

**Quinsigamond Community College**  
**Memorandum**

Pat Toney

2

**To:** The College Community

**From:** Pat Toney, Vice President for Academic Affairs

**Subj:** Academic Matters from December 11, 2012

**Date:** January 24, 2013

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Final approval has been given to the academic matters acted upon at the December 11, 2012 meeting of the Learning Council. All actions are effective Fall 2013 unless otherwise noted.

**I. BUSINESS & TECHNOLOGY DIVISION**

**Business Administration**

- ACC 101 Financial Accounting I
  - Revise the course description as follows: Under “areas of study” in the course description, change “financial statement analysis” to “financial statement preparation.”
- ACC 102 Financial Accounting II
  - Revise the course description from “Students use their knowledge of financial statements...” to “Students use their knowledge of preparing financial statements...”
- ACC 211 Federal Taxation
  - Revise the course description to remove preparation of “partnership, and corporation” (tax returns).
- ACC 231 Computerized Accounting
  - Revise the course description to include description of software used.
- BSS 104 Business Office Procedures
  - Revise course description to include appointment scheduling records management including medical, and compliances.
  - *Note friendly amendment: proposed wording “medical records management” changed to “records management including medical.”*
- Business Administration/Career A.S. – Business Administration Option
  - Change one Social Science Elective in Semester 2 to an Elective.
  - *Note Comment: proposed change to BUS 250 was sent back to Division.*
- MGT 216 Entrepreneurship
  - Revise course name and description.
- Entrepreneurship Certificate
  - Revise name to “Entrepreneurship and Small Business Management.”

**Electronics and Related Programs**

- Create a new course, ELT 130 Embedded Microcontrollers
- ELM 251 Instrumentation and Control Technology
  - Remove prerequisite ELT 121 Digital Computer Circuits.

- Add prerequisite ELT 130 Embedded Microcontrollers.
- ELT 299 Cooperative Experience and Seminar
  - Remove prerequisite of “ELT 122 Microprocessors or CSC 233 Computer Hardware & Support.”
  - Add prerequisite ELT 130 Embedded Microcontrollers.
- ELM 299 Cooperative Experience and Seminar
  - Remove prerequisite, “Approval of Program Coordinator.”
  - Add prerequisites ELT 104 Electronics II and ELT 130 Embedded Microcontrollers.
- Electronics Technology Certificate
  - Remove the requirement “ELT 105 CAD for Technicians or CIS 111 Microcomputer Applications or CIS 115 Introduction to Computer Applications in Telecommunications.”
  - Replace “ELT 122 Microprocessors or CSC 233 Computer Hardware and Support” with ELT 130 Embedded Microcontrollers.
  - *Note friendly amendment: Remove “Retire ELT 105 CAD for Technicians.”*
- Electronics Technology A.S. – Electronics Technician Option
  - Remove the requirement “ELT 105 CAD for Technicians or CIS 111 Introduction to Microcomputer Applications or CIS 115 Introduction to Computer Applications in Telecommunications.”
  - Replace “ELT 122 Microprocessors or CSC 233 Computer Hardware & Support” with ELT 130 Embedded Microcontrollers.
  - *Note friendly amendment: Remove “Retire ELT 105 CAD for Technicians.”*
- Electronics Technology A.S. – Biomedical Instrumentation Option
  - Remove “ELT 105 CAD for Technicians or CIS 111 Introduction to Microcomputer Applications or CIS 115 Introduction to Computer Applications in Telecommunications.”
  - Replace “ELT 122 Microprocessors or CSC 233 Computer Hardware & Support” with ELT 130 Embedded Microcontrollers.
  - Move CSC 141 Windows Client Operating Systems from Semester 2 to Semester 1.
  - Add CSC 234 Networking Technologies
  - Replace Program Elective with ELM 251 Instrumentation and Control Technology.
  - *Note friendly amendment: Remove “Retire ELT 105 CAD for Technicians.”*
- Electromechanical Technology – A.S. – Career Option
  - Replace “ELT 122 Microprocessors or CSC 233 Computer Hardware & Support” with ELT 130 Embedded Microcontrollers.
- Electromechanical Technology – A.S. – Transfer Option
  - Replace “ELT 122 Microprocessors or CSC 233 Computer Hardware & Support” with ELT 130 Embedded Microcontrollers.
  - *Note friendly amendment: Remove “Retire ELT 105 CAD for Technicians.”*

### **Heating, Ventilation & Air Conditioning**

- Create a new course, HVC 106 Comfort Heating Systems.
- Create a new course, HVC 107 Comfort Cooling Systems.
- Heating, Ventilation, & Air Conditioning Certificate
  - Replace HVC 103 Air Conditioning Systems (Semester 1) with HVC 106 Comfort Heating Systems (Semester 1) and HVC 107 Comfort Cooling Systems (Semester 2)
  - Remove Elective from Semester 1.
  - Add Program note: “Students are strongly encouraged to take HVC 101, 102, and 106 together; and HVC 107, 104, and 105 together.”

## **II. HEALTHCARE DIVISION**

### **Surgical Technology**

- SUR 115 Asepsis
  - Remove co-requisites of SUR 101 and SUR 111.
  - Add prerequisite “Enrollment limited to Surgical Technology majors only.”
  - Move from Fall semester to Summer semester.
- SUR 101 Perioperative Issues
  - Reduce credits from 5 credits to 3 credits.
  - Change course description and content.
  - Change prerequisites from “BIO 100 or BIO 140” to “BIO 100 or BIO 140, SUR 115.”
  - Add co-requisite SUR 111.
- SUR 111 Operating Room Techniques
  - Change credits from 4 credits to 5 credits.
  - Change course description and content.
  - Add prerequisites “SUR 115, ALH 102.”
  - Change corequisites from “SUR 101, SUR 115” to “SUR 101.”
- SUR 121 Surgical Procedures I: General, Obstetrics/Gynecology and Orthopedic
  - Change course name to Surgical Procedures I.
  - Change content and course description.
  - Change credits from 3 credits to 8 credits.
  - Change prerequisites from “BIO 140” to “BIO 100 or BIO 140, SUR 115.”
  - Add corequisite SUR 111.
- SUR 199 Clinical Externship I
  - Change course name to Clinical I.
  - Change prerequisites from “BIO 100 or BIO 140” to “SUR 101, SUR 111, SUR 121, SUR 230.”
  - Change from Fall semester to Spring semester.
- SUR 221 Surgical Procedures II: Ophthalmology, Ear/Nose/Throat, Dental/Oral/Maxillofacial, Plastic/Reconstructive & Genitourinary
  - Change course name to Surgical Procedures II.
  - Change content and course description.
  - Change corequisite SUR 121 to prerequisite SUR 121.
  - Move from Semester 2 to Semester 3.
- SUR 225 Advanced Surgical Procedures: Thoracic, Neurosurgery, Peripheral & Cardiovascular
  - Remove from curriculum
- SUR 290 Clinical Externship II
  - Change course name to Clinical II
  - Remove corequisite SUR 221.
  - Add prerequisite SUR 199.
  - Change course description.
- SUR 299 Advanced Clinical Externship
  - Change course name to Clinical III.
  - Change prerequisite from SUR 221 to SUR 290.
  - Remove corequisite SUR 225.

- Surgical Technology Certificate
  - ALH 102 added (1<sup>st</sup> semester) to curriculum
  - SUR 115 remove corequisite, moved from 2<sup>nd</sup> semester to 1<sup>st</sup> semester
  - SUR 101 pre/corequisite change, credit change decrease from 5 to 3, content and course description change
  - SUR 111 pre/corequisite change, credit change increase from 4 to 5, content and course description change
  - SUR 121 pre/corequisite change, credit increase from 6 to 8, content and course description change, combine SUR 121 and SUR 211 and name change
  - SUR 199 pre/corequisite change and name change
  - SUR 221 pre/corequisite change, move from 2<sup>nd</sup> to 3<sup>rd</sup> semester, content and course description change and name change
  - SUR 225 remove from curriculum
  - SUR 290 pre/corequisite change, course description change and name change
  - SUR 299 pre/corequisite change and name change

### **Nursing**

- NUR 100 Paramedic to ADN Bridge
  - Change course description.
  - Change prerequisite from “Paramedic Certification in the state of Massachusetts. Has met admission requirements for the Associate Degree in Nurse Education Program which includes completion of BIO 111, BIO 112, PSY 101, ENG 101” to “Paramedic Certification in the state of Massachusetts, BIO 111, BIO 112, PSY 101, ENG 101.”
  - Change course description.
- NUR 101 Advanced Placement Nursing I
  - Change course description.
  - Change prerequisites from “BIO 112, NUR 100 or admission to LPN to ADN program, PSY 101” to “BIO 111, BIO 112, NUR 100, ENG 101, PSY 101.”

### **HealthCare Certificates**

- Create Healthcare Certificate Emergency Medical Technician.
- Create Healthcare Certificate Nursing Assistant.
- Create Healthcare Certificate Pharmacy Technician.
- Create Healthcare Certificate Phlebotomy/EKG Technician.

## **III. HUMAN SERVICES & SCIENCES DIVISION**

- BIO 105 Principles of Ecology
  - Change course description.
  - *Note friendly amendment: proposed change in prerequisites was tabled.*
- Create a new course, HUS 244 Human Services Practicum II, effective Spring 2014.

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

COURSE REVISION PROPOSAL

1. Course Number and Name : ACC 101 Financial Accounting I

Date: September 18, 2012

2. Originator: Carol Murphy

3. Division Dean: Kathy Rentsch

Date: October 15, 2012

4. Brief Description of the Proposal:

Under "areas of study" in the course description, change " financial statement analysis" to "financial statement preparation."

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division    Date: 11.15.12  
Comment:

7. AA Leadership Team: Jim Beemer

Date: 11/28/12

Recommended: ✓    Not Recommended: \_\_\_\_\_  
Comments:

8. VP/Academic Affairs: J. Porey

Date: 11/28/12

Recommended: ✓    Not Recommended: \_\_\_\_\_  
Comments:

9. Learning Council: [Signature]

Date: 12/11/12

Recommended: ✓    Not Recommended: \_\_\_\_\_  
Comments:

10. VP/Academic Affairs: J. Porey

Date: 12/11/12

Approved: ✓    Not Approved: \_\_\_\_\_  
Comments:

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

Type of Revision: <input checked="" type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Accounting	Division: Business and Technology
Current Course Number: ACC 101	
Current Course Name: Financial Accounting I	
Current Course Description (as it appears in the college catalog):  <b>ACC 101 Financial Accounting I - 3 credits</b> This course focuses on the relationships between business activities and events and the impact they have on financial statements from a prepare/user-of-accounting perspective. Students study financial transactions for both service and merchandising businesses and relate the transactions to a company's assets, liabilities, owners' equity, revenues, expenses, and cash flow. Areas of study include the basic accounting model, the process of the accounting cycle, accounting principles and terminology, <b>financial statement analysis</b> , and computerized accounting applications. <b>Prerequisites:</b> ENG 100 or appropriate placement score, MAT 090. F/S/SU	
Proposed Description (include all proposed changes):  <b>ACC 101 Financial Accounting I - 3 credits</b> This course focuses on the relationships between business activities and events and the impact they have on financial statements from a prepare/user-of-accounting perspective. Students study financial transactions for both service and merchandising businesses and relate the transactions to a company's assets, liabilities, owners' equity, revenues, expenses, and cash flow. Areas of study include the basic accounting model, the process of the accounting cycle, accounting principles and terminology, <b>financial statement preparation</b> , and computerized accounting applications. <b>Prerequisites:</b> ENG 100 or appropriate placement score, MAT 090. F/S/SU	
Rationale for the change:  This change reflects actual course content. Students have always prepared financial statements in ACC 101 and analyzed them in ACC 102.	
Provide a description of any change in course content.  There is no change in course content. Students have always prepared financial statements in ACC 101 and analyzed them in ACC 102.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) <u>N/A</u>	
If this change affects a program grid, please submit a current and proposed program grid for each program affected <u>Does not affect grid</u>	
Please submit a syllabus to your dean with all of the revisions included.	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

COURSE REVISION PROPOSAL

1. Course Number and Name : ACC 102 Financial Accounting II

2. Originator: Carol Murphy

Date: September 18, 2012

3. Division Dean: Kathy Rentsch

Date: October 15, 2012

4. Brief Description of the Proposal:

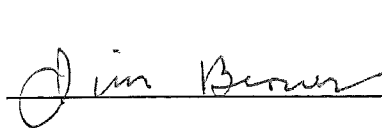
Change course description from "Students use their knowledge of financial statements..." to "Students use their knowledge of preparing financial statements..."

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12

Comment:

7. AA Leadership Team:



Date:

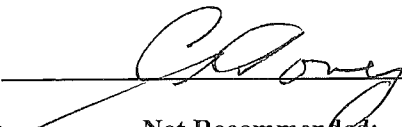
11/28/12

Recommended: ☒

Not Recommended: ☐

Comments:

8. VP/Academic Affairs:



Date:

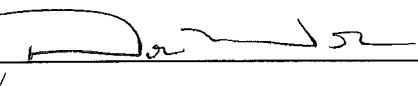
11/28/12

Recommended: ☒

Not Recommended: ☐

Comments:

9. Learning Council:



Date:

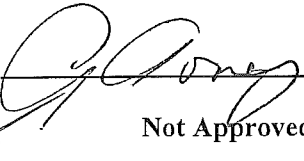
12/11/12

Recommended: ☒

Not Recommended: ☐

Comments:

10. VP/Academic Affairs:



Date:

12/11/12

Approved: ☒

Not Approved: ☐

Comments:

Learning Council - December 11, 2012

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

Type of Revision: <input checked="" type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Accounting	Division: Business and Technology
Current Course Number: ACC 102	
Current Course Name: Financial Accounting II	
Current Course Description (as it appears in the college catalog):  <b>ACC 102 Financial Accounting II - 3 credits</b> This course builds on the material learned in ACC101. <b>Students use their knowledge of financial statements</b> to analyze and communicate a variety of financial information including accounting for accruals, inventory, equity and debt issues, and cash flow statement analysis. Students demonstrate the knowledge they gain by working with Web resources to present a financial analysis of a public corporation. <b>Prerequisite:</b> ACC 101. F/S/SU	
Proposed Description (include all proposed changes):  <b>ACC 102 Financial Accounting II - 3 credits</b> This course builds on the material learned in ACC101. <b>Students use their knowledge of preparing</b> financial statements to analyze and communicate a variety of financial information including accounting for accruals, inventory, equity and debt issues, and cash flow statement analysis. Students demonstrate the knowledge they gain by working with Web resources to present a financial analysis of a public corporation. <b>Prerequisite:</b> ACC 101. F/S/SU	
Rationale for the change:  This change reflects actual course content. Students have always prepared financial statements in ACC 101 and analyzed them in ACC 102.	
Provide a description of any change in course content.  There is no change in course content. Students have always prepared financial statements in ACC 101 and analyzed them in ACC 102.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____ N/A _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected Does not affect grid	
Please submit a syllabus to your dean with all of the revisions included.	



2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

COURSE REVISION PROPOSAL

1. Course Number and Name : ACC 211 Federal Taxation

2. Originator: Carol Murphy

Date: September 18, 2012

3. Division Dean: Kathy Rentsch

Date: October 15, 2012

4. Brief Description of the Proposal:

Change course description to remove preparation of "partnership, and corporation (tax returns)."

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12

Comment:

7. AA Leadership Team:  Date: 11/28/12

Recommended: ☒

Not Recommended: ☐


Comments:

8. VP/Academic Affairs:  Date: 11/28/12

Recommended: ☒

Not Recommended: ☐


Comments:

9. Learning Council:  Date: 12/17/12

Recommended: ☒

Not Recommended: ☐

Comments:

10. VP/Academic Affairs:  Date: 12/11/12

Approved: ☒

Not Approved: ☐

Comments:

2012-2013  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: <input checked="" type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Accounting	Division: Business and Technology
Current Course Number: ACC 211	
Current Course Name: Federal Taxation	
Current Course Description (as it appears in the college catalog):  <b>ACC 211 Federal Taxation - 3 credits</b>  This course examines basic federal income and employment taxes. Students learn how to prepare individual, <b>partnership, and corporation</b> tax returns including the appropriate schedules, manually and on computers. Topics covered include analysis of tax problems, identification of tax issues, income inclusion and exclusion, deductible business and non-business expenses, gains and losses, tax credits, special taxes, and current tax laws and procedures. <b>Prerequisite:</b> ENG 100 or appropriate placement score. F	
Proposed Description (include all proposed changes):  <b>ACC 211 Federal Taxation - 3 credits</b> This course examines basic federal income and employment taxes. Students learn how to prepare individual tax returns including the appropriate schedules, manually and on computers. Topics covered include analysis of tax problems, identification of tax issues, income inclusion and exclusion, deductible business and non-business expenses, gains and losses, tax credits, special taxes, and current tax laws and procedures. <b>Prerequisite:</b> ENG 100 or appropriate placement score. F	
Rationale for the change: The tax code is becoming more and more complex. Students need to be very proficient in tax preparation for individuals to effectively participate in the VITA program. Corporate and other business taxes are very complicated and should be covered in a separate course.	
Provide a description of any change in course content.  Corporate and partnership tax preparation will be eliminated in order to focus on tax preparation for individuals.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____ N/A _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected    Does not affect grid	
Please submit a syllabus to your dean with all of the revisions included.	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**COURSE REVISION PROPOSAL**

1. **Course Number and Name :** ACC 231 Computerized Accounting

2. **Originator:** Jane Joyce

**Date:** 10/22/12

3. **Division Dean:** Kathy Rentsch

**Date:** 10.23.12

4. **Brief Description of the Proposal:** change course description to include description of software used

5. **Effective Date:** Fall 2013

6. **Recommended by the Business & Technology Division** **Date:** 11.15.12

**Comment:**

7. **AA Leadership Team:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Recommended:** ☒

**Not Recommended:** ☐

**Comments:**

8. **VP/Academic Affairs:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Recommended:** ☐

**Not Recommended:** ☐

**Comments:**

9. **Learning Council:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Recommended:** ☒

**Not Recommended:** ☐

**Comments:**

10. **VP/Academic Affairs:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Approved:** ☐

**Not Approved:** ☐

**Comments:**

Type of Revision:	
X_ Description	___ Prerequisite ___ Corequisite ___ Number ___ Name ___ #credits
___ Elective Type	___ other (explain)
Course Discipline or Department: Accounting	Division: Business and Technology
Current Course Number: ACC 231	
Current Course Name: Computerized Accounting	
Current Course Description (as it appears in the college catalog):	
ACC 231 Computerized Accounting 3 cr	
This course focuses on understanding accounting through a mastery of general ledger software applications. Students set up and maintain a computerized accounting records system by recording the transactions necessary to operate a service and merchandising business. This course covers the areas of cash, accounts receivable, accounts payable, and payroll transactions. Students learn how to create these transactions on a computer and how to understand and interpret the resulting financial reports. Prerequisite: ACC 101. S	
Proposed Description (include all proposed changes):	
ACC 231 Computerized Accounting 3 cr	
This course focuses on understanding accounting through a mastery of general ledger software applications, <b>using industry standard software.</b> Students set up and maintain a computerized accounting records system by recording the transactions necessary to operate a service and merchandising business. This course covers the areas of cash, accounts receivable, accounts payable, and payroll transactions. Students learn how to create these transactions on a computer and how to understand and interpret the resulting financial reports Prerequisite: ACC 101. S	
Rationale for the change:	
This change identifies to students the type of software used, and that it is what is currently used by business industry.	
Provide a description of any change in course content. None	
Does the course revision affect another department? Please confer with the coordinator of the affected department. No Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected. n/a	
Please submit a syllabus to your dean with all of the revisions included.	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

COURSE REVISION PROPOSAL

1. Course Number and Name : BSS 104 Business Office Procedures

2. Originator: Maryann Kania

Date: October 11, 2012

3. Division Dean: Kathy Rentsch

Date: October 15, 2012

4. Brief Description of the Proposal:

Change course description to include appointment scheduling, medical records management, and compliances to the course description.

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12  
Comment:

7. AA Leadership Team: Jim Brown Date: 11/28/12

Recommended: ✓ Not Recommended: \_\_\_\_\_

Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12

Recommended: \_\_\_\_\_ Not Recommended: \_\_\_\_\_

Comments:

9. Learning Council: [Signature] Date: 12/11/12

Recommended: ✓ Not Recommended: \_\_\_\_\_

Comments:

10. VP/Academic Affairs: [Signature] Date: 12/11/12

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

Comments:

Learning Council - December 11, 2012

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

COURSE REVISION PROPOSAL

Type of Revision: <input checked="" type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Business Career	Division: Business and Technology
Current Course Number: BSS 104	
Current Course Name: Business Office Procedures	
Current Course Description (as it appears in the college catalog):  <b>BSS 104 Business Office Procedures - 3 credits</b> This course prepares students for office support tasks required in a business. Topics covered include the virtual worker, current employment structure, human relations, time and organization management, records management, communication, technology used for tasks, decision-making, creative thinking, and lifelong learning skills. <b>Prerequisites:</b> BSS 101, CIS 111, ENG 100. F/S/SU	
Proposed Description (include all proposed changes):  <b>BSS 104 Business Office Procedures - 3 credits</b> This course prepares students for office support tasks required in all types of businesses. Topics covered include the virtual worker, current employment structure, <b>appointment scheduling</b> , human relations, time and organization management, <b>medical</b> records management, <b>compliances</b> , communication, technology used for tasks, decision-making, creative thinking, and lifelong learning skills. <b>Prerequisites:</b> BSS 101, CIS 111, ENG 100. F/S/SU	
Rationale for the change: Better reflects the changing office environment and the career paths of our students.	
Provide a description of any change in course content.  Medical records will be added to general records management and compliances such as FERPA and HIPPA will be covered.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____ N/A _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected does not affect grid	
Please submit a syllabus to your dean with all of the revisions included.	

## DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL

1. Program Name: Business Administration/ Career – Associate in Science – Business Administration Option

2. Originator: Jean McLean

Date: November 1, 2012

3. Division Dean: Kathy Rentsch

Date: November 15, 2012

4. Brief Description of the Proposal:

~~Replace BUS 250 Business Administration Capstone with a Business Elective. Replace one of two Social Science Electives with a free or guided Elective.~~

*sent back to Division*

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12

Comments:

7. AA Leadership Team:

Date:

Recommended:

Not Recommended:

Comments:

*BUS 250 sent back to Division. Change one S.S. Elective to a free or guided elective approved at AACT.*

8. VP/Academic Affairs:

Date:

Recommended:

Not Recommended:

Comments:

9. Learning Council:

Date:

Recommended:

Not Recommended:

Comments:

*Friendly amendment "change" medical records management to people management including medical"*

10. VP/Academic Affairs:

Date:

Approved:

Not Approved:

Comments:

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
**DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL**

Program: Business Administration/Career – A.S. – Business Administration Option
Division: Business and Technology
Degree type: AS
Provide a detailed list of the proposed changes to the program.  <del>1. Semester 4: Remove BUS 250 Business Administration Capstone</del> <del>2. Semester 4: Replace BUS 250 with a Business Elective</del> 3. Semester 2: Remove Social Science Electives 4. Semester 2: Replace Social Science Elective with an Elective
Attachments: X Current program grid X Proposed program grid
Submit separate proposals for any new courses or revised courses in the program. no new courses
Provide a rationale for the proposed changes. These changes would allow for the following certificates to flow seamlessly into the Business Administration/Career degree: <ul style="list-style-type: none"> <li>• Accounting Finance Certificate</li> <li>• Insurance Certificate</li> <li>• Entrepreneurship Certificate</li> </ul> In the current program, students have 6 unused credits when they complete the certificate and move on to the degree.
Do any of the proposed changes affect the program goals, the program student learning outcomes, or the course mapping of the General Education Learning Outcomes? If so please provide the revisions. No, students who are not working toward a certificate can still use the Elective to take a Social Science if they choose to. <del>BUS 250 will still be a Business Elective and student can take it as such if they choose to.</del>
Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments. Department(s) Affected: Social Science
Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator. No
For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? No If yes please provide a rationale.
Will any of the following be required: Additional staff ___no___ Additional space ___no___ Additional equipment ___no___ Provide a rationale for any needs indicated and include approximate cost of equipment.



# **BUSINESS ADMINISTRATION CAREER - Associate in Science (Program Code: BB) - CURRENT**

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
Introduction to Microcomputer Applications or Advanced Microcomputer Applications	CIS 111	F/S/SU			3	CIS 111
Principles of Macroeconomics	CIS 112	F/S			3	ENG 100 or approp place score
English Composition & Literature I	ECO 215	F/S/SU			3	ENG 100
Introduction to Business	ENG 101	F/S/SU			3	ENG 091 with a grade of "C" or higher and passing the ENG 096 departmental writing final examination essay or appropriate placement score.
	MGT 101	F/S/SU			3	MAT 099
<b>Semester 2</b>						
Math Elective*	MAT ---	F/S/SU			3	ENG 100 or approp place score, MAT 090
Financial Accounting I	ACC 101	F/S/SU			3	Coreq-CIS 111
Business Law I or E-Business Law & Ethics	BSL 101	F/S/SU			3	ENG 101
English Composition & Literature II	BSL 103	F/S			3	Pre/Coreq ENG 101
Speech Communication Skills	ENG 102	F/S/SU			3	
Social Science Elective	SPH 101	F/S/SU			3	
<b>Semester 3</b>						
Financial Accounting II	---				3	
Integrated Communications for Business	ACC 102	F/S/SU			3	ACC 101
Business or Concentration Elective**	BUS 201	F/S/SU			3	CIS 111, ENG 101
Humanities Elective	---				3	
Social Science Elective	---				3	
<b>Semester 4</b>						
Business Administration Capstone	BUS 250	F/S			3	42 credits completed in the degree program
Business or Concentration Elective**	---				3	
Elective	---				3	
Humanities Elective	---				3	
Lab Science or Science Elective	---				3	
<b>Total credits required</b>					<b>3-4</b>	
					<b>60-61</b>	

**The Degree:**  
Associate in Science

**The Program:**  
Business Administration Career

**Admission Requirements:**

- High School Diploma or GED (refer to page 9)

**The Next Step:**

Enter the workforce or transfer to a four-year program.

**Program Coordinator:**

Jean McLean 508.854.4410  
jmclean@gcc.mass.edu

**Program Notes:**

- Students should note that many required courses have ENG and/or MAT prerequisites.
- This program can be completed at the Southbridge location.

\*MAT 100 or higher

\*\*Students may select any Business elective identified on page 189 of the College catalog or select courses from the various concentrations found on page 67.

Students are encouraged, but not required, to identify a Concentration any Business elective will fulfill the degree requirement.

**Technical Performance Standards:**

There are no specific Technical Performance Standards defined for this program.

# **BUSINESS ADMINISTRATION CAREER - Associate in Science (Program Code: BB) - PROPOSED**

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
Introduction to Microcomputer Applications or Advanced Microcomputer Applications	CIS 111	F/S/SU				
Principles of Macroeconomics	CIS 112	F/S			3	CIS 111
English Composition & Literature I	ECO 215	F/S/SU			3	ENG 100 or approp place score
Introduction to Business	ENG 101	F/S/SU			3	ENG 100
	MGT 101	F/S/SU			3	ENG 091 with a grade of "C" or higher and passing the ENG 096 departmental writing final examination essay or appropriate placement score.
<b>Math Elective*</b>	MAT ---	F/S/SU			3	MAT 099
<b>Semester 2</b>						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
Business Law I or E-Business Law & Ethics	BSL 101	F/S/SU				
English Composition & Literature II	BSL 103	F/S			3	Coreq-CIS 111
Speech Communication Skills	ENG 102	F/S/SU			3	ENG 101
<b>Elective</b>	SPH 101	F/S/SU			3	Pre/Coreq ENG 101
	---				3	
<b>Semester 3</b>						
Financial Accounting II	ACC 102	F/S/SU			3	ACC 101
Integrated Communications for Business	BUS 201	F/S/SU			3	CIS 111, ENG 101
Business or Concentration Elective**	---				3	
Humanities Elective	---				3	
Social Science Elective	---				3	
<b>Semester 4</b>						
Business Administration Capstone	BUS 250	F/S			3	42 credits completed in the degree program
Business or Concentration Elective**	---				3	
Elective	---				3	
Humanities Elective	---				3	
Lab Science or Science Elective	---				3-4	
<b>Total credits required</b>					<b>60-61</b>	

**The Degree:**  
Associate in Science

**The Program:**  
Business Administration Career

**Admission Requirements:**

- High School Diploma or GED (refer to page 9)

**The Next Step:**  
Enter the workforce or transfer to a four-year program.

**Program Coordinator:**  
Jean McLean 508.854.4410  
[jmclean@acc.mass.edu](mailto:jmclean@acc.mass.edu)

**Program Notes:**

- Students should note that many required courses have ENG and/or MAT prerequisites.
- This program can be completed at the Southbridge location.

\*MAT 100 or higher

\*\*Students may select any Business elective as identified on page 189 of the College catalog or select courses from the various concentrations found on page 67.

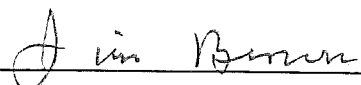


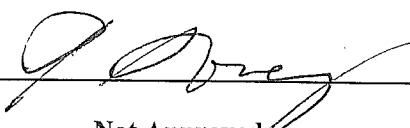
Students are encouraged, but not required, to identify a Concentration any Business elective will fulfill the degree requirement.

**Technical Performance Standards:**

There are no specific Technical Performance Standards defined for this program.

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**COURSE REVISION PROPOSAL**

1. Course Number and Name : MGT 216 Entrepreneurship
2. Originator: Jean McLean Date: 10/24/12
3. Division Dean: Kathy Rentsch Date: 11.15.12
4. Brief Description of the Proposal: Change course name and description to reflect change in certificate. Add content re: managing and growing a small business.
5. Effective Date: Fall 2013
6. Recommended by the Business & Technology Division Date: 11.15.12  
Comment:
7. AA Leadership Team:  Date: 11/28/12  
Recommended: ☒ Not Recommended: ☐  
Comments:
8. VP/Academic Affairs:  Date: 11/28/12  
Recommended: ☒ Not Recommended: ☐  
Comments:
9. Learning Council:  Date: 12/11/12  
Recommended: ☒ Not Recommended: ☐  
Comments:
10. VP/Academic Affairs:  Date: 12/11/12  
Approved: ☒ Not Approved: ☐  
Comments:

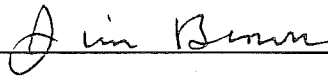
**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**


Type of Revision: <input checked="" type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input checked="" type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Management	Division: Business and Technology
Current Course Number: MGT 216	
Current Course Name: Entrepreneurship	
Current Course Description (as it appears in the college catalog):  <b>MGT 216 Entrepreneurship 3 credits</b> This course examines entrepreneurship — the ability to organize, manage, own, and assume the risk of a business venture. Students gain an understanding of the role of the entrepreneur, learn how to develop a business plan, and become familiar with business and management functions as they relate to the operations of a business. The areas of finance, marketing, law, tax, insurance, and credit are examined. In addition, students learn the competitive, economic, and personnel considerations necessary to organizing and owning a business. <b>Prerequisite: ENG 100 or appropriate placement score. F/S/SU</b>	
Proposed Description (include all proposed changes): <b>MGT 216 Entrepreneurship and Small Business Management 3 credits</b> This course examines the leadership and management skills needed to succeed in starting, managing and growing a small business. Students learn about the challenges of being an entrepreneur/small business owner, examining the advantages and disadvantages, the risks and rewards. Students develop an understanding of business ethics, strategic planning, small business marketing concepts, stakeholder relationship management, basic accounting principles, and administrative processes. Topics studied include the various types of small business ownership, from start ups and franchises, to buying an existing business or taking over a family owned operation. Other topics include how to research and write a business plan and identifying sources of financing. <b>Prerequisite: ENG 100 or appropriate placement score. F/S/SU</b>	
Rationale for the change: This course name and description more accurately reflect the course content and the addition of “Small Business Management” to the name of the Certificate.	
Provide a description of any change in course content. The course content will not change. Virtually all entrepreneurship textbooks assume that the entrepreneur will continue to operate and manage the business and have content on doing so. The authors also assume that many entrepreneurs will buy existing businesses and discuss the merits and pitfalls of various forms of small business ownership.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) <u>  N/A  </u>	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

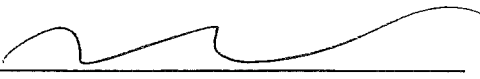
## DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL

1. Program Name: Entrepreneurship Certificate
2. Originator: Jean McLean Date: Oct 22, 2012
3. Division Dean: Kathy Rentsch Date: 10.25.12
4. Brief Description of the Proposal: Change certificate name from "Entrepreneurship" to "Entrepreneurship and Small Business Management."
5. Effective Date: Fall 2013
6. Recommended by the Business & Technology Division Date: 11.15.12

Comments:

7. AA Leadership Team:  Date: 11/24/12  
Recommended: ☒ Not Recommended: ☐  
Comments:

8. VP/Academic Affairs:  Date: 11/25/12  
Recommended: ☒ Not Recommended: ☐  
Comments:

9. Learning Council:  Date: 12/1/12  
Recommended: ☐ Not Recommended: ☐  
Comments:

10. VP/Academic Affairs:  Date: 12/1/12  
Approved: ☒ Not Approved: ☐  
Comments:

FOR NEW PROGRAM/CERTIFICATE OR PROGRAM/CERTIFICATE CLOSURE ONLY

President: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

Board of Trustees: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

## DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL

<b>Program:</b> <b>Entrepreneurship Certificate</b>
<b>Division:</b> <b>Business and Technology</b>
<b>Degree type:</b> <b>Certificate</b>
Provide a detailed list of the proposed changes to the program. <b>Change the program name from "Entrepreneurship" to "Entrepreneurship and Small Business Management."</b>
<b>Attachments:</b> X Current program grid X Proposed program grid
Submit separate proposals for any new courses or revised courses in the program. <b>See MGT 216 Entrepreneurship course revision form</b>
Provide a rationale for the proposed changes. <b>"Entrepreneurship" is not eligible for Federal financial aid according to the DOE. By including "Small Business Management" it should qualify.</b>
Do any of the proposed changes affect the program goals, the program student learning outcomes, or the course mapping of the General Education Learning Outcomes? If so please provide the revisions. <b>MGT 216, Entrepreneurship will also change to Entrepreneurship and Small Business Management. The course description will reflect the inclusion of managing and growing a small business.</b>
Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments. <b>No</b> Department(s) Affected:
Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator. <b>No</b>
For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? <b>No</b>  If yes please provide a rationale.
Will any of the following be required: Additional staff <u>no</u> Additional space <u>no</u> Additional equipment <u>no</u> Provide a rationale for any needs indicated and include approximate cost of equipment.

## ENTREPRENEURSHIP CERTIFICATE (Program Code: EN) – CURRENT

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
Entrepreneurship	MGT 216	F/S			3	ENG 100 or approp place score
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	ENG 100 or approp place score, MAT 090 or approp place score
Financial Accounting I	ACC 101	F/S/SU			3	MAT 090 or approp place score
Personal Financial Planning	FIN 111	F/S/SU			3	ENG 100 or approp place score
English Composition & Literature I	ENG 101	F/S/SU			3	ACC 101
<b>Semester 2</b>						
Small Business Finance	FIN 216	S			3	ACC 101
Computerized Accounting	ACC 231	S			3	ACC 101
Microeconomics*	ECO 216	F/S/SU			3	ENG 100 or approp place score
Principles of Marketing	MRK 201	F/S/SU			3	ENG 100 or approp place score
<b>Total credits required</b>					<b>27</b>	

**Program Notes:**

- Students should note that many required courses have ENG and/or MAT prerequisites.

## ENTREPRENEURSHIP and SMALL BUSINESS MANAGEMENT CERTIFICATE (Program Code: EN) – PROPOSED

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
Entrepreneurship and Small Business Management	MGT 216	F/S/SU			3	ENG 100 or approp place score
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	ENG 100 or approp place score, MAT 090 or approp place score
Financial Accounting I	ACC 101	F/S/SU			3	MAT 090 or approp place score
Personal Financial Planning	FIN 111	F/S/SU			3	ENG 100 or approp place score
English Composition & Literature I	ENG 101	F/S/SU			3	ACC 101
<b>Semester 2</b>						
Small Business Finance	FIN 216	S			3	ACC 101
Computerized Accounting	ACC 231	S			3	ACC 101
Microeconomics*	ECO 216	F/S/SU			3	ENG 100 or approp place score
Principles of Marketing	MRK 201	F/S/SU			3	ENG 100 or approp place score
<b>Total credits required</b>					<b>27</b>	

**Program Notes:**

- Students should note that many required courses have ENG and/or MAT prerequisites.



2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**NEW COURSE PROPOSAL**

1. Course Number and Name: ELT 130 Embedded Microcontrollers

2. Originator: Jim Heffernan Date: 30 October, 2012

3. Division Dean: Kathy Rentsch Date: 30 October, 2012

4. Brief Description of the Proposal:

Create a new course, ELT 130 Embedded Microcontrollers.

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12  
Comments:

7. AA Leadership Team: Jim Bern Date: 11/28/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

9. Learning Council: [Signature] Date: 12/11/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

10. VP/Academic Affairs: [Signature] Date: 12/11/12  
Approved: ✓ Not Approved: \_\_\_\_\_  
Comments:

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

## NEW COURSE PROPOSAL

Course Discipline/Division: <b>Business and Technology Division – Electronics/Electromechanical Technology Department</b>	
Course Number: <b>ELT 130</b>	
Course Name: <b>Embedded Microcontrollers</b>	
Prerequisites and/or corequisites (confer with affected department coordinator): <b>Prerequisites: ELT 103 Electronics I, ELT 121 Digital Computer Circuits</b>	
CIP code (check with IRaP Office): <b>15.0303 and 15.0403</b>	
Effective Term/year: <b>Spring 2013</b>	
<p>Give a rationale for the new course. Be sure to indicate whether this course replaces another course.</p> <p>ELT 130 Embedded Microcontrollers replaces ELT 122 Microprocessors. Microcontrollers are prevalent in electronic and electromechanical systems, and are much more relevant than microprocessors to the kinds of systems that graduates will work with. The primary goal of this course is to make sure students get systems-level experience in the first year of the program.</p> <p>A recent and extensive survey of job postings for Electronics and Electromechanical Technicians shows a strong need for graduates who can build, test, and troubleshoot systems. This is a system-level, project-based course that aims to give students this kind of experience in the first year of their program. Microcontrollers are prevalent in electronic and electromechanical systems and provide a good platform on which students can build functioning systems. Students also gain experience programming microcontrollers and creating graphic programs with LabView, both of which have broad applications throughout the field of electronics. This course also sets the stage for further exploration of microcontrollers, LabView programming, and electronic systems in the second year of the Electronics and Electromechanical Technology programs.</p>	
<p>Is the course content similar to other courses now offered? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>If yes, attach a statement for the coordinator of the department offering the similar course.</p>	
<p>Please indicate if this course will serve as any of the following types of electives</p> <p><input type="checkbox"/> Elective</p> <p><input checked="" type="checkbox"/> Discipline specific (name the discipline) – <b>Electronics/Electromechanical</b></p> <p><input checked="" type="checkbox"/> Program specific (name the program) – <b>Electronics Technology, Electromechanical Technology</b></p> <p><input type="checkbox"/> Multiple perspective (confer with the Liberal Arts Coordinator)</p>	
<p>Is this course required for a program? If yes, submit a separate Program Revision Proposal or New Program Proposal.</p> <p><b>Yes, this course will be required for the Electronics Technology Program, the Electromechanical Technology Program, and the Certificate in Electronics</b></p>	
Expected enrollment per term: <b>16</b>	Expected enrollment per year: <b>32</b>

Will any of the following be required:

Additional staff \_\_\_\_ Additional space \_\_\_\_ Additional equipment   X  

Provide a rationale for any needs indicated above and include approximate cost of equipment.  
**Since this is a project-based course, the department will provide materials for the projects. Actual materials will vary depending on the types of projects, but the estimated cost would be \$2000 per section.**

Library print and non-print resources in support of this course: \$500

## Course Materials

Course number: <b>ELT 130</b>		
Course name: <b>Embedded Microcontrollers</b>		
Credits: 4		
Lecture Hours: 3	Lab hours: 3	Clinic Hours:
General course description and prerequisites (as it will appear in the catalog): <b>This is a project-oriented course where students apply the basic concepts they learn in ELT 103 and ELT 121 to microcontroller-based systems. Students gain valuable experience reading schematics and wiring diagrams, interfacing real-world devices to microcontroller inputs and outputs, and programming the microcontroller to perform various functions. Students also gain experience using LabView graphical programming for data acquisition and control. Students also practice PC board design, soldering, and troubleshooting techniques.</b>		
All required texts and paperbacks, including information on publisher and edition used (provide a suggested text): <b>There are no required texts for this course.</b>		
Instructional Objectives (list): <b>Lectures are designed to support students in the completion of projects. The primary focus will be introducing students to the tools and technologies they will need, including:</b> <ol style="list-style-type: none"><li><b>1. Reading and creating basic schematics and wiring diagrams.</b></li><li><b>2. Interfacing devices to microcontroller inputs and outputs.</b></li><li><b>3. Introduction to microcontroller programming with examples.</b></li><li><b>4. Introduction to graphical programming with LabView.</b></li><li><b>5. A/D conversion and data acquisition.</b></li><li><b>6. Printed circuit board layout.</b></li><li><b>7. Soldering techniques.</b></li><li><b>8. Overview of sensors with examples.</b></li><li><b>9. Overview and demonstration of Servo positioning motors.</b></li></ol>		

Teaching procedures: (provide suggested teaching methodology):

1. **Whiteboard instruction with PowerPoint presentations**
2. **Demonstrations of Arduino interfacing and programming**
3. **Demonstrations of LabView programming examples**
4. **Supplementary handouts as needed**
5. **Project assignments**

Course topics and/or assignments and/or required and/or supplemental reading (provide a list of suggested course topics):

Weeks 1-2

- Reading basic schematics and wiring diagrams
- Interfacing simple devices to microcontroller inputs and outputs
- Interfacing the Arduino microcontroller to an LCD display
- Lab Orientation - Safety

Project 01: Programming basic digital logic functions on the Arduino

Weeks 3-4

- Interfacing to microcontroller analog inputs
- A/D Conversion
  - Sampling
  - Resolution
- Arduino programming examples
- Drawing schematics

Project 02: Microcontroller programming with analog inputs

Weeks 5-7

- Introduction to graphical programming with LabView
- Connecting to the Arduino microcontroller through LabView
- LabView programming examples
- Drawing schematics and wiring diagrams

Project 03: Graphical programming with LabView

Weeks 8-9

- Interfacing a microcontroller to a servo positioning motor
- Arduino programming examples
- LabView programming examples
- PC Board layout
- Introduce ideas/suggestions for final projects

Project 04: Controlling a servo positioning motor

Weeks 10-11

- Interfacing various sensors to a microcontroller
- Arduino programming examples
- LabView programming examples
- Students submit final project proposals

Project 05: Data acquisition and control

Weeks 12-14

- Arduino programming examples
- LabView programming examples
- Problem sessions as needed

Project 06: Final project

Week 15

Student project presentations

Other information:

- Suggested basis for student grading and criteria for evaluating student performance

Evaluation:

Projects: 80%

Attendance: 20%

Numeric grades will be converted into letter grades using the table in the QCC catalog.

Project grades will be based on the following criteria:

System function – does the system function as required?

Construction – wiring organization, mechanical layout, PC board layout (if applicable)

Programming – Concise, logical programming with clear and concise comments inserted

Schematics and other technical diagrams – Correctness, readability

Written description and summary – Grammar and punctuation, clarity of ideas, concise

- Suggested attendance policy

Attendance is expected and required at each scheduled class session. Attendance in class is vital to successful completion of the course. It also reflects the development of good work habits.

When employers call to ask about a student's performance, the first question they ask is usually regarding attendance in class.

