:**

Charter Oak State College has 115 programmatic agreements (75 in-state and 40 out-of-state) and over 38 overall articulation agreements, which includes both programmatic and overall agreements with each of the Connecticut's community colleges. For example, we have program articulation agreements in early childhood, criminal justice, health information management, and business. We have agreements that show how students can combine courses from their associate degree major with a different area of study to develop an individualized studies concentration. Since we are extremely transfer friendly, students rarely lose credits in transfer and because we are primarily a general studies college, students can also complete their associate degree in one area of study and then complete their bachelor's degree with a concentration in a different area.

**Gateway Community College**

Guaranteed admission with Albertus Magnus

Early Childhood Education with Charter Oak

**2+2 Programs**

Drug and Alcohol Recovery with Charter Oak

General Education/Liberal Arts with Charter Oak

Business with Eastern Connecticut State University

College of Technology – Engineering Science Pathway with Fairfield University

Guaranteed Admissions with Sacred Heart University

Business with Southern Connecticut State University

Exercise Science & Wellness with Southern Connecticut State University

Social Work with Southern Connecticut State University

Natural Science with Southern Connecticut State University

Business with UCONN

General Studies with UCONN

Drug and Alcohol Recovery with University of New Haven

Criminal Justice with University of New Haven

Human Services with University of New Haven

College of Technology – Engineering Pathway with University of New Haven

Dietetic Technology with University of New Haven

Dental Hygiene with University of New Haven

Guaranteed Admissions with University of Bridgeport

Guaranteed Admissions/General Admission with University of Phoenix

Business with Western Connecticut State University

Guaranteed Admission with all Connecticut State Universities

**Housatonic Community College**

Criminal Justice with Post University

Art with New York University

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**2+2 Programs**

Music with New York University

Communications with New York University

Education with New York University

Nutrition with New York University

Public Health with New York University

Speech Language Pathology with New York University

Applied Psychology with New York University

Social Work with New York University

School of Continuing and Professional Studies with New York University

All Associate Degree programs with Marymount College (New York)

Fine Arts with Lesley University

Graphic Design with Lesley University

Engineering with Fairfield University

Liberal Arts & Sciences with Fairfield University

Business with Fairfield University

Nursing with Fairfield University

Human Services with Albertus Magnus College

Business Management with Albertus Magnus College

Allied Health with UConn (branch)

Environmental Science with UConn (branch)

Nutrition with UConn (branch)

American Studies with UConn (branch)

Biological Sciences with UConn (branch)

Communications with UConn (branch)

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**2+2 Programs**

Economics with UConn (branch)

History with UConn (branch)

Human Development & Family Studies with UConn (branch)

Maritime Studies with UConn (branch)

Mathematics with UConn (branch)

Psychology with UConn (branch)

Statistics with UConn (branch)

Women's Studies with UConn (branch)

Business Administration with UConn (branch)

Accounting with UConn (branch)

Business law with UConn (branch)

Accounting with Quinnipiac University

Business Management with Quinnipiac University

Marketing and Advertising with Quinnipiac University

Entrepreneurship with Quinnipiac University

Finance with Quinnipiac University

International Business with Quinnipiac University

Computer Information Systems with Quinnipiac University

Communications with Quinnipiac University

Journalism with Quinnipiac University

Public Relations with Quinnipiac University

Film with Quinnipiac University

Video and Interactive Media Services with Quinnipiac University

Sciences with Quinnipiac University

**2+2 Programs**

Humanities with Quinnipiac University

Theater with Quinnipiac University

Game Design and Development with Quinnipiac University

Computer Science with Quinnipiac University

Social Science with Quinnipiac University

Psychology with Quinnipiac University

Sociology with Quinnipiac University

Criminal Justice with Quinnipiac University

Legal Studies with Quinnipiac University

Mathematics with Quinnipiac University

Biomedical Sciences with Quinnipiac University

Health and Science Studies with Quinnipiac University

Business Administration with Sacred Heart University

Business Management with Sacred Heart University

Accounting with Sacred Heart University

Finance with Sacred Heart University

Criminal Justice with Sacred Heart University

Dental Hygiene with University of Bridgeport

Human Services with University of Bridgeport

Business with University of Bridgeport

Computer Science/Engineering with University of Bridgeport

Math with University of Bridgeport

Accounting with University of Bridgeport

Biology with University of Bridgeport

**2+2 Programs**

Computer Applications & Information Systems with University of Bridgeport

Marketing with University of Bridgeport

Management with University of Bridgeport

Journalism with University of Bridgeport

Banking with University of Bridgeport

Fine Arts with University of Bridgeport

Graphic Design with University of Bridgeport

Criminal Justice with University of New Haven

Accounting with University of New Haven

Continuing Education with University of St. Joseph

Business & Technology with UConn (branch)

Business Administration with UConn (branch)

Engineering Science pathway with Central Connecticut State University

Engineering Science pathway with UConn

Engineering Science Pathway with Connecticut College of Technology

Teaching pathway (biology, chemistry, English, foreign language, mathematics and physics with Southern Connecticut State University

**Manchester Community College:**

Accounting with St. Joseph University (Dual Admission Agreement/Weekend Program)

Accounting with Post University

Management with St. Joseph University (Dual Admission Agreement/Weekend Program)

Entrepreneurship Option, Business Administration with the University of Hartford

Accounting and Business Administration with the University of Hartford

Accounting & Business Administration with the University of Connecticut (Transfer Pathway Program/Overall GPA 3.0 and B or higher in all MCC 3000/4000 level courses

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**2+2 Programs**

Child Study (with K-6 Teacher Licensure) with St. Joseph University (Dual Admission Agreement/Weekend Program)

Psychology (liberal arts & science transfer) with St. Joseph University (Dual Admission Agreement/Weekend Program)

Liberal Arts and Sciences with the University of Connecticut

Social Work with St. Joseph University (Dual Admission Agreement/Weekend Program)

Criminal Justice with the University of New Haven

Criminal Justice with Teikyo Post University

Paralegal Studies with Elm College

Hotel/Tourism Management with Paul Smith College

Food Service Management with Paul Smith College

Therapeutic Recreation with Southern Connecticut State University

Environmental Science-Biotechnology Option with Middlesex Community Technical College

Respiratory Care with Quinnipiac University

Engineering with Fairfield University

MCC transfer to Charter Oak for upper division courses

Joint Admission Agreement with Bay Path College

**Middlesex Community College:**

Broadcast-Cinema with Quinnipiac University

Broadcast-Cinema with the University of Hartford

Business Administration with the University of Connecticut Regional Campuses (B.S. Business Technology)

Criminal Justice with Goodwin College (B.S. Organizational Studies)

Dual Admission/Transfer Compact Agreement with the Connecticut State Universities

Electric Power Technology with Bismarck State College

Engineering Science with the University of Connecticut

Engineering Science with Central Connecticut State University

Engineering Science with Fairfield University

Engineering Science with the University of New Haven



**Page 12**  
**2+2 Programs**

Engineering Science with Charter Oak State College  
Guaranteed Admission Program with the University of Connecticut  
Health Information Management with Charter Oak State College  
Radiologic Technology with St. Vincent's College  
Radiologic Technology with the University of Hartford  
Technology Studies (including Options in Computer Engineering Technology and Engineering Technology) with Central Connecticut State University  
Technology Studies (including Options in Computer Engineering Technology and Engineering Technology) with Charter Oak State College

**Naugatuck Valley Community College:**

Rn to BSN with Western Connecticut State University  
Business with Central Connecticut State University  
Criminal Justice with Central Connecticut State University  
Dance with Central Connecticut State University  
Engineering with Central Connecticut State University  
Hospitality with Central Connecticut State University  
Liberal Arts with Central Connecticut State University  
Nursing with Central Connecticut State University  
Radiologic Technology with Charter Oak  
Respiratory Care with Charter Oak  
Liberal Arts with Eastern Connecticut State University  
General Studies with Eastern Connecticut State University  
Liberal Arts & Sciences with Fairfield University  
Nursing with Fairfield University  
Math/Science with Fairfield University  
All program with Goddard College  
Nursing with Goodwin College  
Hospitality Management with Johnson & Wales  
Criminal Justice with Post University