- Suggested plagiarism statement

Cheating and copying will not be tolerated. Students are expected to learn from each other and from other sources but must do their own work. Copied work will result in a grade of zero.

- Suggested assessment methodologies

See criteria for evaluating student performance above.

Please submit a syllabus for this new course to your dean.

**Done.**

List the Student Learning Outcomes for this course in the table below. Recommendations for writing SLOs can be found in the *General Information for Academic Affairs Proposals* document that is available on the QCC's Intranet under Frequently Used Forms (Academic Governance Forms).

COURSE STUDENT LEARNING OUTCOMES FOR <b>ELT 130 Embedded Microcontrollers</b>	
Upon completion of the course, students will be able to:	
1	Build basic microcontroller-based systems according to electronic schematics and wiring diagrams.
2	Test microcontroller-based systems using basic electronic test equipment such as multi-meters and oscilloscopes.
3	Program a microcontroller to perform basic functions.
4	Write basic data acquisition and control programs using LabView.
5	Create schematics and wiring diagrams using a schematic capture program.
6	Demonstrate good soldering technique in the assembly of PC boards.
7	Document a system including description of the system, schematics, wiring diagrams, physical diagrams, description of the process used to create the system, description of troubleshooting and results of tests.

How does the course support general education? Using the chart below, indicate the degree or level of connection between the course and outcome as indicated here.

I – Introductory/Background – There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional - There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized – There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

CONNECTION OF <b>ELT 130 Embedded Microcontrollers</b> TO GENERAL EDUCATION STUDENT LEARNING OUTCOMES	I,M,E
Communication Skills: Students will write and speak effectively.	M
Information Literacy: Students will locate, evaluate and apply reliable and appropriate information.	E
Quantitative Reasoning: Students will apply the concepts and methods of mathematics to solve problems.	E
Scientific Reasoning: Students will relate scientific methods of inquiry to the acquisition of knowledge.	E
Technical Literacy: Students will utilize computer and emerging technologies effectively.	E
Aesthetics: Students will appreciate the variety of human experiences as expressed through the arts.	N/A
Multiple Perspectives: Students will demonstrate knowledge and appreciation of diverse cultures.	N/A
Ethics: Students will develop an awareness of personal obligations and responsibilities in one's community of influence.	I
Impact of Technology: Students will reflect on the impact of scientific and technological advances on the individual, society and the environment.	I
Civic Literacy: Students will demonstrate awareness of the responsibilities of local, national and international citizenship.	N/A

## COURSE REVISION PROPOSAL

1. Course Number and Name : ELM 251 Instrumentation and Control Technology

2. Originator: Jim Heffernan Date: 31 October, 2012

3. Division Dean: Kathy Rentsch Date: 31 October, 2012

4. Brief Description of the Proposal:

Remove prerequisite ELT 121 Digital Computer Circuits. Add prerequisite ELT 130 Embedded Microcontrollers (new course).

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12

Comment:

7. AA Leadership Team: Jim Bern Date: 11/28/12

Recommended: ✓ Not Recommended: \_\_\_\_\_

Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12

Recommended: ✓ Not Recommended: \_\_\_\_\_

Comments:

9. Learning Council: [Signature] Date: 12/11/12

Recommended: ✓ Not Recommended: \_\_\_\_\_

Comments:

10. VP/Academic Affairs: [Signature] Date: 12/11/12

Approved: ✓ Not Approved: \_\_\_\_\_

Comments:

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
**COURSE REVISION PROPOSAL**

Type of Revision: <input type="checkbox"/> Description <input checked="" type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: <b>Electromechanical Technology</b>	Division: <b>Business and Technology</b>
Current Course Number: <b>ELT 251</b>	
Current Course Name: <b>Instrumentation and Control Technology</b>	
Current Course Description (as it appears in the college catalog):  This course covers the theory and application of mechanical processes and their control circuits. All major aspects of a control system are studied, including controllers, drivers, actuators, sensors and feedback control. Topics include AC and DC motors, brushless motors, stepper motors, sensors, transducers, servomechanisms, and pneumatics. Students gain skills designing, characterizing, and troubleshooting small-scale control systems. <b>Prerequisites:</b> ELT 104, ELT 121. F	
Proposed Description (include all proposed changes):  This course covers the theory and application of mechanical processes and their control circuits. All major aspects of a control system are studied, including controllers, drivers, actuators, sensors and feedback control. Topics include AC and DC motors, brushless motors, stepper motors, sensors, transducers, servomechanisms, and pneumatics. Students gain skills designing, characterizing, and troubleshooting small-scale control systems. <b>Prerequisites:</b> ELT 104, ELT 130. F/S	
Rationale for the change:  ELT 130 is a new project-based course that introduces students to the tools and technology of electronic and electromechanical systems, including schematic drawing, microcontroller interfacing and programming, and graphical programming with LabView. Students will be expected to use these technologies in ELM 251, which is a more in-depth study of electronic and electromechanical systems. There is ample evidence that technology students benefit greatly from working with systems first and then proceeding to more detailed study of the system components, so ELT 130 must be a prerequisite to ELM 251.	
Provide a description of any change in course content. <b>No change in course content.</b>	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) <u>none</u>	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	



2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**COURSE REVISION PROPOSAL**

1. Course Number and Name : ELT 299 Cooperative Experience and Seminar

2. Originator: Jim Heffernan

Date: 31 October, 2012

3. Division Dean: Kathy Rentsch

Date: 31 October, 2012

4. Brief Description of the Proposal:

Remove prerequisite of "ELT 122 Microprocessors or CSC 233 Computer Hardware & Support." Add prerequisite ELT 130 Embedded Microcontrollers (new course).

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12

Comment:

7. AA Leadership Team: Jim Berni

Date: 11/28/12

Recommended: ✓

Not Recommended: \_\_\_\_\_

Comments:

8. VP/Academic Affairs: J. Gray

Date: 11/28/12

Recommended: ✓

Not Recommended: \_\_\_\_\_

Comments:

9. Learning Council: [Signature]

Date: 12/11/12

Recommended: ✓

Not Recommended: \_\_\_\_\_

Comments:

10. VP/Academic Affairs: J. Gray

Date: 12/11/12

Approved: ✓

Not Approved: \_\_\_\_\_

Comments:

Learning Council - December 11, 2012

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

## COURSE REVISION PROPOSAL

Type of Revision: <input type="checkbox"/> Description <input checked="" type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: <b>Electromechanical Technology</b>	Division: <b>Business and Technology</b>
Current Course Number: <b>ELT 299</b>	
Current Course Name: <b>Cooperative Work Experience &amp; Seminar</b>	
Current Course Description (as it appears in the college catalog):  This course provides students with a structured learning experience by applying classroom theory to practical work experience. Students participate in seminars to exchange information about their work experience. The number of credits earned is determined by the number of weeks and hours per week required by the cooperative work experience and the established learning objectives. <b>Prerequisites:</b> ELT 104, ELT 122 or CSC 233. F/S/SU	
Proposed Description (include all proposed changes):  This course provides students with a structured learning experience by applying classroom theory to practical work experience. Students participate in seminars to exchange information about their work experience. The number of credits earned is determined by the number of weeks and hours per week required by the cooperative work experience and the established learning objectives. <b>Prerequisites:</b> ELT 104, ELT 130. F/S/SU	
Rationale for the change:  ELT 122 Microprocessors is being replaced by ELT 130 Embedded Microcontrollers, and the option to take CSC 233 has been eliminated, so neither of those prerequisites will be valid. ELT 130 is particularly important as a prerequisite, because it is a project-based course where students build, test and troubleshoot systems, and develop many of the real-world skills they need to function as entry-level technicians.	
Provide a description of any change in course content. <b>No change in course content.</b>	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) <u>none</u>	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

COURSE REVISION PROPOSAL

1. Course Number and Name : ELM 299 Cooperative Experience and Seminar

2. Originator: Jim Heffernan Date: 31 October, 2012

3. Division Dean: Kathy Rentsch Date: 31 October, 2012

4. Brief Description of the Proposal:

Remove prerequisite, "Approval of Program Coordinator." Add prerequisites ELT 104 Electronics II and ELT 130 Embedded Microcontrollers (new course)

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12  
Comment:

7. AA Leadership Team: Jim Brown Date: 11/28/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

9. Learning Council: [Signature] Date: 12/11/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

10. VP/Academic Affairs: [Signature] Date: 12/11/12  
Approved: ✓ Not Approved: \_\_\_\_\_  
Comments:

Learning Council - December 11, 2012

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

COURSE REVISION PROPOSAL

Type of Revision: ___ Description <b><u>X</u></b> Prerequisite   ___ Corequisite   ___ Number   ___ Name   ___ #credits ___ Elective Type   ___ other (explain)	
Course Discipline or Department: <b>Electromechanical Technology</b>	Division: <b>Business and Technology</b>
Current Course Number: <b>ELM 299</b>	
Current Course Name: <b>Cooperative Work Experience &amp; Seminar</b>	
Current Course Description (as it appears in the college catalog):  This course provides students with a structured learning experience while applying classroom theory to a practical work experience. Students participate in a seminar where they exchange feedback about their work experiences. The number of credits earned is determined by the number of weeks and hours per week required by the cooperative work experience and the established learning objectives. <b>Prerequisite:</b> Approval of program coordinator. F/S/SU	
Proposed Description (include all proposed changes):  This course provides students with a structured learning experience while applying classroom theory to a practical work experience. Students participate in a seminar where they exchange feedback about their work experiences. The number of credits earned is determined by the number of weeks and hours per week required by the cooperative work experience and the established learning objectives. <b>Prerequisite:</b> ELT 104, ELT 130 F/S/SU	
Rationale for the change:  Students applying for a Co-op in Electromechanical Technology need to have completed at least the first year technical courses in Electronics so they can function effectively as entry-level technicians. ELT 130 is particularly important, because it is a project-based course where students build, test and troubleshoot systems, and develop many of the real-world skills they need to advance in their field.	
Provide a description of any change in course content. <b>No change in course content.</b>	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) <b>none</b>	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

## DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL

1. Program Name: Electronics Technology Certificate

2. Originator: Jim Heffernan

Date: 30 October, 2012

3. Division Dean: Kathy Rentsch

Date: 30 October, 2012

4. Brief Description of the Proposal:

1. Remove the requirement "ELT 105 CAD for Technicians or CIS 111 Microcomputer Applications or CIS 115 Introduction to Computer Applications in Telecommunications." Retire ELT 105 CAD for Technicians.
2. Replace "ELT 122 Microprocessors or CSC 233 Computer Hardware and Support" with a new course, ELT 130 Embedded Microcontrollers. Retire ELT 122 Microprocessors.

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12

Comments:

7. AA Leadership Team:

*Jim Heffernan*

Date:

*11/28/12*

Recommended: ☒

Not Recommended: ☐

Comments:

8. VP/Academic Affairs:

*G. Gray*

Date:

*11/28/12*

Recommended: ☐

Not Recommended: ☐

Comments:

9. Learning Council:

*[Signature]*

Date:

*12/11/12*

Recommended: ☒

Not Recommended: ☐

Comments:

*friendly amendment: Remove "Retire ELT 105 CAD for Technicians."*

10. VP/Academic Affairs:

*G. Gray*

Date:

*12/11/12*

Approved: ☒

Not Approved: ☐

Comments:

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
**DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL**

Program: <b>Electronics Technology Certificate</b>
Division: <b>Business and Technology</b>
Degree type: <b>Associate in Science</b>
<p>Provide a detailed list of the proposed changes to the program.</p> <ol style="list-style-type: none"> <li>1. Semester 1: Remove the requirement “ ELT 105 CAD for Technicians or CIS 111 Microcomputer Applications or CIS 115 Introduction to Computer Applications in Telecommunications.” Retire ELT 105 CAD for Technicians.</li> <li>2. Semester 2: Replace “ELT 122 Microprocessors or CSC 233 Computer Hardware and Support” with a new course, ELT 130 Embedded Microcontrollers. Retire ELT 122 Microprocessors.</li> </ol>
<p>Attachments:</p> <p>X Current program grid</p> <p>X Proposed program grid</p>
Submit separate proposals for any new courses or revised courses in the program.
<p>Provide a rationale for the proposed changes.</p> <ol style="list-style-type: none"> <li>1. Use of word processing and spreadsheets are embedded throughout ELT and ELM courses, and most students come to QCC proficient in these applications, so it is unnecessary to make it a program requirement. The most important content from ELT 105 (electronic CAD, soldering) is being moved into the new course, ELT 130, so ELT 105 is no longer necessary.</li> <li>2. Based on an analysis of current local job postings, companies are seeking technicians that can apply the concepts of Electronics to building, testing and troubleshooting systems. Microcontrollers provide a good platform on which students can build functioning systems. Microcontrollers are prevalent in electronic and electromechanical systems, and are much more relevant than microprocessors to the kinds of systems that graduates will work with. The new course ELT 130 includes outcomes that will be essential to the Electronics and Electromechanical program, therefore it cannot be optional.</li> </ol>
<p>Do any of the proposed changes affect the program goals, the program student learning outcomes, or the course mapping of the General Education Learning Outcomes? If so please provide the revisions.</p> <p>The new course, ELT 130, includes the most important outcomes of ELT 105 CAD for Technicians, and it brings important new outcomes to the program that will increase the employability of graduates. The new course meets all of the same general education requirements as ELT 122, which it is replacing.</p>

<p>Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.</p> <p>Department(s) Affected: <b>None</b></p>
<p>Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.</p> <p>There are no transfer agreements that specifically identify ELT 122 Microprocessors, so replacing that course will not have any effect.</p>
<p>For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? <b>No</b></p> <p>If yes please provide a rationale.</p>
<p>Will any of the following be required:  Additional staff _____ Additional space _____ Additional equipment <u><b>X</b></u>  Provide a rationale for any needs indicated and include approximate cost of equipment.</p> <p>Since the new course ELT 130 is a project-based course, the department must provide materials for the projects. Actual materials will vary depending on the types of projects, but the estimated cost would be \$2000 per section.</p>





## DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL

1. Program Name: Electronics Technology – A.S. - Electronics Technician Option

2. Originator: Jim Heffernan

Date: 30 October, 2012

3. Division Dean: Kathy Rentsch

Date: 30 October, 2012

4. Brief Description of the Proposal:

1. Remove the requirement "ELT 105 CAD for Technicians or CIS 111 Introduction to Microcomputer Applications or CIS 115 Introduction to Computer Applications in Telecommunications." Retire ELT 105.
2. Replace "ELT 122 Microprocessors or CSC 233 Computer Hardware & Support" with a new course, ELT 130 Embedded Microcontrollers.

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12

Comments:

7. AA Leadership Team: Jim Brown

Date: 11/28/12

Recommended: ✓ Not Recommended:       

Comments:

8. VP/Academic Affairs: PTony

Date: 11/28/12

Recommended: ✓ Not Recommended:       

Comments:

9. Learning Council: [Signature]

Date: 12/11/12

Recommended: ✓ Not Recommended:       

Comments:

*friendly amendment: Remove "Retire ELT 105."*

10. VP/Academic Affairs: PTony

Date: 12/11/12

Approved: ✓ Not Approved:       

Comments:

## DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL

Program: <b>Electronics Technology – Electronics Technician Option</b>
Division: <b>Business and Technology</b>
Degree type: <b>Associate in Science</b>
<p>Provide a detailed list of the proposed changes to the program.</p> <ol style="list-style-type: none"> <li>1. Semester 1: Remove the requirement “ ELT 105 CAD for Technicians or CIS 111 Introduction to Microcomputer Applications or CIS 115 Introduction to Computer Applications in Telecommunications.” Retire ELT 105.</li> <li>2. Semester 2: Replace “ELT 122 Microprocessors or CSC 233 Computer Hardware &amp; Support” with a new course, ELT 130 Embedded Microcontrollers.</li> </ol>
<p>Attachments:</p> <p>X Current program grid</p> <p>X Proposed program grid</p>
Submit separate proposals for any new courses or revised courses in the program.
<p>Provide a rationale for the proposed changes.</p> <ol style="list-style-type: none"> <li>1. Use of word processing and spreadsheets are embedded throughout ELT and ELM courses, and most students come to QCC proficient in these applications, so it is unnecessary to make it a program requirement. The most important content from ELT 105 (electronic CAD, soldering) is being moved into the new course, ELT 130, so ELT 105 is no longer necessary.</li> <li>2. Based on an analysis of current local job postings, companies are seeking technicians that can apply the concepts of Electronics to building, testing and troubleshooting systems. Microcontrollers provide a good platform on which students can build functioning systems. Microcontrollers are prevalent in electronic and electromechanical systems, and are much more relevant than microprocessors to the kinds of systems that graduates will work with. The new course ELT 130 includes outcomes that will be essential to the Electronics and Electromechanical program, therefore it cannot be optional.</li> </ol>
<p>Do any of the proposed changes affect the program goals, the program student learning outcomes, or the course mapping of the General Education Learning Outcomes? If so please provide the revisions.</p> <p>The new course, ELT 130, includes the most important outcomes of ELT 105 CAD for Technicians, and it brings important new outcomes to the program that will increase the employability of graduates. The new course meets all of the same general education requirements as ELT 122, which it is replacing.</p>

<p>Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.</p> <p>Department(s) Affected: <b>None</b></p>
<p>Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.</p> <p>There are no transfer agreements that specifically identify ELT 122 Microprocessors, so replacing that course will not have any effect.</p>
<p>For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? <b>No</b></p> <p>If yes please provide a rationale.</p>
<p>Will any of the following be required:</p> <p>Additional staff ____ Additional space ____ Additional equipment <u><b>X</b></u></p> <p>Provide a rationale for any needs indicated and include approximate cost of equipment.</p> <p>Since the new course ELT 130 is a project-based course, the department must provide materials for the projects. Actual materials will vary depending on the types of projects, but the estimated cost would be \$2000 per section.</p>



## DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL

1. **Program Name:** Electronics Technology – A.S. - Biomedical Instrumentation Option

2. **Originator:** Jim Heffernan

**Date:** 30 October, 2012

3. **Division Dean:** Kathy Rentsch

**Date:** 30 October, 2012

4. **Brief Description of the Proposal:**

1. Remove "ELT 105 CAD for Technicians or CIS 111 Introduction to Microcomputer Applications or CIS 115 Introduction to Computer Applications in Telecommunications." Retire ELT 105.
2. Replace "ELT 122 Microprocessors or CSC 233 Computer Hardware & Support" with new course: ELT 130 Embedded Microcontrollers. Retire ELT 122.
3. Move CSC 141 Windows Client Operating Systems from Semester 2 to Semester 1.
4. Add CSC 234 Networking Technologies.
5. Replace Program Elective with ELM 251 Instrumentation and Control Technology.

5. **Effective Date:** Fall 2013

6. **Recommended by the Business & Technology Division** **Date:** 11.15.12

**Comments:**

7. **AA Leadership Team:** Jim Bunn **Date:** 11/28/12

**Recommended:** ✓ **Not Recommended:** \_\_\_\_\_

**Comments:**

8. **VP/Academic Affairs:** [Signature] **Date:** 11/28/12

**Recommended:** ✓ **Not Recommended:** \_\_\_\_\_

**Comments:**

9. **Learning Council:** [Signature] **Date:** 12/11/12

**Recommended:** ✓ **Not Recommended:** \_\_\_\_\_

**Comments:**

*friendly amendment: Remove "Retire ELT 105."*

10. **VP/Academic Affairs:** [Signature] **Date:** 12/11/12

**Approved:** ✓ **Not Approved:** \_\_\_\_\_

**Comments:**

## DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL

Program: <b>Electronics Technology – Biomedical Instrumentation Option</b>
Division: <b>Business and Technology</b>
Degree type: <b>Associate in Science</b>
Provide a detailed list of the proposed changes to the program. <ol style="list-style-type: none"><li>1. Semester 1: Remove “ELT 105 CAD for Technicians or CIS 111 Computer Applications or CIS 115 Introduction to Computer Applications in Telecommunications.” Retire ELT 105.</li><li>2. Semester 2: Replace “ELT 122 Microprocessors or CSC 233 Computer Hardware &amp; Support” with new course: ELT 130 Embedded Microcontrollers. Retire ELT 122.</li><li>3. Move CSC 141 Windows Client Operating Systems from Semester 2 to Semester 1</li><li>4. Semester 2: Add CSC 234 Networking Technologies.</li><li>5. Semester 3: Replace Program Elective with ELM 251 Instrumentation and Control Technology.</li></ol>
Attachments: X Current program grid X Proposed program grid
Submit separate proposals for any new courses or revised courses in the program.
Provide a rationale for the proposed changes. <ol style="list-style-type: none"><li>1. Use of word processing and spreadsheets are embedded throughout ELT and ELM courses, and most students come to QCC proficient in these applications, so it is unnecessary to make it a program requirement. The most important content from ELT 105 (electronic CAD, soldering) is being moved into the new course, ELT 130, so ELT 105 is no longer necessary.</li><li>2. Based on an analysis of current local job postings, companies are seeking technicians that can apply the concepts of Electronics to building, testing and troubleshooting systems. Microcontrollers provide a good platform on which students can build functioning systems. Microcontrollers are prevalent in electronic and electromechanical systems, and are much more relevant than microprocessors to the kinds of systems that graduates will work with. The new course ELT 130 includes outcomes that will be essential to the Electronics and Electromechanical program, therefore it cannot be optional.</li><li>3. Based on several visits to the Biomedical Equipment departments at St. Vincent Hospital and UMass Medical Center, and based on numerous discussions with technicians and their supervisors, it is clear that modern hospitals have become highly networked environments. Many of the devices that technicians work on and the problems they are called to solve involve network connection issues.</li><li>4. According to supervisors and technicians in the field, much of the equipment that biomedical equipment technicians deal with involves actuators, valves, sensors and</li></ol>

<p>should be required of all graduates of the Biomedical Instrumentation Option.</p> <p>5.</p>
<p>Do any of the proposed changes affect the program goals, the program student learning outcomes, or the course mapping of the General Education Learning Outcomes? If so please provide the revisions.</p> <p>The new course, ELT 130, includes the most important outcomes of ELT 105 CAD for Technicians, and it brings important new outcomes to the program that will increase the employability of graduates. The new course meets all of the same general education requirements as ELT 122, which it is replacing.</p>
<p>Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.</p> <p>Department(s) Affected: <b>None</b></p>
<p>Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.</p> <p>There are no transfer agreements that specifically identify ELT 122 Microprocessors, so replacing that course will not have any effect.</p>
<p>For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? <b>No</b></p> <p>If yes please provide a rationale.</p>
<p>Will any of the following be required:  Additional staff ____ Additional space ____ Additional equipment <u><b>X</b></u>  Provide a rationale for any needs indicated and include approximate cost of equipment.</p> <p>Since the new course ELT 130 is a project-based course, the department must provide materials for the projects. Actual materials will vary depending on the types of projects, but the estimated cost would be \$2000 per section.</p>





2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL**

1. Program Name: Electromechanical Technology – A.S. - Career, Option

2. Originator: Jim Heffernan Date: 30 October, 2012

3. Division Dean: Kathy Rentsch Date: 30 October, 2012

4. Brief Description of the Proposal:

Replace "ELT 122 Microprocessors or CSC 233 Computer Hardware & Support" with a new course, ELT 130 Embedded Microcontrollers. Retire ELT 122 Microprocessors

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12

Comments:

7. AA Leadership Team: Jim Brown Date: 11/28/12

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

9. Learning Council: \_\_\_\_\_ Date: \_\_\_\_\_

Recommended: \_\_\_\_\_ Not Recommended: \_\_\_\_\_  
Comments:

10. VP/Academic Affairs: [Signature] Date: 12/11/12

Approved: ✓ Not Approved: \_\_\_\_\_  
Comments:

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL**

Program: <b>Electromechanical Technology – Career Option</b>
Division: <b>Business and Technology</b>
Degree type: <b>Associate in Science</b>
Provide a detailed list of the proposed changes to the program. In Semester 2, Replace “ELT 122 Microprocessors or CSC 233 Computer Hardware & Support” with a new course, ELT 130 Embedded Microcontrollers. Retire ELT 122 Microprocessors
Attachments: X Current program grid X Proposed program grid
Submit separate proposals for any new courses or revised courses in the program.
Provide a rationale for the proposed changes.  Based on an analysis of current local job postings, companies are seeking technicians that can apply the concepts of Electronics to building, testing and troubleshooting systems. Microcontrollers provide a good platform on which students can build functioning systems. Microcontrollers are prevalent in electronic and electromechanical systems, and are much more relevant than microprocessors to the kinds of systems that graduates will work with. The new course ELT 130 includes outcomes that will be essential to the Electronics and Electromechanical program, therefore it cannot be optional.
Do any of the proposed changes affect the program goals, the program student learning outcomes, or the course mapping of the General Education Learning Outcomes? If so please provide the revisions.  The new course, ELT 130, includes the most important outcomes of ELT 105 CAD for Technicians, and it brings important new outcomes to the program that will increase the employability of graduates. The new course meets all of the same general education requirements as ELT 122, which it is replacing.