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**2+2 Programs**

DARC with Post University  
Human Services with Post University  
Radiologic Technology with Quinnipiac University  
Nursing with Quinnipiac University  
Business with Sacred Heart University  
Nursing (RNOBN; RNOMSN) with Sacred Heart University  
Early Childhood with St. Joseph University  
Liberal Arts with St. Joseph University  
Nursing with St. Joseph University  
Radiologic Technology with St. Vincent's College  
Business Administration with Southern Connecticut State University  
Elementary/Special Education/Bilingual with Southern Connecticut State University  
Liberal Arts & Sciences with Southern Connecticut State University  
Nursing with Southern Connecticut State University  
Electrical with State University of New York  
Early Childhood with University of Bridgeport  
Human Services with University of Bridgeport  
Liberal Arts with University of Bridgeport  
Nursing with UConn  
Horticulture with UConn  
Liberal & Arts and General Studies with UConn  
Business & Technology (tri-campus only) with UConn  
General Studies with UConn  
Liberal Arts & Sciences with UConn  
Agriculture and Natural Resources with UConn  
Early Childhood with University of Hartford  
Engineering with University of Hartford  
Nursing with University of Hartford  
Radiologic Technology with University of Hartford

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**2+2 Programs**

Respiratory Care with University of Hartford

Engineering University of New Haven

Liberal Arts & Sciences with University of New Haven

All programs with University of Phoenix

Nursing with University of Wisconsin-Green Bay (online)

Business with Western Connecticut State University

Education/Secondary Math/Biology/Chemistry with Western Connecticut State University

Music with Western Connecticut State University

Nursing with Western Connecticut State University

Liberal Arts with Western Connecticut State University

Nursing (RN-MSN) Yale University

**Northwestern Connecticut Community College:**

Electric Power Technology with Bismarck State College

Biomolecular Science with Central Connecticut State University

Engineering Science & Technology Studies with Central Connecticut State University