<p>Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.</p> <p>Department(s) Affected: <b>None</b></p>
<p>Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.</p> <p>There are no transfer agreements that specifically identify ELT 122 Microprocessors, so replacing that course will not have any effect.</p>
<p>For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? <b>No</b></p> <p>If yes please provide a rationale.</p>
<p>Will any of the following be required:</p> <p>Additional staff ____ Additional space ____ Additional equipment <u><b>X</b></u></p> <p>Provide a rationale for any needs indicated and include approximate cost of equipment.</p> <p>Since the new course ELT 130 is a project-based course, the department must provide materials for the projects. Actual materials will vary depending on the types of projects, but the estimated cost would be \$2000 per section.</p>



2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL**

1. Program Name: Electromechanical Technology – A.S. - Transfer Option

2. Originator: Jim Heffernan

Date: 30 October, 2012

3. Division Dean: Kathy Rentsch

Date: 30 October, 2012

4. Brief Description of the Proposal:

Replace "ELT 122 Microprocessors or CSC 233 Computer Hardware & Support" with a new course, ELT 130 Embedded Microcontrollers. Retire ELT 122 Microprocessors.

5. Effective Date: Fall 2013

6. Recommended by the Business & Technology Division Date: 11.15.12

Comments:

7. AA Leadership Team: Jim Berni Date: 11/28/12

Recommended: ☒ Not Recommended: ☐  
Comments:

8. VP/Academic Affairs: G. Porey Date: 11/28/12

Recommended: ☒ Not Recommended: ☐  
Comments:

9. Learning Council: [Signature] Date: 12/11/12

Recommended: ☒ Not Recommended: ☐  
Comments:

10. VP/Academic Affairs: G. Porey Date: 12/11/12

Approved: ☒ Not Approved: ☐  
Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**

**DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL**

Program: <b>Electromechanical Technology – Transfer Option</b>
Division: <b>Business and Technology</b>
Degree type: <b>Associate in Science</b>
Provide a detailed list of the proposed changes to the program.  In Semester 2, replace “ELT 122 Microprocessors or CSC 233 Computer Hardware & Support” with a new course, ELT 130 Embedded Microcontrollers. Retire ELT 122 Microprocessors.
Attachments: X Current program grid X Proposed program grid
Submit separate proposals for any new courses or revised courses in the program.
Provide a rationale for the proposed changes.  Based on an analysis of current local job postings, companies are seeking technicians that can apply the concepts of Electronics to building, testing and troubleshooting systems. Microcontrollers provide a good platform on which students can build functioning systems. Microcontrollers are prevalent in electronic and electromechanical systems, and are much more relevant than microprocessors to the kinds of systems that graduates will work with. The new course ELT 130 includes outcomes that will be essential to the Electronics and Electromechanical program, therefore it cannot be optional.
Do any of the proposed changes affect the program goals, the program student learning outcomes, or the course mapping of the General Education Learning Outcomes? If so please provide the revisions.  The new course, ELT 130, includes the most important outcomes of ELT 105 CAD for Technicians, and it brings important new outcomes to the program that will increase the employability of graduates. The new course meets all of the same general education requirements as ELT 122, which it is replacing.

<p>Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments.</p> <p>Department(s) Affected: <b>None</b></p>
<p>Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.</p> <p>There are no transfer agreements that specifically identify ELT 122 Microprocessors, so replacing that course will not have any effect.</p>
<p>For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? <b>No</b></p> <p>If yes please provide a rationale.</p>
<p>Will any of the following be required:  Additional staff ____ Additional space ____ Additional equipment <u><b>X</b></u>  Provide a rationale for any needs indicated and include approximate cost of equipment.</p> <p>Since the new course ELT 130 is a project-based course, the department must provide materials for the projects. Actual materials will vary depending on the types of projects, but the estimated cost would be \$2000 per section.</p>

# ELECTRONICS TECHNOLOGY CERTIFICATE (Program Code: CE) – CURRENT

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 CAD for Technicians <u>or</u> Introduction to Microcomputer Applications <u>or</u> Introduction to Computer Applications in Telecommunications Electronics I Digital Computer Circuits English Composition & Literature I College Algebra Semester 2 Windows Client Operating Systems Electronics II Microprocessors <u>or</u> Computer Hardware & Support Total credits required	ELT 105	F			3	ENG 100 or approp place score
	CIS 111	F/S/SU			4	ENG 100 or approp place score, MAT 099
	CIS 115	F/S/SU			4	ENG 100 or approp place score, MAT 099
	ELT 103	F/S			3	ENG 100 or approp place score
	ELT 121	F/S			3	MAT 099 or approp place score
	ENG 101	F/S/SU			4	
	MAT 100	F/S/SU			4	
	CSC 141	F/S/SU			4	
	ELT 104	F/S			4	ELT 103
	ELT 122	F/S			4	ELT 121
	CSC 233	F/S			4	Coreq-CSC 141
					29	

# ELECTRONICS TECHNOLOGY CERTIFICATE (Program Code: CE) – PROPOSED

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 Electronics I Digital Computer Circuits English Composition & Literature I College Algebra Semester 2 Windows Client Operating Systems Electronics II Embedded Microcontrollers Total credits required	ELT 103	F/S			4	ENG 100 or approp place score, MAT 099
	ELT 121	F/S			4	ENG 100 or approp place score, MAT 099
	ENG 101	F/S/SU			3	ENG 100 or approp place score
	MAT 100	F/S/SU			3	MAT 099 or approp place score
	CSC 141	F/S/SU			4	
	ELT 104	F/S			4	ELT 103
	ELT 130	F/S			4	ELT 103, ELT 121
					26	



# ELECTRONICS TECHNOLOGY – ELECTRONICS TECHNICIAN OPTION - Associate in Science (Program Code: ELET) – CURRENT

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 CAD for Technicians <u>or</u> Introduction to Microcomputer Applications <u>or</u> Introduction to Computer Applications in Telecommunications Electronics I Digital Computer Circuits English Composition & Literature I College Mathematics I: Precalculus	ELT 105	F				ENG 100 or approp place score
	CIS 111	F/S/SU				
	CIS 115	F/S/SU			3	
	ELT 103	F/S			4	ENG 100 or approp place score, MAT 099
	ELT 121	F/S			4	ENG 100 or approp place score, MAT 099
	ENG 101	F/S/SU			3	ENG 100 or approp place score
	MAT 123	F/S/SU			3	MAT 100 or approp place score
	CSC 141	F/S/SU			4	
	ELT 104	F/S			4	ELT 103
	ELT 122	F/S				ELT 121
Semester 2 Windows Client Operating Systems Electronics II Microprocessors <u>or</u> Computer Hardware & Support English Composition & Literature II College Mathematics II: Trigonometry	CSC 233	F/S			4	Coreq-CSC 141
	ENG 102	F/S/SU			3	ENG 101
	MAT 124	F/S/SU			3	MAT 123
	---					
	---				4	
	MAT 233	F/S/SU			4	MAT 124
	PHY 101	F			4	Coreq-MAT 124
	---				3	
	---				3	
	---					
Semester 3 Program Elective* Calculus I Physics I Humanities Elective Social Science Elective	---					
	---				4	
	---				4	
	---				4	
	---				3	
	---				3	
	---					
	---				4	
	---				4	
	---				4	
Semester 4 Program Elective* Calculus II Physics II Technical Elective** Total credits required	---					
	---				4	
	---				4	
	---				4	
	---				3	
	---				68	
	---					
	---					
	---					
	---					

## Program Notes:

- Students should note that many required courses have ENG and/or MAT prerequisites
- For additional information see program introduction on page 120.

\*Program Elective may be any 200-Level ELT or ELM course.

\*\*Courses that satisfy Technical Electives are: any CSC course, any ELM course, any 200 level ELT course, any 200 level CIS course, CIS 134, MAT 122, any 200 level MAT courses or any 200 level MNT course.

# ELECTRONICS TECHNOLOGY – ELECTRONICS TECHNICIAN OPTION - Associate in Science (Program Code: ELET) – PROPOSED

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
Electronics I	ELT 103	F/S			4	ENG 100 or approp place score, MAT 099
Digital Computer Circuits	ELT 121	F/S			4	ENG 100 or approp place score, MAT 099
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT 100 or approp place score
<b>Semester 2</b>						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Electronics II	ELT 104	F/S			4	ELT 103
<b>Embedded Microcontrollers</b>	ELT 130	F/S			4	ELT 103, ELT 121
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
College Mathematics II: Trigonometry	MAT 124	F/S/SU			3	MAT 123
<b>Semester 3</b>						
Program Elective*	---				4	
Calculus I	MAT 233	F/S/SU			4	MAT 124
Physics I	PHY 101	F			4	Coreq-MAT 124
Humanities Elective	---				3	
Social Science Elective	---				3	
<b>Semester 4</b>						
Program Elective*	---				4	
Calculus II	MAT 234	F/S/SU			4	MAT 233
Physics II	PHY 102	S			4	PHY 101
Technical Elective**	---				3	
<b>Total credits required</b>					<b>65</b>	

## Program Notes:

- Students should note that many required courses have ENG and/or MAT prerequisites
- For additional information see program introduction on page 120.

\*Program Elective may be any 200-Level ELT or ELM course.

\*\*Courses that satisfy Technical Electives are: any CSC course, any ELM course, any CST course, any 200 level ELT course, any 200 level CIS course, CIS 134, MAT 122, any 200 level MAT courses or any 200 level MNT course.

# **ELECTRONICS TECHNOLOGY - BIOMEDICAL INSTRUMENTATION OPTION - Associate in Science (Program Code: ELBI) – CURRENT**

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b> <b>CAD for Technicians or</b> <b>Introduction to Microcomputer Applications or</b> <b>Introduction to Computer Applications in</b> <b>Telecommunications</b> <b>Electronics I</b> <b>Digital Computer Circuits</b> <b>English Composition &amp; Literature I</b> <b>College Mathematics I: Precalculus</b> <b>Semester 2</b> <b>Windows Client Operating Systems</b> <b>Electronics II</b> <b>Microprocessors or</b> <b>Computer Hardware &amp; Support</b> <b>English Composition &amp; Literature II</b> <b>College Mathematics II: Trigonometry</b> <b>Semester 3</b> <b>General Biology: Core Concepts</b> <b>Program Elective*</b> <b>Cooperative Work Experience &amp; Seminar</b> <b>Physics I</b> <b>Social Science Elective</b> <b>Semester 4</b> <b>Principles of Human Biology or</b> <b>Introduction to the Human Body</b> <b>Program Elective*</b> <b>Physics II</b> <b>Humanities Elective</b> <b>Total credits required</b>	ELT 105	F				ENG 100 or approp place score
	CIS 111	F/S/SU				
	CIS 115	F/S/SU			3	
	ELT 103	F/S			4	ENG 100 or approp place score, MAT 099
	ELT 121	F/S			4	ENG 100 or approp place score, MAT 099
	ENG 101	F/S/SU			3	ENG 100 or approp place score
	MAT 123	F/S/SU			3	MAT 100 or approp place score
	CSC 141	F/S/SU			4	
	ELT 104	F/S			4	ELT 103
	ELT 122	F/S				ELT 121
	CSC 233	F/S			4	Coreq-CSC 141
	ENG 102	F/S/SU			3	ENG 101
	MAT 124	F/S/SU			3	MAT 123
	BIO 101	F/S/SU			4	Coreq-ENG 101
	ELT 299	F/S/SU			4	
	PHY 101	F			3	ELT 104, ELT 122 or CSC 233
	---	F/S/SU			4	Coreq- MAT 124
	BIO 100	F/S/SU			3	
	BIO 140	F/S/SU			4	ENG 100 or approp place score
	---	S			4	PHY 101
	PHY 102	F/S/SU			4	
	---	F/S/SU			3	
					68	

## **Program Notes:**

- Students should note that many required courses have ENG and/or MAT prerequisites
- For additional information see program introduction on page 120.
- \* Program Elective may be any 200-Level ELT or ELM course

# **ELECTRONICS TECHNOLOGY - BIOMEDICAL INSTRUMENTATION OPTION - Associate in Science (Program Code: ELBI) – PROPOSED**

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
<b>Windows Client Operating Systems</b>	CSC 141	F/S/SU			4	
Electronics I	ELT 103	F/S			4	ENG 100 or approp place score, MAT 099
Digital Computer Circuits	ELT 121	F/S			4	ENG 100 or approp place score, MAT 099
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT 100 or approp place score
<b>Semester 2</b>						
<b>Networking Technologies</b>	CSC 234	F/S			4	Coreq-CSC 141
Electronics II	ELT 104	F/S			4	ELT 103
<b>Embedded Microcontrollers</b>	ELT 130	F/S			4	ELT 103, ELT 121
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
College Mathematics II: Trigonometry	MAT 124	F/S/SU			3	MAT 123
<b>Semester 3</b>						
<b>General Biology: Core Concepts</b>	BIO 101	F/S/SU			4	Coreq-ENG 101
<b>Instrumentation and Control Technology</b>	ELM 251	F/S			4	ELT 104, ELT 130
<b>Cooperative Work Experience &amp; Seminar</b>	ELT 299	F/S/SU			3	ELT 104, ELT 130
Physics I	PHY 101	F			4	Coreq- MAT 124
Social Science Elective	---	F/S/SU			3	
<b>Semester 4</b>						
<b>Principles of Human Biology or</b>	BIO 100	F/S/SU			4	ENG 100 or approp place score
<b>Introduction to the Human Body</b>	BIO 140				4	
<b>Program Elective*</b>	---				4	
Physics II	PHY 102	S			4	PHY 101
Humanities Elective	---	F/S/SU			3	
<b>Total credits required</b>					<b>65</b>	

## **Program Notes:**

- Students should note that many required courses have ENG and/or MAT prerequisites
- For additional information see program introduction on page 120.
- \* Program Elective may be any 200-Level ELT or ELM course.

# ELECTROMECHANICAL TECHNOLOGY - CAREER OPTION - Associate in Science (Program Code: EPCA) – CURRENT

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
Electronics I	ELT 103	F/S			4	ENG 100 or approp place score, MAT 099
Digital Computer Circuits	ELT 121	F/S			4	ENG 100 or approp place score, MAT 099
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Mathematics Elective*	---				3	
<b>Semester 2</b>						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Electronics II	ELT 104	F/S			4	ELT 103
Microprocessors or	ELT 122	F/S				ELT 121
Computer Hardware and Support	CSC 233	F/S			4	Coreq: CSC 141
Mathematics Elective*	---				3	
<b>Semester 3</b>						
Instrumentation and Control Technology	ELM 251	F			4	ELT 104, ELT 121
Networking Technologies	CSC 234	F/S			4	Coreq: CSC 141
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Laboratory Science Elective**	---				4	
<b>Semester 4</b>						
Robotics and Automated Systems	ELM 256	S			4	ELT 104, ELT 121
Introduction to Programmable Logic Controllers	ELM 257	F/S			4	ELT 121
Cooperative Work Experience & Seminar	ELM 299	F/S/SU			3-6	Approval of Program Coordinator
Laboratory Science Elective**	---				4	
Social Science Elective***	---				3	
<b>Total credits required</b>					<b>62-65</b>	

## Program Notes:

- Students should note that many required courses have ENG and/or MAT prerequisites
- The Electromechanical Technology Program was developed in partnership with local and national representatives of the semiconductor manufacturing industry.
- \* Recommended Mathematics electives: MAT 100 College Algebra, MAT 122 Statistics
- \*\* Recommended Lab Science electives: SCI 107 Science of Technology: Vision and Light, SCI 108 Science of Technology: Hearing and Sound, PHY 101 Physics I (requires MAT 124 as a co-requisite), PHY 102 Physics II
- \*\*\* Recommended Social Science Elective: PSY 118 Psychology of Interpersonal Relations

# **ELECTROMECHANICAL TECHNOLOGY - CAREER OPTION - Associate in Science (Program Code: EPCA) – PROPOSED**

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
Electronics I	ELT 103	F/S			4	ENG 100 or approp place score, MAT 099
Digital Computer Circuits	ELT 121	F/S			4	ENG 100 or approp place score, MAT 099
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Mathematics Elective*	--				3	
<b>Semester 2</b>						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Electronics II	ELT 104	F/S			4	ELT 103
Embedded Microcontrollers	ELT 130	F/S			4	ELT 103, ELT 121
Mathematics Elective*	--				3	
<b>Semester 3</b>						
Instrumentation and Control Technology	ELM 251	F			4	ELT 104, ELT 130
Networking Technologies	CSC 234	F/S			4	Coreq: CSC 141
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Laboratory Science Elective*	--				4	
<b>Semester 4</b>						
Robotics and Automated Systems	ELM 256	S			4	ELT 104, ELT 121
Introduction to Programmable Logic Controllers	ELM 257	F/S			4	ELT 121
Cooperative Work Experience & Seminar	ELM 299	F/S/SU			3-6	ELT 104, ELT 130
Laboratory Science Elective**	--				4	
Social Science Elective***	--				3	
<b>Total credits required</b>					<b>62-65</b>	

## **Program Notes:**

- Students should note that many required courses have ENG and/or MAT prerequisites
- The Electromechanical Technology Program was developed in partnership with local and national representatives of the semiconductor manufacturing industry.
- \* Recommended Mathematics electives: MAT 100 College Algebra, MAT 122 Statistics
- \*\* Recommended Lab Science electives: SCI 107 Science of Technology: Vision and Light, SCI 108 Science of Technology: Hearing and Sound, PHY 101 Physics I (requires MAT 124 as a co-requisite), PHY 102 Physics II
- \*\*\* Recommended Social Science Elective: PSY 118 Psychology of Interpersonal Relations

# ELECTROMECHANICAL TECHNOLOGY - TRANSFER OPTION - Associate in Science (Program Code: EPTR) – CURRENT

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Electronics I	ELT 103	F/S			4	ENG 100 or approp place score, MAT 099
Digital Computer Circuits	ELT 121	F/S			4	ENG 100 or approp place score, MAT 099
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT100 or approp place score
<b>Semester 2</b>						
<b>Microprocessors or</b>	ELT 122	F/S				ELT 121
<b>Computer Hardware and Support</b>	CSC 233	F/S			4	Coreq: CSC 141
Electronics II	ELT 104	F/S			4	ELT 103
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
College Math II: Trigonometry	MAT 124	F/S/SU			3	MAT 123
<b>Semester 3</b>						
<b>Instrumentation and Control Technology</b>	ELM 251	F			4	ELT 104, ELT 121
Networking Technologies	CSC 234	F/S			4	Coreq: CSC 141
Physics I	PHY 101	F			4	Coreq-MAT 124
Social Science Elective*	---				3	
<b>Semester 4</b>						
Robotics and Automated Systems	ELM 256	S			4	ELT 104, ELT 121
Introduction to Programmable Logic Controllers	ELM 257	F/S			4	ELT 121
Physics II	PHY 102	S			4	PHY 101
Liberal Arts Elective**	---				3	
<b>Total credits required</b>					<b>62</b>	

## Program Notes:

- Students should note that many required courses have ENG and/or MAT prerequisites
- The Electromechanical Technology Program was developed in partnership with local and national representatives of the semiconductor manufacturing industry.

\*Recommended Social Science Elective: PSY 118 Psychology of Interpersonal Relations

\*\* Recommended Liberal Arts Elective: SPH 101 Speech Communication Skills

# **ELECTROMECHANICAL TECHNOLOGY - TRANSFER OPTION - Associate in Science (Program Code: EPTR) – PROPOSED**

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
<b>Semester 1</b>						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Electronics I	ELT 103	F/S			4	ENG 100 or approp place score, MAT 099
Digital Computer Circuits	ELT 121	F/S			4	ENG 100 or approp place score, MAT 099
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT100 or approp place score
<b>Semester 2</b>						
<b>Embedded Microcontrollers</b>						
Electronics II	ELT 130	F/S			4	ELT 103, ELT 121
English Composition & Literature II	ELT 104	F/S			4	ELT 103
College Math II: Trigonometry	ENG 102	F/S/SU			3	ENG 101
	MAT 124	F/S/SU			3	MAT 123
<b>Semester 3</b>						
<b>Instrumentation and Control Technology</b>						
Networking Technologies	ELM 251	F			4	ELT 104, ELT 130
Physics I	CSC 234	F/S			4	Coreq: CSC 141
Social Science Elective*	PHY 101	F			4	Coreq: MAT 124
	---				3	
<b>Semester 4</b>						
Robotics and Automated Systems	ELM 256	S			4	ELT 104, ELT 121
Introduction to Programmable Logic Controllers	ELM 257	F/S			4	ELT 121
Physics II	PHY 102	S			4	PHY 101
Liberal Arts Elective**	---				3	
<b>Total credits required</b>					<b>62</b>	

## **Program Notes:**

- Students should note that many required courses have ENG and/or MAT prerequisites
- The Electromechanical Technology Program was developed in partnership with local and national representatives of the semiconductor manufacturing industry.

\*Recommended Social Science Elective: PSY 118 Psychology of Interpersonal Relations

\*\* Recommended Liberal Arts Elective: SPH 101 Speech Communication Skills



**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**

**NEW COURSE PROPOSAL**

1. **Course Number and Name:** HVC 106 Comfort Heating Systems

2. **Originator:** Robert Recko

**Date:** 10.23.12

3. **Division Dean:** Kathy Rentsch

**Date:** 10.23.12

4. **Brief Description of the Proposal:**

Create new course, HVC 106 Comfort Heating Systems. This course will focus specifically on heating. Originally HVC 103 Air Conditioning Systems addressed both heating and cooling, but there is too much content to be covered in one 5-credit course.

5. **Effective Date:** Fall 2013

6. **Recommended by the Business & Technology Division**

**Date:** 11.15.12

**Comments:**

7. **AA Leadership Team:** Jim Brown

**Date:** 11/28/12

**Recommended:** ☒

**Not Recommended:** ☐

**Comments:**

8. **VP/Academic Affairs:** [Signature]

**Date:** 11/28/12

**Recommended:** ☒

**Not Recommended:** ☐

**Comments:**

9. **Learning Council:** [Signature]

**Date:** 12/11/12

**Recommended:** ☒

**Not Recommended:** ☐

**Comments:**

10. **VP/Academic Affairs:** [Signature]

**Date:** 12/11/12

**Approved:** ☒

**Not Approved:** ☐

**Comments:**

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**NEW COURSE PROPOSAL**

Course Discipline/Division: Heating, Ventilation, and Air Conditioning/Business & Technology Division	
Course Number: HVC 106	
Course Name:  Comfort Heating Systems	
Prerequisites and/or corequisites (confer with affected department coordinator):  Prerequisite: Enrollment limited to HVC majors only Corequisite: HVC 101	
CIP code (check with IRaP Office): 47.0201	
Effective Term/year: Fall 2013	
Give a rationale for the new course. Be sure to indicate whether this course replaces another course.  This course will focus specifically on heating. Originally HVC 103 Air Conditioning Systems addressed both heating and cooling, but there is too much content to be covered in one 5-credit course. This change refocuses the HVAC Certificate in preparation for development and introduction of an Associate Degree program in a related area.	
Is the course content similar to other courses now offered? Yes <u>X</u> No <u>    </u> If yes, attach a statement for the coordinator of the department offering the similar course. See "rationale."	
Please indicate if this course will serve as any of the following types of electives <u>    </u> Elective <u>  x  </u> Discipline specific (name the discipline) Heating, Ventilation, and Air Conditioning <u>  x  </u> Program specific (name the program) HVAC Certificate <u>    </u> Multiple perspective (confer with the Liberal Arts Coordinator)	
Is this course required for a program? If yes, submit a separate Program Revision Proposal or New Program Proposal.  Yes	
Expected enrollment per term: 20	Expected enrollment per year: 20

Will any of the following be required: No

Additional staff \_\_\_\_ Additional space \_\_\_\_ Additional equipment \_\_\_\_

Provide a rationale for any needs indicated above and include approximate cost of equipment.

Library print and non-print resources in support of this course: \$500

## Course Materials

Course number: HVC 106		
Course name: Comfort Heating Systems		
Credits: 4		
Lecture Hours: 3	Lab hours: 3	Clinic Hours:
General course description and prerequisites (as it will appear in the catalog):		
<p><b>HVC 106 Comfort Heat Systems 4 credits</b></p> <p>This course is a study of mechanical energy systems that use gas, oil, and electricity for comfort heating applications. An emphasis on energy efficiency and awareness of energy costs is inherent in the content. Hands-on laboratories cover the installation and use of electrical controls, system evaluation, mechanical and electrical troubleshooting of residential and light commercial applications. This course includes a laboratory component.</p> <p><b>Prerequisite: Enrollment limited to HVC majors only</b></p> <p><b>Corequisite: HVC 101</b></p>		
All required texts and paperbacks, including information on publisher and edition used (provide a suggested text):		
Whitman/Johnson. Refrigeration & Air Conditioning Technology. Delmar; ISBN-13: 978-1-4283-1936-3; ISBN-10: 1-4283-1936-0		
Instructional Objectives (list):		
Through a combination of lectures, demonstrations, weekly assignments and student projects, students:		
<ol style="list-style-type: none"><li>1) Demonstrate safe lab practices;</li><li>2) Demonstrate knowledge of fuel and energy values to make cost comparisons</li><li>3) Apply knowledge of piping and fabrication knowledge and skills to heating systems</li><li>4) Apply the knowledge of control circuit logic to heating system operation and safety control</li><li>5) Demonstrate knowledge of energy saving strategies and design methods</li><li>6) Apply knowledge of fuel gas properties and mechanisms for application to gas heating appliances</li><li>7) Apply knowledge of fuel oil properties and mechanisms for application to oil heating appliances</li><li>8) Apply knowledge of air and hydronic heating components and methods to heating systems installations</li><li>9) Apply knowledge of air and hydronic heating systems to diagnose heating systems problems</li><li>10) Demonstrate methods of performing procedures that allows equipment to operate at peak energy efficiency</li></ol>		
Teaching procedures: (provide suggested teaching methodology):		
A blend of lectures, demonstrations, weekly assignments, and student projects are utilized to aid student success.		

1. Whiteboard instruction with PowerPoint slides
2. In-lab hands-on projects and demonstrations
3. Supplementary handouts as needed
4. Question and answer sessions
5. Weekly homework and laboratory assignments
6. Online Learning Management System

Course topics and/or assignments and/or required and/or supplemental reading (provide a list of suggested course topics):

### Course Topics

#### Application and Materials for Mechanical Heating Systems

Copper Tubing  
Plastic Pipe  
Soldering and Brazing  
Steel Pipe  
Installation Methods  
Safety

Text: Unit Seven: Tubing and Piping

#### Energy Systems, Energy Usage and Energy Conservation

Energy Units  
Fuels: Oil, Gas and Electric  
Energy Efficiency and Fuel Cost Comparisons

Text: Units 30 Electric Heat, 31 Gas Heat, Unit 32 Oil Heat

#### Electric Heat

Forced Air and Hydronic  
Heating Equipment Design  
Control of Electric Heat  
Safety

Text: Unit 30 Electric Heat

#### Gas Heat

Forced Air Furnaces  
Fuel Gas Composition and Gas Safety  
Regulators and Gas valves  
Combustion Systems  
Limits, Safety and Flame Safety Devices  
Two Stage and Modulating Heat  
Venting and Gas Piping  
Combustion Efficiency  
Electric and Mechanical Troubleshooting

Text: Unit 31 Gas Heat

#### Oil Heat

Composition of Fuel Oils  
Fuel Oil Combustion  
Oil Safety  
Oil Burners

Oil Controls – Operating and Safety  
Heat Delivery Systems  
Oil Systems Installation  
Oil Efficiency and The “Tune Up” process  
Oil Service  
MA Fuel Oil Code

Text: Unit 32 Oil Heat

### **Hydronic Heat**

Methods of Heat Transfer  
Basic Hydronic System  
Hydronic System Components  
High Temperature, Low Temperature and Radiant Systems  
Piping Configurations  
Domestic Hot Water  
Hydronic Control Systems

Text: Unit 33 Hydronic Heat

### **Indoor Air Quality**

Control of the Indoor Environment  
Causes and prevention of Indoor Air Pollution  
Ventilation, Filtration and Humidification  
IAQ Strategies

Text: Unit 33 Indoor Air Quality

### **Comfort and Psychrometrics**

Defining Comfort  
Relationship between Air and Humidity  
Dry Bulb, Wet Bulb and Dew Point  
The Psychrometric Chart  
The Psychrometric Chart as a Diagnostic Tool

Text: Unit 35 Comfort and Psychrometrics

### **Air Distribution and Balance**

Basic Sheet Metal Materials and Methods  
Basic Air Distribution System  
Air Measurement Tools  
Duct Designs  
Determining Air Quantities  
Air Balancing

Text: Unit 37 Distribution and Balance

### **Combination Forced Air Heating and Cooling Systems**

Integration of Electric, Oil, Gas and Electric Air Conditioning  
Examples of strategies for Total Comfort Systems

Text: Unit 42, Heating Systems with Electric Air Conditioning	
Other information:	
<ul style="list-style-type: none"> <li>Suggested basis for student grading and criteria for evaluating student performance</li> </ul>	
Final grades for this course will be based on the following:	
Exam 1 (Midterm):	10%
Exam 2: (End of term)	10%
Final Exam:	30%
Eleven Quizzes:	20% (all worth the same)
Lab Projects:	30% (all worth the same)
<i>Final course grade will follow the QCC grading system</i>	
<ul style="list-style-type: none"> <li>Suggested attendance policy</li> </ul>	
<b><u>Attendance Policy</u></b>	
Attendance is extremely important in this program. The course expectation for attendance mirrors that of the HVAC/R industry. There are also licensing requirements that mandate student hours. After three absences the student will be notified in writing by the instructor about the absences. Students are required to confer with the instructor about what work needs to be made up. It is the responsibility of the student not only make up all work missed but to be sure that all required work is completed on time.	
<ul style="list-style-type: none"> <li>Suggested plagiarism statement</li> </ul>	
<b><u>Plagiarism</u></b>	
Submitted assignments are expected to be the product of the student's individual and original effort. Any work deemed by the instructor as plagiarized will not be accepted and the student may subject to further discipline as per the QCC Student Handbook.	
<ul style="list-style-type: none"> <li>Suggested assessment methodologies</li> </ul>	
Please submit a syllabus for this new course to your dean.	

List the Student Learning Outcomes for this course in the table below. Recommendations for writing SLOs can be found in the *General Information for Academic Affairs Proposals* document that is available on the QCC's Intranet under Frequently Used Forms (Academic Governance Forms).

COURSE STUDENT LEARNING OUTCOMES FOR: Comfort Heating Systems HVC 106	
Upon completion of the course, students will be able to:	
1	Demonstrate safe lab practices;
2	Demonstrate knowledge of fuel and energy values to make cost comparisons
3	Apply knowledge of piping and fabrication knowledge and skills to heating systems
4	Apply the knowledge of control circuit logic to heating system operation and safety control
5	Demonstrate knowledge of energy saving strategies and design methods
6	Apply knowledge of fuel gas properties and mechanisms for application to gas heating appliances
7	Apply knowledge of fuel oil properties and mechanisms for application to oil heating appliances
8	Students apply knowledge of air and hydronic heating components and methods to heating systems installations
9	Students apply knowledge of air and hydronic heating systems to diagnose heating systems problems
10	Demonstrate methods of performing procedures that allows equipment to operate at peak energy efficiency

How does the course support general education? Using the chart below, indicate the degree or level of connection between the course and outcome as indicated here.

I – Introductory/Background – There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the

achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional - There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized – There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

CONNECTION OF HVC 106 Comfort Heating Systems TO GENERAL EDUCATION STUDENT LEARNING OUTCOMES	I,M,E
Communication Skills: Students will write and speak effectively.	I
Information Literacy: Students will locate, evaluate and apply reliable and appropriate information.	E
Quantitative Reasoning: Students will apply the concepts and methods of mathematics to solve problems.	E
Scientific Reasoning: Students will relate scientific methods of inquiry to the acquisition of knowledge.	E
Technical Literacy: Students will utilize computer and emerging technologies effectively.	E
Aesthetics: Students will appreciate the variety of human experiences as expressed through the arts.	I
Multiple Perspectives: Students will demonstrate knowledge and appreciation of diverse cultures.	I
Ethics: Students will develop an awareness of personal obligations and responsibilities in one's community of influence.	I
Impact of Technology: Students will reflect on the impact of scientific and technological advances on the individual, society and the environment.	E
Civic Literacy: Students will demonstrate awareness of the responsibilities of local, national and international citizenship.	M

If the course is required in a program or it is an elective in a program, please indicate how the course contributes to the Program Student Learning Outcomes. List the Program Student Learning Outcomes and indicate the degree or level of connection between the course and outcome as I, M, or E. Please delete this table if it is not applicable.

CONNECTION OF HVC 106 Comfort Heating Systems to PROGRAM STUDENT LEARNING OUTCOMES FOR HVAC program		
		I,M,E
1	Solder, Braze, and Flare copper tubing.	E
2	Safely wire and install electrical circuits	E
3	Use electrical meters to make electrical measurements	E
4	Understand and interpret wiring schematics	E
5	Troubleshoot electrical problems	E
6	Evacuate, charge and recover refrigerant from Air Conditioning and Refrigeration systems	E
7	Troubleshoot Air Conditioning and Refrigeration systems	E
8	Troubleshoot Heating systems	E





**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**

**NEW COURSE PROPOSAL**

1. **Course Number and Name:** HVC 107 Comfort Cooling Systems

2. **Originator:** Robert Recko

**Date:** 10.23.12

3. **Division Dean:** Kathy Rentsch

**Date:** 10.23.12

4. **Brief Description of the Proposal:**

Create new course, HVC 107 Comfort Cooling Systems. This course will focus specifically on cooling. Originally HVC 103 Air Conditioning Systems addressed both heating and cooling, but there is too much content to be covered in one 5-credit course.

5. **Effective Date:** Fall 2013

6. **Recommended by the Business & Technology Division**

**Date:** 11.15.12

**Comments:**

7. **AA Leadership Team:** Jim Brown **Date:** 11/28/12

**Recommended:** ☒ **Not Recommended:** ☐

**Comments:**

8. **VP/Academic Affairs:** [Signature] **Date:** 11/28/12

**Recommended:** ☒ **Not Recommended:** ☐

**Comments:**

9. **Learning Council:** [Signature] **Date:** 12/11/12

**Recommended:** ☒ **Not Recommended:** ☐

**Comments:**

10. **VP/Academic Affairs:** [Signature] **Date:** 12/11/12

**Approved:** ☒ **Not Approved:** ☐

**Comments:**

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**NEW COURSE PROPOSAL**

Course Discipline/Division: Heating, Ventilation, and Air Conditioning/Business & Technology Division	
Course Number: HVC 107	
Course Name: Comfort Cooling Systems	
Prerequisites and/or corequisites (confer with affected department coordinator): Prerequisite: HVC 101; Enrollment limited to HVC majors only	
CIP code (check with IRaP Office): 47.0201	
Effective Term/year: Fall 2013	
Give a rationale for the new course. Be sure to indicate whether this course replaces another course.  This course will focus specifically on cooling. Originally HVC 103 Air Conditioning Systems addressed both heating and cooling, but there is too much content to be covered in one 5-credit course. This change refocuses the HVAC Certificate in preparation for development and introduction of an Associate Degree program in a related area.	
Is the course content similar to other courses now offered? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, attach a statement for the coordinator of the department offering the similar course. See "rationale."	
Please indicate if this course will serve as any of the following types of electives <input type="checkbox"/> Elective <input checked="" type="checkbox"/> Discipline specific (name the discipline) Heating, Ventilation, and Air Conditioning <input checked="" type="checkbox"/> Program specific (name the program) HVAC Certificate <input type="checkbox"/> Multiple perspective (confer with the Liberal Arts Coordinator)	
Is this course required for a program? If yes, submit a separate Program Revision Proposal or New Program Proposal.  Yes	
Expected enrollment per term: 20	Expected enrollment per year: 20

Will any of the following be required: No
Additional staff ____ Additional space ____ Additional equipment ____
Provide a rationale for any needs indicated above and include approximate cost of equipment.
Library print and non-print resources in support of this course: \$500

## Course Materials

Course number: HVC 107		
Course name: Comfort Cooling systems		
Credits: 4		
Lecture Hours: 3	Lab hours: 3	Clinic Hours:
<p>General course description and prerequisites (as it will appear in the catalog):</p> <p><b>HVC 107 Comfort Cooling Systems 4 credits</b></p> <p>This course is a study of mechanical cooling equipment used in comfort cooling, heat pump, and other indoor environmental applications. Hands-on laboratories cover the installation and use of electrical controls, system evaluation, and mechanical and electrical troubleshooting of residential and light commercial applications. Strategies for energy efficiency maintenance procedures are matched to appropriate equipment. This course includes a laboratory component.</p> <p><b>Prerequisite: HVC 101; Enrollment limited to HVC majors only</b></p>		
<p>All required texts and paperbacks, including information on publisher and edition used (provide a suggested text):</p> <p>Whitman/Johnson. Refrigeration &amp; Air Conditioning Technology. Delmar; ISBN-13: 978-1-4283-1936-3;</p> <p>ISBN-10: 1-4283-1936-0</p>		
<p>Instructional Objectives (list):</p> <p>Through a combination of lectures, demonstrations, weekly assignments and student projects, students:</p> <ol style="list-style-type: none"> <li>1. Demonstrate safe lab practices</li> <li>2. Apply knowledge of refrigeration mechanisms to air conditioning applications</li> <li>3. Apply industry standards in selecting and constructing materials used in air conditioning installations</li> <li>4. Demonstrate the knowledge of control circuit design</li> <li>5. Identify normal system temperatures and pressures for diagnosis of system problems</li> <li>6. Apply knowledge of refrigeration mechanisms to air to air heat pump applications</li> <li>7. Identify normal system temperatures and pressures for diagnosis of heat pump problems</li> <li>8. Apply knowledge of fuel gas properties and mechanisms for application to gas heating appliances</li> <li>9. Demonstrate knowledge of identifying and evaluating system efficiency</li> <li>10. Demonstrate methods of performing procedures that allows equipment to operate at peak energy efficiency</li> </ol>		
<p>Teaching procedures: (provide suggested teaching methodology):</p> <ol style="list-style-type: none"> <li>1. Whiteboard instruction with PowerPoint slides</li> <li>2. In-lab hands-on projects and demonstrations</li> <li>3. Supplementary handouts as needed</li> <li>4. Question and answer sessions</li> <li>5. Weekly homework and laboratory assignments</li> <li>6. Online Learning Management System</li> </ol>		
Course topics and/or assignments and/or required and/or supplemental reading (provide a list of suggested		

course topics):

## **Course Topics**

### **Refrigeration Mechanisms for Comfort Cooling**

Building Heat Gain and Unit Sizing  
Evaporative Cooling  
Applying Refrigeration Systems for Comfort Cooling  
Cooling Cycle Components for Air Conditioning  
Design Conditions  
Compressor Design and Application  
High Efficiency Design

Text: Unit 36, Refrigeration Applied to Air Conditioning

### **Installation of Comfort Cooling Systems**

Air Flow Materials Specifications  
Piping Materials Specifications  
Electrical Installation – NEC/MA Elect Code  
Unit Start-Up

Text: Unit 38, Installation

### **Control of Comfort Cooling Equipment**

Low Voltage Controls  
Operating and Safety Controls  
Electronic Controls  
Control Strategies for Energy Efficiency

Text: Unit 39, Controls

### **Typical Operating Conditions**

Establishing a Base line for Determining Operational Standards  
Humidity Standards  
Equipment Grades and Specifications  
Refrigerant Controls and Efficiency  
Design Factors that affect System Efficiency  
Motor Characteristics Under Differing Conditions  
Refrigerant Temperature and Pressure Under Differing Conditions

Text, Unit 40 Typical Operating Conditions

### **Air Source Heat Pumps**

Reverse Cycle Refrigeration  
Applying Heat Pumps for Efficiency  
Heat Pump Cycle Components  
Balance Points  
Auxiliary Heat  
Heat Pump Controls  
Heat Pump Troubleshooting

Text: Unit 43 Heat Pumps

### **Geothermal Heat Pumps**

Using Geothermal Energy to Power the Heat Pump Cycle  
Cycle and Piping Diagrams  
Using Geothermal for Energy Efficiency

Text: Unit 44, Geothermal Heat Pumps

### **Troubleshooting and Diagnostic Procedures**

Diagnostic Logic  
Refrigerant Charging Strategies  
Troubleshooting the Refrigerant Cycle  
Diagnostic Tools and Aides  
Electrical Troubleshooting  
Service Procedures for Energy Efficiency

Text: Unit 41, Troubleshooting

Other information:

- Suggested basis for student grading and criteria for evaluating student performance

Final grades for this course will be based on the following:

Exam 1 (Midterm):	10%
Exam 2: (End of term)	10%
Final Exam:	30%
Eleven Quizzes:	20% (all worth the same)
Lab Projects:	30% (all worth the same)

*Final course grade will follow the QCC grading system*

- Suggested attendance policy

#### **Attendance Policy**

Attendance is extremely important in this program. The course expectation for attendance mirrors that of the HVAC/R industry. There are also licensing requirements that mandate student hours. After three absences the student will be notified in writing by the instructor about the absences. Students are required to confer with the instructor about what work needs to be made up. It is the responsibility of the student not only make up all work missed but to be sure that all required work is completed on time.