Rn to BSN with Central Connecticut State University

Technology Studies with Charter Oak College

Engineering Science with Fairfield University

RN to BSN with Fairfield University

RN to BSN with Goodwin College

Criminal Justice with Post University

Environmental Science with Post University

RN to BSN with Sacred Heart University

RN to MSN with Sacred Heart University

RN to BSN with Saint Vincent's College

RN to BSN with Southern Connecticut State University

Animal Science with UCONN

Engineering with the University of Hartford

RN to BSN with the University of Hartford

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**2+2 Programs**

Engineering Science with the University of New Haven

RN to BSN with the University of St. Joseph

RN to BSN with the University of Wisconsin-Green Bay

RN to BSN with the Western Connecticut State University

RN to BSN with Yale University School of Nursing

**Norwalk Community College:**

Design for Web with University of Bridgeport

Nursing with University of Phoenix

Nursing with Central Connecticut State University

Nursing with Fairfield University

Nursing with Goodwin College

Nursing with Sacred Heart University

Nursing with Southern Connecticut State University

Nursing with St. Vincent's College

Nursing with University of Hartford

Nursing with University of St. Joseph

Nursing with University of Wisconsin-Green bay

Physical Therapy Assistant with Sacred Heart University

Accounting with Sacred Heart University

Accounting with Western Connecticut State University

Business Administration with UConn

Insurance & Financial Banking with Sacred Heart University

Insurance & Financial Banking with Western Connecticut State University

Legal Assistant with Sacred Heart University

Management with Sacred Heart University

Marketing with Fairfield University

Marketing with Sacred Heart University

Computer Science/Computer Security with Fairfield University

Computer Science/Computer Security with Sacred Heart University

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**2+2 Programs**

Communication Arts with Sacred Heart University  
Liberal Arts & Science with UConn  
Engineering Pathway with Central Connecticut State University  
Engineering Pathway with Charter Oak  
Engineering Pathway with UConn  
Engineering Pathway with Fairfield University  
Engineering Pathway with University of Hartford  
Engineering Pathway with University of New Haven  
Engineering Pathway with Rensselaer Polytechnic Institute  
Criminal Justice with Sacred Heart University  
Criminal Justice with University of New Haven  
Early Childhood Education with Charter Oak  
Early Childhood Education with UConn  
Exercise Science with Sacred Heart University  
Exercise Science with Western Connecticut State University  
Human Services with Sacred Heart University  
Human Services with University of Bridgeport  
Human Services with UConn  
Human Services with Western Connecticut State University  
**Quinebaug Valley Community College:**  
Liberal Arts & Sciences with Assumption College  
Liberal Arts & Sciences with Central Connecticut State University  
Business Administration with Central Connecticut State University  
Engineering Science with Central Connecticut State University  
Engineering Technology with Central Connecticut State University  
Biomolecular Science with Central Connecticut State University  
Human Services with Central Connecticut State University  
General Studies with Central Connecticut State University  
Business Administration (Management) with Nichols College

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**2+2 Programs**

Administration Assistant Office Management with Nichols College

General Studies with Nichols College

General Studies with Sacred Heart University

General Studies with the University of Bridgeport

Accounting with the University of St. Joseph

Management with the University of St. Joseph

Psychology with the University of St. Joseph

Social Work with the University of St. Joseph

Accounting with UCONN

Business Administration (Management) with UCONN

Business Administration with UCONN

Computer networking with UCONN

Engineering Science with UCONN

Fine Arts with UCONN

General Studies with UCONN

Liberal Arts & Sciences with UCONN

Medical Assistance with UCONN

Biomolecular Science with UCONN

**Three Rivers Community College:**

Architectural Design with the University of Bridgeport

Early Childhood Education with Eastern Connecticut State University

Early Childhood Education with Mitchell College

Criminal Justice with the University of New Haven

Criminal Justice with Roger Williams University

Criminal Justice with Mitchell College

Bachelor of General Studies with the University of Connecticut

Bachelor of General Studies with Charter Oak College

Accounting, Business and Marketing with University of Bridgeport School of Business

Business Management with Albertus Magnus College

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**2+2 Programs**

Electrical Engineering and Mechanical Engineering with Fairfield University School of Engineering

Technical Studies/Electric Power Technology with Bismarck State College

Sports Management with Post University

Dental Hygiene with the University of New Haven

Nursing Program (BSN) with Central Connecticut State University

Nursing with Goodwin College

Nursing with Sacred Heart University

Nursing with Southern Connecticut State University

Nursing with University of Hartford

Nursing with University of St. Joseph

Nursing with University of Wisconsin-Green Bay

Nursing with Western Connecticut State University

**Tunxis Community College:**

General Studies with the University of Connecticut

Technology Studies with Bismarck State College

Technology with Charter Oak College

Technology with Fairfield University

Technology with Central Connecticut State University

Technology with the University of New Haven

Computer Science (For Mathematics Secondary Teaching; Computer Science Alternative Program, & Honors Program) with Central Connecticut State University

Computer Information Systems with Charter Oak

Computer Science with Charter Oak College

Accounting (Weekend Program) with the University of St. Joseph

Business and Technology with the University of Connecticut

Business Administration with the University of Connecticut

Business with Eastern Connecticut State University

Business with Southern Connecticut State University

**2+2 Programs**

Business Administration with Charter Oak

Finance with Charter oak College

Business (Fashion Merchandising, Management, & Marketing) with Laboratory Institute for Merchandising

Business with Post University (Finalize May 2014)

Management (Weekend Program) with the University of St. Joseph

Engineering with the University of Hartford

Engineering Technology with the University of Hartford

Engineering Science/Technology with the University of Connecticut

Early Childhood Education with Eastern Connecticut State University

Early Childhood Education with Charter Oak College

Teaching Careers (Primary/Secondary Education) with Central Connecticut State University

Human Services with Post University

Social Work (Weekend Program) with University of St. Joseph

Psychology (Weekend Program) with the University of St. Joseph

Psychology with Charter Oak College

Sociology with Charter Oak College

Nursing (Weekend Program) with the University of St. Joseph

Criminal Justice with Post University

Criminal Justice with Charter Oak College

Dental Hygiene with the University of Bridgeport

Dental Hygiene with Vermont Technical College

Dental Hygiene (Health Studies; Organizational Leadership; &Health Care Administration) with Charter Oak College