- Suggested plagiarism statement

#### **Plagiarism**

Submitted assignments are expected to be the product of the student's individual and original effort. Any work deemed by the instructor as plagiarized will not be accepted and the student may subject to further discipline as per the QCC Student Handbook.

- Suggested assessment methodologies

Please submit a syllabus for this new course to your dean.

List the Student Learning Outcomes for this course in the table below. Recommendations for writing SLOs can be found in the *General Information for Academic Affairs Proposals* document that is available on the QCC's Intranet under Frequently Used Forms (Academic Governance Forms).

COURSE STUDENT LEARNING OUTCOMES FOR HVC 107 – Comfort Cooling Systems	
Upon completion of the course, students will be able to:	
1	Demonstrate safe lab practices
2	Apply knowledge of refrigeration mechanisms to air conditioning applications
3	Apply industry standards in selecting and constructing materials used in air conditioning installations
4	Demonstrate the knowledge of control circuit design
5	Identify normal system temperatures and pressures for diagnosis of system problems
6	Apply knowledge of refrigeration mechanisms to air to air heat pump applications
7	Identify normal system temperatures and pressures for diagnosis of heat pump problems
8	Apply knowledge of fuel gas properties and mechanisms for application to gas heating appliances
9	Demonstrate knowledge of identifying and evaluating system efficiency
10	Demonstrate methods of performing procedures that allows equipment to operate at peak energy efficiency

How does the course support general education? Using the chart below, indicate the degree or level of connection between the course and outcome as indicated here.

I – Introductory/Background – There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional - There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized – There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

CONNECTION OF HVC 107 – Comfort Cooling Systems TO GENERAL EDUCATION STUDENT LEARNING OUTCOMES	I,M,E
Communication Skills: Students will write and speak effectively.	I
Information Literacy: Students will locate, evaluate and apply reliable and appropriate information.	E
Quantitative Reasoning: Students will apply the concepts and methods of mathematics to solve problems.	E
Scientific Reasoning: Students will relate scientific methods of inquiry to the acquisition of knowledge.	E
Technical Literacy: Students will utilize computer and emerging technologies effectively.	E
Aesthetics: Students will appreciate the variety of human experiences as expressed through the arts.	I
Multiple Perspectives: Students will demonstrate knowledge and appreciation of diverse cultures.	I
Ethics: Students will develop an awareness of personal obligations and responsibilities in one's community of influence.	I
Impact of Technology: Students will reflect on the impact of scientific and technological advances on the individual, society and the environment.	E
Civic Literacy: Students will demonstrate awareness of the responsibilities of local, national and international citizenship.	M

If the course is required in a program or it is an elective in a program, please indicate how the course contributes to the Program Student Learning Outcomes. List the Program Student Learning Outcomes and indicate the degree or level of connection between the course and outcome as I, M, or E. Please delete this table if it is not applicable.

CONNECTION OF HVC 107 – Comfort Cooling Systems to PROGRAM STUDENT LEARNING OUTCOMES FOR HVAC program		
		I,M,E
1	Solder, Braze, and Flare copper tubing	E
2	Safely wire and install electrical circuits	E
3	Use electrical meters to make electrical measurements	E
4	Understand and interpret wiring schematics	E
5	Troubleshoot electrical problems	E
6	Evacuate, charge and recover refrigerant from Air Conditioning and Refrigeration systems	E
7	Troubleshoot Air Conditioning and Refrigeration systems	E
8	Troubleshoot Heating systems	E





2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL**

1. **Program Name:** Heating Ventilation Air Conditioning Certificate

2. **Originator:** Robert Recko

**Date:** 10.23.12

3. **Division Dean:** Kathy Rentsch

**Date:** 10.23.12

4. **Brief Description of the Proposal:**

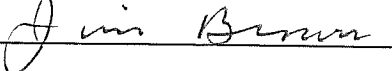
1. Replace HVC 103 Air Conditioning Systems (Semester 1) with HVC 106 Comfort Heating Systems (Semester 1) and HVC 107 Comfort Cooling Systems (Semester 2).
2. Remove Elective from Semester 1.
3. Add Program note: "Students are strongly encouraged to take HVC 101, 102, and 106 together; and HVC 107, 104, and 105 together."

5. **Effective Date:** Fall 2013

6. **Recommended by the Business & Technology Division**

**Date:** 11.15.12

**Comments:**

7. **AA Leadership Team:** 

**Date:** 11/28/12

**Recommended:** ☒

**Not Recommended:**           

**Comments:**

8. **VP/Academic Affairs:** 

**Date:** 11/28/12

**Recommended:** ☒

**Not Recommended:**           

**Comments:**

9. **Learning Council:** 

**Date:** 12/11/12

**Recommended:** ☒

**Not Recommended:**           

**Comments:**

10. **VP/Academic Affairs:** 

**Date:** 12/11/12

**Approved:** ☒

**Not Approved:**           

**Comments:**

**QUINSIGAMOND COMMUNITY COLLEGE**  
**DEGREE PROGRAM OR CERTIFICATE REVISION PROPOSAL**

Program: Heating Ventilation Air Conditioning
Division: Business & Technology
Degree type: Certificate
Provide a detailed list of the proposed changes to the program. <ol style="list-style-type: none"> <li>1. Replace HVC 103 Air Conditioning Systems (Semester 1) with HVC 106 Comfort Heating Systems (Semester 1) and HVC 107 Comfort Cooling Systems (Semester 2).</li> <li>2. Remove Elective from Semester 1.</li> <li>3. Add Program note: "Students are strongly encouraged to take HVC 101, 102, and 106 together; and HVC 107, 104, and 105 together."</li> </ol>
Attachments: <input checked="" type="checkbox"/> Current program grid <input checked="" type="checkbox"/> Proposed program grid
Submit separate proposals for any new courses or revised courses in the program. Attached
Provide a rationale for the proposed changes.  Originally HVC 103 Air Conditioning Systems addressed both heating and cooling, but there is too much content to be covered in one 5-credit course. This change refocuses the HFAC Certificate in preparation for development and introduction of an Associate Degree program in a related area.
Do any of the proposed changes affect the program goals, the program student learning outcomes, or the course mapping of the General Education Learning Outcomes? If so please provide the revisions. No
Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments. Department(s) Affected: n/a
Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator. n/a
For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? n/a  If yes please provide a rationale.
Will any of the following be required: Additional staff <u>No</u> Additional space <u>No</u> Additional equipment <u>No</u> Provide a rationale for any needs indicated and include approximate cost of equipment.

# HEATING VENTILATION AIR CONDITIONING CERTIFICATE (Program Code: HVAC) CURRENT

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Elective*	---				3	
Basic Refrigeration Systems and Heat Theory	HVC 101	F			4	Enrollment limited to HVC Majors only
Basic Electricity	HVC 102	F			4	Enrollment limited to HVC majors only
Semester 2						
Air Conditioning Systems	HVC 103	S			5	HVC 101; Enrollment limited to HVC majors only
Mass. Refrigeration Code	HVC 104	S			4	HVC 101; Enrollment limited to HVC majors only
Mass. Electrical Code	HVC 105	S			4	HVC 102; Enrollment limited to HVC majors only
Total Credits Required					27	

# HEATING VENTILATION AIR CONDITIONING CERTIFICATE (Program Code: HVAC) PROPOSED

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Basic Refrigeration Systems and Heat Theory	HVC 101	F			4	Enrollment limited to HVC Majors only
Basic Electricity	HVC 102	F			4	Enrollment limited to HVC majors only
Comfort Heating Systems	HVC 106	F			4	Coreq: HVC 101; Enrollment limited to HVC majors only
Semester 2						
Comfort Cooling Systems	HVC 107	S			4	Enrollment limited to HVC majors only
Mass. Refrigeration Code	HVC 104	S			4	HVC 101; Enrollment limited to HVC majors only
Mass. Electrical Code	HVC 105	S			4	HVC 102; Enrollment limited to HVC majors only
Total Credits Required					27	

Program Note: Students are strongly encouraged to take HVC 101, 102, and 106 together; and HVC 107, 104, and 105 together.



2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**COURSE REVISION PROPOSAL**

1. Course Number and Name: SUR 115 Asepsis

2. Originator: Deborah Coleman

Date: November 7, 2012

3. Division Dean: Jane E. June

Date: November 15, 2012

Brief Description of the Proposal: Move SUR 115 from Fall semester to Summer semester and remove corequisite.

4. Effective Date: Summer 2013

5. Recommended by the Healthcare Division.

Date: November 15, 2012

Comment:

6. AA Leadership Team:

Jim Brun

Date: 11/28/12

Recommended: ✓

Not Recommended: \_\_\_\_\_

Comments:

7. VP/Academic Affairs:

Gregory

Date: 11/28/12

Recommended: ✓

Not Recommended: \_\_\_\_\_

Comments:

8. Learning Council:

[Signature]

Date: 12/11/12

Recommended: ✓

Not Recommended: \_\_\_\_\_

Comments:

9. VP/Academic Affairs:

[Signature]

Date: 12/11/12

Approved: ✓

Not Approved: \_\_\_\_\_

Comments:

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

## COURSE REVISION PROPOSAL

Type of Revision: <input type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input checked="" type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input checked="" type="checkbox"/> other (explain)    change in semester	
Course Discipline or Department: Surgical Technology	Division: Healthcare
Current Course Number: SUR 115	
Current Course Name: Asepsis	
Current Course Description (as it appears in the college catalog): <b>SUR 115 Asepsis</b> <span style="float: right;"><b>2 credits</b></span> This course covers the principles and practices of surgical asepsis that must be maintained in the clinical setting. Included are the study of microscopic life forms, the relationship of microbes to disease and illness, the principles and techniques of disinfection, sterilization, antisepsis, and the development of the "surgical conscience". <b>Corequisites: SUR 101, SUR 111. F</b>	
Proposed Description (include all proposed changes): <b>SUR 115 Asepsis</b> <span style="float: right;"><b>2 credits</b></span> This course covers the principles and practices of surgical asepsis that must be maintained in the clinical setting. Included are the study of microscopic life forms, the relationship of microbes to disease and illness, the principles and techniques of disinfection, sterilization, antisepsis, and the development of the "surgical conscience". <b>Prerequisites: Enrollment limited to Surgical Technology majors only.</b>	
Rationale for the change:  In order to be compliant with the new curriculum additional material will be added to other Fall courses. Therefore by moving SUR 115 to the summer it will free up time to add additional required material in the Fall. Remove corequisite SUR 101 and SUR 111.	
Provide a description of any change in course content.  <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.  <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	

1. **Course Number and Name:** SUR 101 Perioperative Issues
2. **Originator:** Deborah Coleman **Date:** November 7, 2012
3. **Division Dean:** Jane E. June **Date:** November 15, 2012
4. **Brief Description of the Proposal:** Reduce the credits from 5 cr. to 3 cr., course description change, content and pre/co-requisite change.

**6. Recommended by the Healthcare Division.** **Date: November 15, 2012**  
**Comment:**

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments: \_\_\_\_\_

Recommended: \_\_\_\_\_ Not Recommended: \_\_\_\_\_  
Comments: \_\_\_\_\_

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments: \_\_\_\_\_

**Comments:**

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: <input checked="" type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input checked="" type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Surgical Technology	Division: Healthcare
Current Course Number: SUR 101	
Current Course Name: Perioperative Issues	
Current Course Description (as it appears in the college catalog): <b>SUR 101 Perioperative Issues</b> <span style="float: right;"><b>5 credits</b></span> This course provides knowledge in the areas of patient care directly associated with the surgical experience. Included are an in-depth overview of the hospital, the operating room and its equipment, and the individual roles of the surgical team; principles of patient safety: identification, transportation, and positioning; medical terminology, and, surgical pharmacology. Prerequisites: BIO 100 or BIO 140. F	
Proposed Description (include all proposed changes): <b>SUR 101 Perioperative Issues</b> <span style="float: right;"><b>3 credits</b></span> This course provides knowledge in the areas of patient care directly associated with the surgical experience. Included are an in-depth overview of the hospital, the operating room and its equipment, and the individual roles of the surgical team; principles of patient safety: identification, transportation, and positioning; and, surgical pharmacology. Prerequisites: BIO 100 or BIO 140, SUR 115 Co-requisite: SUR 111                      F	
Rationale for the change: In order to be compliant with the new curriculum additional material will be added to other courses. Therefore by moving the medical terminology to the summer semester students will be better prepared for the Fall and promote increased learning. ALH 102 Introduction to Medical Terminology would then be required in 1 <sup>st</sup> semester.	
Provide a description of any change in course content.  The medical terminology would be removed from the course.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	



2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

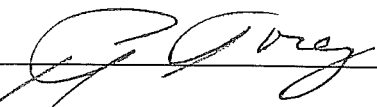
1. Course Number and Name: SUR 111 Operating Room Techniques
2. Originator: Deborah Coleman Date: November 7, 2012
3. Division Dean: Jane E. June Date: November 15, 2012
4. Brief Description of the Proposal: Add 1 credit with description and content change. Change co-requisite SUR 115 to prerequisite SUR 115.

5. Effective Date: Fall 2013

6. Recommended by the Healthcare Division. Date: November 15, 2012  
Comment:

7. AA Leadership Team:  Date: 11/28/12

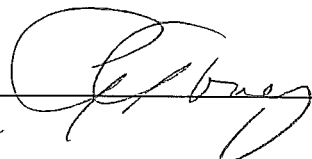
Recommended: ☒ Not Recommended: ☐  
Comments:

8. VP/Academic Affairs:  Date: 11/28/12

Recommended: ☒ Not Recommended: ☐  
Comments:

9. Learning Council:  Date: 12/11/12

Recommended: ☒ Not Recommended: ☐  
Comments:

10. VP/Academic Affairs:  Date: 12/11/12

Approved: ☒ Not Approved: ☐

Comments:

Type of Revision: <input checked="" type="checkbox"/> Description <input checked="" type="checkbox"/> Prerequisite <input checked="" type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input checked="" type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Surgical Technology	Division: Healthcare
Current Course Number: SUR 111	
Current Course Name: Operating Room Techniques	
Current Course Description (as it appears in the college catalog): <b>SUR 111 Operating Room Techniques</b> <b>4 credits</b> This course introduces techniques and procedures utilized during the surgical experience. Topics covered include scrubbing, gowning, and gloving; and the establishment of the sterile field with its armamentarium of sutures, instruments, and supplies. The laboratory component allows the student to observe and demonstrate the principles and procedures taught in the classroom in a non-patient contact environment. <b>Corequisites: SUR 101, SUR 115. F</b>	
Proposed Description (include all proposed changes): <b>SUR 111 Operating Room Techniques</b> <b>5 credits</b> This course introduces techniques and procedures utilized during the surgical experience. Topics covered include scrubbing, gowning, and gloving; and the establishment of the sterile field with its armamentarium of sutures, instruments, supplies and equipment. The course includes an in depth discussion of laparoscopic equipment and supplies, laser, and emergency preparedness. The laboratory component allows the student to observe and demonstrate the principles and procedures taught in the classroom in a non-patient contact environment. <b>Prerequisites: SUR 115, ALH 102</b> <b>Corequisites: SUR 101 F</b>	
Rationale for the change: The accrediting agency has changed the core curriculum. Additional didactic content to be added equivalent to 15 hours per semester. SUR 115 moved to Semester 1 so will serve as prerequisite instead of co-requisite.	
Provide a description of any change in course content.  There has been an increased number of supplies, instruments, equipment and emergency preparedness added.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. No Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

2011-2012  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

1. Course Number and Name: SUR 121 Surgical Procedures I: General, Obstetrics/Gynecology and Orthopedic
2. Originator: Debbie Coleman Date: November 7, 2012
3. Division Dean: Jane E. June Date: November 15, 2012
4. Brief Description of the Proposal: Course name change, content change, course description change, credit change, pre/corequisite change.
5. Effective Date: Fall 2013
6. Recommended by the Healthcare Division. Date: November 15, 2012  
Comment:
7. AA Leadership Team: Jim Brown Date: 11/28/12  
Recommended: ☒ Not Recommended: ☐  
Comments:
8. VP/Academic Affairs: George Date: 11/28/12  
Recommended: ☒ Not Recommended: ☐  
Comments:
9. Academic Affairs Committee: [Signature] Date: 12/11/12  
Recommended: ☒ Not Recommended: ☐  
Comments:
10. VP/Academic Affairs: George Date: 12/11/12  
Approved: ☒ Not Approved: ☐  
Comments:

**2011-2012**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: <input checked="" type="checkbox"/> Description <input checked="" type="checkbox"/> Prerequisite <input checked="" type="checkbox"/> Corequisite <input type="checkbox"/> Number <input checked="" type="checkbox"/> Name <input checked="" type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Surgical Technology	Division: Healthcare
Current Course Number: SUR 121	
Current Course Name: Surgical Procedures I: General, Obstetrics/Gynecology and Orthopedic	
Current Course Description (as it appears in the college catalog):  <b>SUR 121 Surgical Procedures I: General, Obstetrics/Gynecology and Orthopedic</b> <span style="float: right;"><b>3 credits</b></span> This course explores the diagnostic and surgical interventions of general, OB/GYN, and minor orthopedic surgery. Ethical, legal, and moral values relating to the individual patient as well as the operating room procedures are included. <b>Prerequisites: BIO 140. F</b>	
Proposed Description (include all proposed changes):  <b>SUR 121 Surgical Procedures I</b> <span style="float: right;"><b>8 credits</b></span> This course explores the diagnostic and surgical interventions of general, OB/GYN, orthopedic, EENT, dental/oral/maxillofacial, plastic/reconstructive and GU. Additionally this course covers laparoscopic and robotic procedures for each specialty. Ethical, legal and moral values relating to the individual patient as well as the operating room procedures are included. <b>Prerequisites: BIO 100 or BIO 140, SUR 115 F</b> <b>Co-requisite: SUR 111</b>	
Rationale for the change: Currently the content is offered in two consecutive courses within the same semester. This is confusing to students and challenging to schedule. Content is combined and expanded.	
For change in the number of credits, provide a description of the change in course content. Combined SUR 121 and SUR 221 content which presently totals 6 credits. Added two credits in order to cover laparoscopic and robotic procedures and the numerous procedures in each specialty that our accrediting agency requires be taught. Robotic and laparoscopic surgery utilize high tech equipment that takes additional time to teach.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

**COURSE REVISION PROPOSAL**

1. Course Number and Name: SUR 199 Clinical Externship I
2. Originator: Deborah Coleman Date: November 7, 2012
3. Division Dean: Jane E. June Date: November 15, 2012
4. Brief Description of the Proposal: Course name change and pre/corequisite change.
5. Effective Date: Fall 2013
6. Recommended by the Healthcare Division. Date: November 15, 2012  
Comment:
7. AA Leadership Team: Jim Berra Date: 11/28/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:
8. VP/Academic Affairs: [Signature] Date: 11/28/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:
9. Learning Council: [Signature] Date: 12/11/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:
10. VP/Academic Affairs: [Signature] Date: 12/11/12  
Approved: ✓ Not Approved: \_\_\_\_\_  
Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: <input type="checkbox"/> Description <input checked="" type="checkbox"/> Prerequisite <input checked="" type="checkbox"/> Corequisite <input type="checkbox"/> Number <input checked="" type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Surgical Technology	Division: Healthcare
Current Course Number: SUR 199	
Current Course Name: Clinical Externship I	
Current Course Description (as it appears in the college catalog): <b>SUR 199 Clinical Externship I</b> <span style="float: right;"><b>4 credits</b></span> Students are assigned to surgical settings within the greater Worcester area. Clinical experience provides students with supervised applications of the theory, principles, and procedures taught in the classroom. Students experience patient contact as a member of the operating room team. This experience takes place in selected area hospitals and clinics and focuses on minimally complex surgical cases. <b>Prerequisites: BIO 100 or BIO 140. F</b>	
Proposed Description (include all proposed changes): <b>SUR 199 Clinical I</b> <span style="float: right;"><b>4 credits</b></span> Students are assigned to surgical settings within the greater Worcester area. Clinical experience provides students with supervised applications of the theory, principles, and procedures taught in the classroom. Students experience patient contact as a member of the operating room team. This experience takes place in hospitals and clinics and focuses on minimally complex surgical cases. <b>Prerequisites: SUR 101, SUR 111, SUR 121, SUR 230 S</b>	
Rationale for the change: Students must pass all previous classes before starting clinical.	
Provide a description of any change in course content.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

2011-2012  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

1. Course Number and Name: SUR 221 Surgical Procedures II: Ophthalmology, Ear/Nose/Throat, Dental/Oral/Maxillofacial, Plastic/Reconstructive & Genito-Urinary
2. Originator: Debbie Coleman Date: November 7, 2012
3. Division Dean: Jane E. June Date: November 15, 2012
4. Brief Description of the Proposal: Name change, description change, content change, pre/corequisite change and move from 2<sup>nd</sup> semester to 3<sup>rd</sup> semester.
5. Effective Date: Fall 2013

6. Recommended by the Healthcare Division Date: November 15, 2012  
Comment:

7. AA Leadership Team: Jim Brown Date: 11/28/12

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

8. VP/Academic Affairs: G. Long Date: 11/28/12

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

9. Academic Affairs Committee: [Signature] Date: 12/11/12

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

10. VP/Academic Affairs: G. Long Date: 12/11/12

Approved: ✓ Not Approved: \_\_\_\_\_

Comments:

Type of Revision: <input type="checkbox"/> Description <input checked="" type="checkbox"/> Prerequisite <input checked="" type="checkbox"/> Corequisite    ___ Number ___ Name ___ #credits ___ Elective Type     ___ other (explain)	
Course Discipline or Department: Surgical Technology	Division: Healthcare
Current Course Number: SUR 221	
Current Course Name: Surgical Procedures II: Ophthalmology, Ear/Nose/Throat, Dental/Oral/Maxillofacial, Plastic/Reconstructive & Genito-Urinary	
Current Course Description (as it appears in the college catalog):  SUR 221 Surgical Procedures II: Ophthalmology, Ear/Nose/Throat, Dental/Oral/Maxillofacial, Plastic/Reconstructive & Genito-Urinary    3 credits This course explores the more complex diagnostic and surgical interventions of ophthalmology, ear, nose, and throat, dental/oral/maxillofacial, plastic/reconstructive and genito-urinary surgery. This course is scheduled for the second half of the first semester. Corequisite: SUR 121. F	
Proposed Description (include all proposed changes):  SUR 221 Surgical Procedures II     3 credits This course explores the diagnostic and surgical interventions of specialized surgeries including thoracic, neurosurgery, peripheral and cardiovascular surgeries.	
Prerequisite: SUR 121. F	
Rationale for the change: The content from SUR 221 was added to SUR 121. SUR 221 name changed to simplify. Description changed to reflect the content from SUR 225 since SUR 225 was eliminated.	
For change in the number of credits, provide a description of the change in course content.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	



2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

1. Course Number and Name: SUR 225 Advanced Surgical Procedures; Thoracic, Neurosurgery, Peripheral & Cardiovascular

2. Originator: Deborah Coleman

Date: November 7, 2012

3. Division Dean: Jane E. June

Date: November 15, 2012

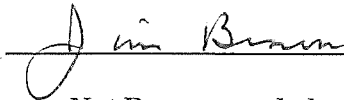
4. Brief Description of the Proposal: Remove from curriculum.

5. Effective Date: Fall 2013

6. Recommended by the Healthcare Division.  
Comment:

Date: November 15, 2012

7. AA Leadership Team:



Date: 11/24/12

Recommended: ☒ Not Recommended: ☐  
Comments:

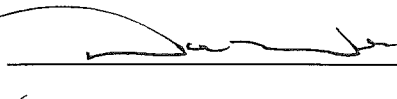
8. VP/Academic Affairs:



Date: 11/28/12

Recommended: ☒ Not Recommended: ☐  
Comments:

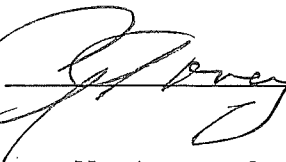
9. Learning Council:



Date: 12/11/12

Recommended: ☒ Not Recommended: ☐  
Comments:

10. VP/Academic Affairs:



Date: 12/11/12

Approved: ☒ Not Approved: ☐

Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: ___ Description ___ Prerequisite ___ Corequisite ___ Number ___ Name ___ #credits ___ Elective Type ___ <input checked="" type="checkbox"/> other (explain) - Remove from curriculum	
Course Discipline or Department: Surgical Technology	Division: Healthcare
Current Course Number: SUR 225	
Current Course Name: Advanced Surgical Procedures: Thoracic, Neurosurgery, Peripheral & Cardiovascular	
Current Course Description (as it appears in the college catalog): <b>SUR 225 Advanced Surgical Procedures: Thoracic, Neurosurgery, Peripheral &amp; Cardiovascular</b> <span style="float: right;"><b>3 credits</b></span> This course explores the diagnostic and surgical interventions of specialized surgeries including thoracic, neurosurgery, peripheral, and cardiovascular surgeries. Because of the nature of the surgical procedures, this course requires unique scheduling during the second half of the second semester. Prerequisite: SUR 221 Corequisite: SUR 299. S	
Proposed Description (include all proposed changes):	
Rationale for the change:  Content will be covered in SUR 221.	
Provide a description of any change in course content.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

1. Course Number and Name: SUR 290 Clinical Externship II

2. Originator: Deborah Coleman

Date: November 7, 2012

3. Division Dean: Jane E. June

Date: November 15, 2012

4. Brief Description of the Proposal: Course name change, pre/corequisite change, course description change.

5. Effective Date: Fall 2013

6. Recommended by the Healthcare Division.

Date: November 15, 2012

Comment:

7. AA Leadership Team:

Jim Berman

Date:

11/24/12

Recommended: ☒

Not Recommended: ☐

Comments:

8. VP/Academic Affairs:

G. Long

Date:

11/26/12

Recommended: ☒

Not Recommended: ☐

Comments:

9. Learning Council:

[Signature]

Date:

12/11/12

Recommended: ☒

Not Recommended: ☐

Comments:

10. VP/Academic Affairs:

G. Long

Date:

12/11/12

Approved: ☒

Not Approved: ☐

Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: <input checked="" type="checkbox"/> Description <input checked="" type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input checked="" type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Surgical Tech	Division: Healthcare
Current Course Number: SUR 290	
Current Course Name: Clinical Externship II	
Current Course Description (as it appears in the college catalog): <b>SUR 290 Clinical Externship II</b> <span style="float: right;"><b>6 credits</b></span> This course involves the practical application of the skills, knowledge, and abilities developed in SUR 221 with a specific focus on moderately complex surgical cases, including if possible but not limited to ophthalmology, ears/nose/throat, dental/oral/ maxillofacial, plastic/reconstructive and genito-urinary. This clinical experience requires appropriate case scheduling. Corequisite: SUR 221. S	
Proposed Description (include all proposed changes): <b>SUR 290 Clinical II</b> <span style="float: right;"><b>6 credits</b></span> This course involves the practical application of the skills, knowledge, and abilities developed in SUR 121 with a specific focus on moderately complex surgical cases, such as ophthalmology, ears/nose/throat, dental/oral/ maxillofacial, plastic/reconstructive and genito-urinary. This clinical experience requires appropriate case scheduling. Prerequisite: SUR 199. S	
Rationale for the change: SUR 121 and SUR 221 combine to make the new SUR 121. Revise prerequisite to reflect previous clinical course.	
Provide a description of any change in course content.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

1. Course Number and Name: SUR 299 Advanced Clinical Externship
2. Originator: Deborah Coleman Date: November 7, 2012
3. Division Dean: Jane E. June Date: November 15, 2012
4. Brief Description of the Proposal: Course name change, prerequisite change from SUR 221 to SUR 290 and corequisite removal.
5. Effective Date: Fall 2013

6. Recommended by the Healthcare Division Date: November 15, 2012  
Comment:

7. AA Leadership Team: *Jin Benin* Date: 11/28/12

Recommended: ☒ Not Recommended: ☐  
Comments:

8. VP/Academic Affairs: *C. Dong* Date: 11/28/12

Recommended: ☐ Not Recommended: ☐  
Comments:

9. Learning Council: *[Signature]* Date: 12/11/12

Recommended: ☒ Not Recommended: ☐  
Comments:

10. VP/Academic Affairs: *C. Dong* Date: 12/11/12

Approved: ☒ Not Approved: ☐

Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: <input type="checkbox"/> Description <input checked="" type="checkbox"/> Prerequisite <input checked="" type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Surgical Tech	Division: Healthcare
Current Course Number: SUR 299	
Current Course Name: Advanced Clinical Externship	
Current Course Description (as it appears in the college catalog): <b>SUR 299 Advanced Clinical Externship</b> <span style="float: right;"><b>6 credits</b></span> This course involves the practical application of the skills, knowledge, and abilities taught in the classroom via patient contact as a member of the operating room team. This clinical experience focuses on the more complex surgical procedures..  Prerequisite: SUR 221 Corequisite: SUR 225. S	
Proposed Description (include all proposed changes): <b>SUR 299 Clinical III</b> <span style="float: right;"><b>6 credits</b></span> This course involves the practical application of the skills, knowledge, and abilities taught in the classroom via patient contact as a member of the operating room team. This clinical experience focuses on more complex surgical procedures.  Prerequisite: SUR 290 S	
Rationale for the change: Revise prerequisite to reflect the previous clinical course. SUR 225 removed from curriculum.	
Provide a description of any change in course content.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) _____	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
DEGREE PROGRAM OR CERTIFICATE REVISION  
PROPOSAL

1. Program Name: Surgical Technology

2. Originator: Deborah Coleman

Date: November 7, 2012

3. Division Dean: Jane E. June

Date: November 15, 2012

4. Brief Description of the Proposal: The Association of Surgical Technology has changed the core curriculum. Many items have been added or expanded in the new curriculum. In order to become compliant with the new core curriculum and promote student learning it is necessary to increase the program by 4 credits.

5. Effective Date: Fall 2013

6. Recommended by the Healthcare Division.

Date: November 15, 2012

Comments:

7. AA Leadership Team: *Jim Brown*

Date: 11/28/12

Recommended: ☒

Not Recommended:           

Comments:

8. VP/Academic Affairs: *[Signature]*

Date: 11/28/12

Recommended:           

Not Recommended:           

Comments:

9. Learning Council: *[Signature]*

Date: 12/11/12

Recommended: ☒

Not Recommended:           

Comments:

10. VP/Academic Affairs: *[Signature]*

Date: 12/11/12

Approved: ☒

Not Approved:           

Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**DEGREE PROGRAM OR CERTIFICATE REVISION**  
**PROPOSAL**

Program: Surgical Technology
Division: Health Care
Degree type: Certificate
Provide a detailed list of the proposed changes to the program. 1. ALH 102 added (1 <sup>st</sup> semester) to curriculum 2. SUR 115 remove corequisite, moved from 2 <sup>nd</sup> semester to 1 <sup>st</sup> semester 3. SUR 101 pre/corequisite change, credit change decrease from 5 to 3, content and course description change 4. SUR 111 pre/corequisite change, credit change increase from 4 to 5, content and course description change 5. SUR 121 pre/corequisite change, credit increase from 6 to 8, content and course description change, combine SUR 121 and SUR 221 and name change 6. SUR 199 pre/corequisite change and name change 7. SUR 221 pre/corequisite change, move from 2 <sup>nd</sup> to 3 <sup>rd</sup> semester, content and course description change and name change, 8. SUR 225 remove from curriculum 9. SUR 290 pre/corequisite change, course description change and name change 10. SUR 299 pre/corequisite change and name change
Attachments: Current program grid Proposed program grid
Submit separate proposals for any new courses or revised courses in the program.
Provide a rationale for the proposed changes.
Do any of the proposed changes affect the program goals, the program student learning outcomes, or the course mapping of the General Education Learning Outcomes? If so please provide the revisions.
Do any of the proposed changes affect another department? Examples include the deletion or addition of program courses that are offered by other departments. Please confer with the coordinators of affected departments. Department(s) Affected:
Do any of the proposed changes affect articulation agreements? Consult with the Transfer Coordinator.
For an associate degree program, are there any changes in the number of general education credits that could affect MassTransfer? If yes please provide a rationale.
Will any of the following be required: Additional staff _____ Additional space _____ Additional equipment _____ Provide a rationale for any needs indicated and include approximate cost of equipment.



# SURGICAL TECHNOLOGY – Certificate (Program Code: ST) - CURRENT

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Summer 1 or 2)						
Introduction to the Human Body	BIO 140	F/S/SU			4	ENG 100
Semester 2						
Perioperative Issues	SUR 101	F			5	BIO 140
Operating Room Techniques	SUR 111	F			4	Coreq-SUR 101, SUR 115
Asepsis	SUR 115	F			2	Coreq-SUR 101, SUR 111
Surgical Procedures I: General, Obstetrics/ Gynecology, & Orthopedic	SUR 121	F			3	BIO 140
Surgical Procedures II: Ophthalmology, Ear/ Nose/ Throat, Dental/ Oral/Maxillo Facial, Plastic/Reconstructive & Genito-Urinary	SUR 221	F			3	Coreq-SUR 121
Ethics	SUR 230	F			1	
Semester 3						
Clinical externship I	SUR 199	S			4	BIO 140
Advanced Surgical Procedures: Thoracic, Neurosurgery, Peripheral & Cardiovascular	SUR 225	S			3	SUR 221, Coreq-SUR 299
Clinical Externship II	SUR 290	S			6	SUR 221
Advanced Clinical Externship	SUR 299	S			6	SUR 221, Coreq-SUR 225
Total credits required					41	

**The Certificate:**  
Surgical Technology

**The Program:**  
Surgical Technology prepares graduates to work as surgical technicians and to take the professional certificate exam.

**Admission Requirements:**

- High School Diploma or GED (refer to page 9)
- Please see admission requirements on program pages and on page 13-15.
- Attend a Health Information Session

Please see Admission Process in the program introduction.

**The Next Step:**

Sit for professional certification exam, pursue additional education in health related field or enter the workforce.

**Program Coordinator:**

Deborah Coleman 508.854.2734  
[dc Coleman@gcc.mass.edu](mailto:dc Coleman@gcc.mass.edu)

**Program Notes:**

For additional information see program introduction on page 185.

**CORI/SORI/DRUG TEST:**

Required of all accepted students prior to beginning clinical experiences.

**Technical Performance Standards:**

Prior to application to this program, please review the Technical Performance Standards requirements on pages 16-19.

# SURGICAL TECHNOLOGY – Certificate (Program Code: ST) - PROPOSED

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Summer 1 or 2)						
Asepsis	SUR 115	SU			2	Enrollment limited to Surgical Technology majors only.
Principles of Human Biology or Introduction to the Human Body	BIO 100	F/S/SU			4	
	BIO 140					ENG 100 or approp place score
Introduction to Medical Terminology	ALH 102	F/S/SU			3	Coreq- ENG 100 or approp place score
Semester 2						
Perioperative Issues	SUR 101	F			3	BIO 100 or BIO 140, SUR 115 Coreq-SUR 111
Operating Room Techniques	SUR 111	F			5	ALH 102, SUR 115 Coreq-SUR 101
Surgical Procedures I	SUR 121	F			8	BIO 100 or BIO 140, SUR 115 Coreq- SUR 111
Ethics	SUR 230	F			1	
Semester 3						
Clinical I	SUR 199	S			4	SUR 101, SUR 111, SUR 121, SUR 230
Surgical Procedures II	SUR 221	S			3	SUR 121
Clinical II	SUR 290	S			6	SUR 199
Clinical III	SUR 299	S			6	SUR 290
Total credits required					45	

**The Certificate:**  
Surgical Technology

## **The Program:**

Surgical Technology prepares graduates to work as surgical technicians and to take the professional certificate exam.

## **Admission Requirements:**

- High School Diploma or GED (refer to page 9)
- Please see admission requirements on program pages and on page 13-15.
- Attend a Health Information Session

Please see Admission Process in the program introduction.

## **The Next Step:**

Sit for professional certification exam, pursue additional education in health related field or enter the workforce.

## **Program Coordinator:**

Deborah Coleman 508.854.2734  
[dcoleman@gcc.mass.edu](mailto:dcoleman@gcc.mass.edu)

## **Program Notes:**

For additional information see program introduction on page 185.

## **CORI/SORI/DRUG TEST:**

Required of all accepted students prior to beginning clinical experiences.

## **Technical Performance Standards:**

Prior to application to this program, please review the Technical Performance Standards requirements on pages 16-19.

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 100 Paramedic to ADN Bridge

2. Originator: Ellen Vangel-Brousseau

Date: November 1, 2012

3. Division Dean: Jane E. June

Date: November 15, 2012

Brief Description of the Proposal: Change in course description for NUR 100  
Paramedic to ADN Bridge course

4. Effective Date: Fall 2013

5. Recommended by the Healthcare Division.  
Comment:

Date: November 15, 2012

6. AA Leadership Team:

Jim Brown

Date: 11/28/12

Recommended: ☒

Not Recommended: ☐

Comments:

7. VP/Academic Affairs:

G. Porey

Date: 11/26/12

Recommended: ☒

Not Recommended: ☐

Comments:

8. Learning Council:

[Signature]

Date: 12/11/12

Recommended: ☒

Not Recommended: ☐

Comments:

9. VP/Academic Affairs:

G. Porey

Date: 12/18/12

Approved: ☒

Not Approved: ☐

Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: <input checked="" type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Advanced Placement Evening	Division: Healthcare
Current Course Number: NUR 100	
Current Course Name: Paramedic to ADN Bridge	
<b>Current Course Description (as it appears in the college catalog):</b> <b>NUR 100 Paramedic to ADN Bridge</b> <span style="float: right;"><b>1 credit</b></span> This one credit course focuses on curriculum topics that are essential for those students who hold a Paramedic certification in the state of Massachusetts and who are seeking advanced placement into the QCC Associate of Science Degree in the Nurse Education Evening Program. Topics include: scope of practice, holistic philosophy of nursing practice, ethical and legal issues, grief/loss, activity and exercise, intro to aging, skin integrity, nutrition and feed, stress/coping and principles of medication administration. Clinical lab content includes: Hygiene/bed bath and massage, changing an occupied bed, transfer, range of joint motion and feeding a patient. This course also includes 2 evenings in the clinical setting practicing skills previously mentioned. Successful completion of this one credit course with a C or better enable student to enter NUR 101 a one credit Advanced Placement Nursing I course. <b>Pre-requisites: Paramedic Certification in the state of Massachusetts. Has met admission requirements for the Associate Degree in Nurse Education Program which includes completion of BIO 111, BIO 112, PSY 101, ENG 101. F</b>	
<b>Proposed Description (include all proposed changes):</b> <b>NUR 100 Paramedic to ADN Bridge</b> <span style="float: right;"><b>1 credit</b></span> This one credit course focuses on curriculum topics that are essential for those students who hold a Paramedic certification in the state of Massachusetts and who are seeking Advanced Placement into the QCC Associate of Science Degree Nurse Education Evening Program. Topics include: Foundations of Nursing Practice, Nursing Theory and Evidenced Based Practice, Scope of Practice, Legal, Ethical and Advocacy Issues, Roles basic to nursing care, role transition, actions basic to nursing care and promoting healthy psychosocial responses. Introduction to the nursing process is also discussed. Clinical lab content includes basic nursing skills practice and competency. This course also includes clinical practice of basic skills in the long term care setting. Successful completion of this one credit course with a C or better enable students to enter the NUR 101 Advanced Placement Nursing I course. <b>Pre-requisites: Paramedic Certification in the state of Massachusetts, BIO 111, BIO 112, PSY 101, ENG 101. F</b>	
<b>Rationale for the change:</b> More clearly represents curriculum and lab topics	
Provide a description of any change in course content.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. NO Affected department(s)	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
COURSE REVISION PROPOSAL

1. Course Number and Name: NUR 101 Advanced Placement Nursing I

2. Originator: Ellen Vangel-Brousseau

Date: November 1, 2012

3. Division Dean: Jane E. June

Date: November 15, 2012

Brief Description of the Proposal: Change in course description for NUR 101  
Advanced Placement Nursing I

4. Effective Date: Fall 2013

5. Recommended by the Healthcare Division.  
Comment:

Date: November 15, 2012

6. AA Leadership Team: Jin Brown Date: 11/28/12

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

7. VP/Academic Affairs: [Signature] Date: 11/28/12

Recommended: \_\_\_\_\_ Not Recommended: \_\_\_\_\_  
Comments:

8. Learning Council: \_\_\_\_\_ Date: \_\_\_\_\_

Recommended: \_\_\_\_\_ Not Recommended: \_\_\_\_\_  
Comments:

9. VP/Academic Affairs: [Signature] Date: 12/11/12

Approved: ✓ Not Approved: \_\_\_\_\_

Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: <input checked="" type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits Elective Type                      other (explain)	
Course Discipline or Department: Advanced Placement Evening	Division: Healthcare
Current Course Number: NUR 101	
Current Course Name: Advanced Placement Nursing I	
Current Course Description (as it appears in the college catalog): <b>NUR 101 Advanced Placement Nursing I    1 credit</b> Nursing 101 is a one credit course designed for all qualified Licensed Practical Nurses seeking advanced placement into (NUR 105). The course focuses on curriculum topics that are essential for the first semester Associate Degree nursing student. Topics include the philosophy and objectives of associate degree nursing education and of the Quinsigamond Community College Nurse Education Program; the nursing process, with emphasis on deriving nursing diagnoses, decision making, critical thinking and priority setting; Orem's Theory of Self care; and Erickson Theory of Human Development. The course also covers therapeutic communication techniques, multicultural factors affecting nursing practice, teaching/learning, informatics, health promotion and complementary alternative medicine. The clinical component includes practice and return demonstration of physical assessment techniques in the college nursing laboratory setting using fellow nursing students and Vital SIM technology. Prerequisites: BIO 112, NUR 100 or admission to LPN to ADN program, PSY 101. Corequisites: NUR 103 (credentialed) and NUR 104 (credentialed). Restriction: This course is restricted to those students who have met admission requirements for the Associate Degree in the Nursing program and hold a current Practical Nursing licensure from an approved program. F	
Proposed Description (include all proposed changes): <b>NUR 101 Advanced Placement Nursing I    1 credit</b> This one credit course is designed for all qualified License Practical Nursing and Paramedics who are seeking advanced placement into the Evening Associate of Science Degree Program, NUR 105 course. The course focuses on curriculum topics that are essential for the first semester Associate Degree nursing student. Topics include: Nursing philosophy of the profession and of the QCC Associate of Science degree Nurse Education Program, nursing process application, decision making, critical thinking and priority setting, Orem's Theory of Self Care and Erickson Theory of Human Development. The course also reinforces roles basic to nursing care, health promotion and complementary alternative medicine, physical assessment and fluid and electrolytes. The clinical component includes practice and competency of all lab modules completed by the Fundamentals of Nursing NUR 104 students including asepsis, wound care, and other assigned modules. Successful completion of this one credit course with a C or better enables students to credential for NUR 103 and NUR 104. Prerequisites: BIO 111, BIO 112, NUR 100, ENG 101, PSY 101. Corequisites: NUR 103 (credentialed) and NUR 104 (credentialed). Restriction: This course is restricted to those students who have met admission requirements for the Associate Degree in the Nursing program and hold a current Practical Nursing licensure from an approved program. F	
Rationale for the change: Need to add Paramedics to Course Description plus make changes to accurately reflect current curriculum.	
Provide a description of any change in course content.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. NO	

Affected department(s) _____
If this change affects a program grid, please submit a current and proposed program grid for each program affected
Please submit a syllabus to your dean with all of the revisions included.





2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
NEW DEGREE PROGRAM OR NEW CERTIFICATE  
PROPOSAL

1. Program Name: Healthcare Certificate Emergency Medical Technician
2. Originator: Jane E. June Date: October 19, 2012
3. Division Dean: Jane E. June Date: November 15, 2012
4. Brief Description of the Proposal: Career ladder initiative as part of the DOL grant.
5. Effective Date: Fall 2013
6. Recommended by the Healthcare Division. Date: November 15, 2012

Comment:

7. AA Leadership Team: Jimi Brown Date: 11/28/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

9. Learning Council: [Signature] Date: 12/11/12  
Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

10. VP/Academic Affairs: [Signature] Date: 12/11/12  
Approved: 2 Not Approved: \_\_\_\_\_  
Comments:

COPY  
packet sent to  
Sue L. for B.O.T.  
1/8/13

FOR NEW PROGRAM/CERTIFICATE OR PROGRAM/CERTIFICATE CLOSURE ONLY

President: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

Board of Trustees: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**NEW DEGREE PROGRAM OR NEW CERTIFICATE**  
**PROPOSAL**

Program: Emergency Medical Technician
Division: Healthcare
Degree type: Certificate
CIP code for the degree program or certificate (check with IRaP Office): 51.0904
Attachments: Proposed program grid
Submit separate proposals for any new courses or revised courses in the program.
<p>Provide a rationale for the proposed new program including a narrative for each of the following:</p> <ul style="list-style-type: none"> <li>• How the need for this new program or certificate was determined – Career ladder and Department of Labor grant</li> <li>• How the program was designed - Input within the Healthcare Division and Academic Affairs Leadership Team</li> <li>• Wage analysis where appropriate; consult with IRaP office</li> <li>• How the new program or certificate was reviewed, approved, or developed in conjunction with an advisory board or other external agency – Department of Labor Process Team, Department of Labor Program Team and Academic Affairs Leadership Team</li> <li>• Demonstrated regional employer interest in hiring graduates - Yes</li> </ul>
<p>List the program goals.</p> <p>To secure employment in Emergency Medical Services.</p> <p>To continue with education through a career ladder.</p>
<p>Does any aspect of the proposed program affect another department? Please confer with the coordinators of affected departments.    No</p> <p>Affected department(s):</p>
<p>For an associate degree program, does the proposed program meet the general education credit requirement for MassTransfer?</p> <p>If no, please provide a rationale.</p>
<p>Does the program or certificate qualify for financial aid? Check with the Director of Financial Aid and fill out the Gainful Employment Form as needed.</p>

Will any of the following be required: Additional staff <u>  X  </u> Additional space <u>  X  </u> Additional equipment <u>  X  </u> Provide a rationale for any needs indicated and include approximate cost of equipment.
Start-up collection of library resources in support of this program: \$2,500

List the Program Student Learning Outcomes in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I – Introductory/Background – There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional - There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized – There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PROGRAM STUDENT LEARNING OUTCOMES FOR Healthcare Certificate Emergency Medical Technician		Supporting course(s)	I, M, E
1	Students will write effectively.	ENG 100	I
2	Students will gain an understanding of basic microcomputer applications.	CIS 111	I
3	Student will understand the health professions.	ALH 101	I
4	Students will have a basic understanding of basic structure and function of the human body.	BIO 100	I
5	Students will understand and demonstrate skills specific to emergency situations.	EMT 101	I
6			
7			
8			
9			
10			

For a degree program, indicate the courses that fulfill the General Education Student Learning Outcomes.

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR Healthcare Certificate Emergency Medical Technician		Supporting course(s)	I,M,E
Communication Skills: Students will write and speak effectively.		ENG 100	I
Information Literacy: Students will locate, evaluate and apply reliable and appropriate information.		ENG 100	I

Quantitative Reasoning: Students will apply the concepts and methods of mathematics to solve problems.		
Scientific Reasoning: Students will relate scientific methods of inquiry to the acquisition of knowledge.	EMT 101	I
Technical Literacy: Students will utilize computer and emerging technologies effectively.	CIS 111	I
Aesthetics: Students will appreciate the variety of human experiences as expressed through the arts.		
Multiple Perspectives: Students will demonstrate knowledge and appreciation of diverse cultures.	EMT 101	I
Ethics: Students will develop an awareness of personal obligations and responsibilities in one's community of influence.	EMT 101	I
Impact of Technology: Students will reflect on the impact of scientific and technological advances on the individual, society and the environment.		
Civic Literacy: Students will demonstrate awareness of the responsibilities of local, national and international citizenship.		

## Healthcare Certificate Emergency Medical Technician

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Introduction to the Health Professions	ALH 101	F/S/SU			3	ENG 091 and ENG 096 or appropriate placement score
Introduction to English Composition*	ENG 100	F/S/SU			3	ENG 091 and ENG 096 or appropriate placement score
Introduction to Medical Terminology	ALH 102	F/S/SU			3	Coreq - ENG 100 or appropriate placement score
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Principles of Human Biology	BIO 100	F/S/U			4	ENG 100 or appropriate placement score
Basic Emergency Medical Technology	EMT 101	F/S/U			7	
<i>Total credits required</i>					23	

If students complete the Health Certificate, maintain a GPA of 3.0 and meet the admission requirements of a Healthcare program (see Programs of Study listing on pages 51 and 52) they will be guaranteed admission on a space available basis.

\*If student meets the ENG 100 based on a placement score, PSY 101 can be substituted.

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

NEW DEGREE PROGRAM OR NEW CERTIFICATE PROPOSAL

1. Program Name: Healthcare Certificate Nursing Assistant
2. Originator: Jane E. June Date: October 19, 2012
3. Division Dean: Jane E. June Date: November 15, 2012
4. Brief Description of the Proposal: Career ladder initiative as part of the DOL grant.
5. Effective Date: Fall 2013
6. Recommended by the Healthcare Division. Date: November 15, 2012

Comment:

7. AA Leadership Team: J in Brown Date: 11/20/12

Recommended: ✓ Not Recommended:         
Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12

Recommended: ✓ Not Recommended:         
Comments:

9. Learning Council: [Signature] Date: 12/11/12

Recommended: ✓ Not Recommended:         
Comments:

10. VP/Academic Affairs: [Signature] Date: 12/11/12

Approved: ✓ Not Approved:       

Comments:

FOR NEW PROGRAM/CERTIFICATE OR PROGRAM/CERTIFICATE CLOSURE ONLY

President: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

Board of Trustees: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_



2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
NEW DEGREE PROGRAM OR NEW CERTIFICATE PROPOSAL

Program: Nursing Assistant
Division: Healthcare
Degree type: Certificate
CIP code for the degree program or certificate (check with IRaP Office): 51.3901
Attachments: Proposed program grid
Submit separate proposals for any new courses or revised courses in the program.
<p>Provide a rationale for the proposed new program including a narrative for each of the following:</p> <ul style="list-style-type: none"> <li>• How the need for this new program or certificate was determined – Career ladder and Department of Labor grant</li> <li>• How the program was designed – Input within the Healthcare Division and Academic Affairs Leadership Team</li> <li>• Wage analysis where appropriate; consult with IRaP office</li> <li>• How the new program or certificate was reviewed, approved, or developed in conjunction with an advisory board or other external agency – Department of Labor Process Team, Department of Labor Program Team and Academic Affairs Leadership Team</li> <li>• Demonstrated regional employer interest in hiring graduates - Yes</li> </ul>
<p>List the program goals.</p> <p>To secure employment in a Hospital or Long Term Care Facility.</p> <p>To continue with education through a career ladder.</p>
<p>Does any aspect of the proposed program affect another department? Please confer with the coordinators of affected departments.      No</p> <p>Affected department(s):</p>
<p>For an associate degree program, does the proposed program meet the general education credit requirement for MassTransfer?</p> <p>If no, please provide a rationale.</p>
<p>Does the program or certificate qualify for financial aid? Check with the Director of Financial Aid and fill out the Gainful Employment Form as needed.</p>
<p>Will any of the following be required:</p> <p>Additional staff <u>  X  </u>      Additional space <u>  X  </u>      Additional equipment <u>  X  </u></p> <p>Provide a rationale for any needs indicated and include approximate cost of equipment.</p>
<p>Start-up collection of library resources in support of this program: \$2,500</p>

List the Program Student Learning Outcomes in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I – Introductory/Background – There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional - There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized – There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PROGRAM STUDENT LEARNING OUTCOMES FOR Healthcare Certificate – Nursing Assistant		Supporting course(s)	I, M, E
1	Students will write effectively.	ENG 100	I
2	Students will gain an understanding of basic microcomputer applications.	CIS 111	I
3	Student will understand the health professions.	ALH 101	I
4	Students will have a basic understanding of basic structure and function of the human body.	BIO 100	I
5	Students will understand and demonstrate skills specific to Nursing Assistant protocols.	ALH 131 ALH 132	I
6			
7			
8			
9			
10			

For a degree program, indicate the courses that fulfill the General Education Student Learning Outcomes.

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR Healthcare Certificate – Nursing Assistant		Supporting course(s)	I,M,E
Communication Skills: Students will write and speak effectively.		ENG 100	I
Information Literacy: Students will locate, evaluate and apply reliable and appropriate information.		ENG 100	I
Quantitative Reasoning: Students will apply the concepts and methods of mathematics to solve problems.			
Scientific Reasoning: Students will relate scientific methods of inquiry to the acquisition of knowledge.		ALH 131 ALH 132	I
Technical Literacy: Students will utilize computer and emerging technologies effectively.		CIS 111	I
Aesthetics: Students will appreciate the variety of human experiences as expressed through the arts.			
Multiple Perspectives: Students will demonstrate knowledge and appreciation of		ALH 131	I

diverse cultures.	ALH 132	I
Ethics: Students will develop an awareness of personal obligations and responsibilities in one's community of influence.	ALH 131 ALH 132	I
Impact of Technology: Students will reflect on the impact of scientific and technological advances on the individual, society and the environment.		
Civic Literacy: Students will demonstrate awareness of the responsibilities of local, national and international citizenship.		

## Healthcare Certificate Nursing Assistant

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Introduction to the Health Professions	ALH 101	F/S/SU			3	ENG 091 and ENG 096 or appropriate placement score
Introduction to English Composition*	ENG 100	F/S/SU			3	ENG 091 and ENG 096 or appropriate placement score
Introduction to Medical Terminology	ALH 102	F/S/SU			3	Coreq- ENG 100 or appropriate placement score
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Principles of Human Biology	BIO 100	F/S/U			4	ENG 100 or appropriate placement score
Introductory Nursing Assistant	ALH 131	F/S/U			5	ENG 091 and ENG 096 or appropriate placement score
Advanced Nursing Assistant	ALH 132	F/S/U			2	ALH 131
<i>Total credits required</i>					23	

If students complete the Health Certificate, maintain a GPA of 3.0 and meet the admission requirements of a Healthcare program (see Programs of Study listing on pages 51 and 52) they will be guaranteed admission on a space available basis.

\*If student meets the ENG 100 based on a placement score, PSY 101 can be substituted.

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

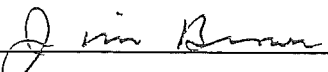
NEW DEGREE PROGRAM OR NEW CERTIFICATE  
PROPOSAL

1. Program Name: Healthcare Certificate Pharmacy Technician
2. Originator: Jane E. June Date: October 19, 2012
3. Division Dean: Jane E. June Date: November 15, 2012
4. Brief Description of the Proposal: Career ladder initiative as part of the DOL grant.

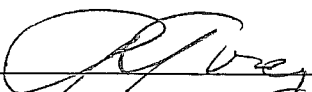
5. Effective Date: Fall 2013

6. Recommended by the Healthcare Division. Date: November 15, 2012


Comment:

7. AA Leadership Team:  Date: 11/28/12

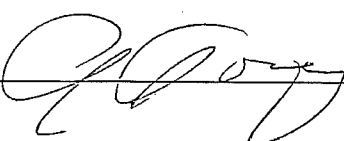
Recommended: ☒ Not Recommended: ☐  
Comments:

8. VP/Academic Affairs:  Date: 11/28/12

Recommended: ☒ Not Recommended: ☐  
Comments:

9. Learning Council:  Date: 12/11/12

Recommended: ☒ Not Recommended: ☐  
Comments:

10. VP/Academic Affairs:  Date: 12/11/12

Approved: ☒ Not Approved: ☐

Comments:

FOR NEW PROGRAM/CERTIFICATE OR PROGRAM/CERTIFICATE CLOSURE ONLY

President: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

Board of Trustees: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
NEW DEGREE PROGRAM OR NEW CERTIFICATE  
PROPOSAL

Program: Pharmacy Technician
Division: Healthcare
Degree type: Certificate
CIP code for the degree program or certificate (check with IRaP Office): 51.0805
Attachments: Proposed program grid
Submit separate proposals for any new courses or revised courses in the program.
<p>Provide a rationale for the proposed new program including a narrative for each of the following:</p> <ul style="list-style-type: none"> <li>• How the need for this new program or certificate was determined- Career ladder and Department of Labor grant</li> <li>• How the program was designed – Input within the Healthcare Division and Academic Affairs Leadership Team</li> <li>• Wage analysis where appropriate; consult with IRaP office</li> <li>• How the new program or certificate was reviewed, approved, or developed in conjunction with an advisory board or other external agency – Department of Labor Process Team, Department of Labor Program Team and Academic Affairs Leadership Team</li> <li>• Demonstrated regional employer interest in hiring graduates - Yes</li> </ul>
<p>List the program goals.</p> <p>To secure employment in a Pharmacy.</p> <p>To continue with education through a career ladder.</p>
<p>Does any aspect of the proposed program affect another department? Please confer with the coordinators of affected departments.      No</p> <p>Affected department(s):</p>
<p>For an associate degree program, does the proposed program meet the general education credit requirement for MassTransfer?</p> <p>If no, please provide a rationale.</p>
<p>Does the program or certificate qualify for financial aid? Check with the Director of Financial Aid and fill out the Gainful Employment Form as needed.</p>
<p>Will any of the following be required:</p> <p>Additional staff <u>  X  </u>      Additional space <u>  X  </u>      Additional equipment <u>  X  </u></p> <p>Provide a rationale for any needs indicated and include approximate cost of equipment.</p>
<p>Start-up collection of library resources in support of this program: \$2,500</p>

List the Program Student Learning Outcomes in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I – Introductory/Background – There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional - There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized – There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PROGRAM STUDENT LEARNING OUTCOMES FOR Pharmacy Technician		Supporting course(s)	I, M, E
1	Students will write effectively.	ENG 100	I
2	Students will gain an understanding of basic microcomputer applications.	CIS 111	I
3	Student will understand the health professions.	ALH 101	I
4	Students will have a basic understanding of basic structure and function of the human body.	BIO 100	I
5	Students will understand and demonstrate skills specific to pharmacy protocols.	ALH 137 ALH 138	I
6			
7			
8			
9			
10			

For a degree program, indicate the courses that fulfill the General Education Student Learning Outcomes.

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR Pharmacy Technician	Supporting course(s)	I,M,E
Communication Skills: Students will write and speak effectively.	ENG 100	I
Information Literacy: Students will locate, evaluate and apply reliable and appropriate information.	ENG 100	I
Quantitative Reasoning: Students will apply the concepts and methods of mathematics to solve problems.		
Scientific Reasoning: Students will relate scientific methods of inquiry to the acquisition of knowledge.	ALH 137 ALH 138	I
Technical Literacy: Students will utilize computer and emerging technologies effectively.	CIS 111	I
Aesthetics: Students will appreciate the variety of human experiences as expressed through the arts.		
Multiple Perspectives: Students will demonstrate knowledge and appreciation of diverse cultures.	ALH 137 ALH 138	I I



Ethics: Students will develop an awareness of personal obligations and responsibilities in one's community of influence.	ALH 137 ALH 138	I
Impact of Technology: Students will reflect on the impact of scientific and technological advances on the individual, society and the environment.		
Civic Literacy: Students will demonstrate awareness of the responsibilities of local, national and international citizenship.		

## Healthcare Certificate Pharmacy Technician

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Introduction to the Health Professions	ALH 101	F/S/SU			3	ENG 091 and ENG 096 or appropriate placement score
Introduction to English Composition*	ENG 100	F/S/SU			3	ENG 091 and ENG 096 or appropriate placement score
Introduction to Medical Terminology	ALH 102	F/S/SU			3	Coreq - ENG 100 or appropriate placement score
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Principles of Human Biology	BIO 100	F/S/U			4	ENG 100 or appropriate placement score
Pharmacy Technician	ALH 137	F/S/U			3	MAT090; ENG 091 and ENG 096 or appropriate placement score
Pharmacy Technician Clinical Co-Operative Externship	ALH 138				6	ALH 137
<i>Total credits required</i>					25	

If students complete the Health Certificate, maintain a GPA of 3.0 and meet the admission requirements of a Healthcare program (see Programs of Study listing on pages 51 and 52) they will be guaranteed admission on a space available basis.

\*If student meets the ENG 100 based on a placement score, PSY 101 can be substituted.

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

NEW DEGREE PROGRAM OR NEW CERTIFICATE PROPOSAL

1. Program Name: Healthcare Certificate Phlebotomy/EKG Technician
2. Originator: Jane E. June Date: October 19, 2012
3. Division Dean: Jane E. June Date: November 15, 2012
4. Brief Description of the Proposal: Career ladder initiative as part of the DOL grant.

5. Effective Date: Fall 2013

6. Recommended by the Healthcare Division. Date: November 15, 2012

Comment:

7. AA Leadership Team: Jim Brown Date: 11/28/12

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12

Recommended: \_\_\_\_\_ Not Recommended: \_\_\_\_\_  
Comments:

9. Learning Council: [Signature] Date: 12/11/12

Recommended: ✓ Not Recommended: \_\_\_\_\_  
Comments:

10. VP/Academic Affairs: [Signature] Date: 12/11/12

Approved: ✓ Not Approved: \_\_\_\_\_

Comments:

FOR NEW PROGRAM/CERTIFICATE OR PROGRAM/CERTIFICATE CLOSURE ONLY

President: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

Board of Trustees: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Not Approved: \_\_\_\_\_

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE  
NEW DEGREE PROGRAM OR NEW CERTIFICATE PROPOSAL

Program: Phlebotomy/EKG Technician
Division: Healthcare
Degree type: Certificate
CIP code for the degree program or certificate (check with IRaP Office): 51.1009
Attachments: Proposed program grid
Submit separate proposals for any new courses or revised courses in the program.
<p>Provide a rationale for the proposed new program including a narrative for each of the following:</p> <ul style="list-style-type: none"> <li>• How the need for this new program or certificate was determined – Career ladder and Department of Labor grant</li> <li>• How the program was designed – Input within the Healthcare Division and Academic Affairs Leadership Team</li> <li>• Wage analysis where appropriate; consult with IRaP office</li> <li>• How the new program or certificate was reviewed, approved, or developed in conjunction with an advisory board or other external agency – Department of Labor Process Team, Department of Labor Program Team and Academic Affairs Leadership Team</li> <li>• Demonstrated regional employer interest in hiring graduates - Yes</li> </ul>
<p>List the program goals.</p> <p>To secure employment in a Hospital or Long Term Care facility.</p> <p>To continue with education through a career ladder.</p>
<p>Does any aspect of the proposed program affect another department? Please confer with the coordinators of affected departments.    No</p> <p>Affected department(s):</p>
<p>For an associate degree program, does the proposed program meet the general education credit requirement for MassTransfer?</p> <p>If no, please provide a rationale.</p>
<p>Does the program or certificate qualify for financial aid? Check with the Director of Financial Aid and fill out the Gainful Employment Form as needed.</p>
<p>Will any of the following be required:</p> <p>Additional staff <u>  X  </u>      Additional space <u>  X  </u>      Additional equipment <u>  X  </u></p> <p>Provide a rationale for any needs indicated and include approximate cost of equipment.</p>
<p>Start-up collection of library resources in support of this program: \$2,500</p>

List the Program Student Learning Outcomes in the table below. Indicate the course or courses that will fulfill each outcome and indicate the degree or level of connection between the course and outcome as indicated here.

I – Introductory/Background – There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional - There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized – There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

PROGRAM STUDENT LEARNING OUTCOMES FOR Phlebotomy/EKG Technician		Supporting course(s)	I, M, E
1	Students will write effectively.	ENG 100	I
2	Students will gain an understanding of basic microcomputer applications.	CIS 111	I
3	Student will understand the health professions.	ALH 101	I
4	Students will have a basic understanding of basic structure and function of the human body.	BIO 100	I
5	Students will understand and demonstrate skills specific to Phlebotomy/EKG Technician protocols.	ALH 134 ALH 136	I
6			
7			
8			
9			
10			

For a degree program, indicate the courses that fulfill the General Education Student Learning Outcomes.

GENERAL EDUCATION STUDENT LEARNING OUTCOMES FOR Phlebotomy/EKG Technician	Supporting course(s)	I,M,E
Communication Skills: Students will write and speak effectively.	ENG 100	I
Information Literacy: Students will locate, evaluate and apply reliable and appropriate information.	ENG 100	I
Quantitative Reasoning: Students will apply the concepts and methods of mathematics to solve problems.		
Scientific Reasoning: Students will relate scientific methods of inquiry to the acquisition of knowledge.	ALH 134 ALH 136	I I
Technical Literacy: Students will utilize computer and emerging technologies effectively.	CIS 111	I
Aesthetics: Students will appreciate the variety of human experiences as expressed through the arts.		
Multiple Perspectives: Students will demonstrate knowledge and appreciation of diverse cultures.	ALH 134 ALH 136	I I

Ethics: Students will develop an awareness of personal obligations and responsibilities in one's community of influence.	ALH 134	I
	ALH 136	I
Impact of Technology: Students will reflect on the impact of scientific and technological advances on the individual, society and the environment.		
Civic Literacy: Students will demonstrate awareness of the responsibilities of local, national and international citizenship.		

## Healthcare Certificate Phlebotomy/EKG Technician

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Introduction to the Health Professions	ALH 101	F/S/SU			3	ENG 091 and ENG 096 or appropriate placement score
Introduction to English Composition*	ENG 100	F/S/SU			3	ENG 091 and ENG 096 or appropriate placement score
Introduction to Medical Terminology	ALH 102	F/S/SU			3	Coreq - ENG 100 or appropriate placement score
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Principles of Human Biology	BIO 100	F/S/U			4	ENG 100 or appropriate placement score
Phlebotomy/EKG Technician	ALH 134	F/S/U			3	ENG 091 and ENG 096 or appropriate placement score
Phlebotomy/EKG Technician Clinical Co-Operative Externship	ALH 136				6	ALH 134
<i>Total credits required</i>					26	

If students complete the Health Certificate, maintain a GPA of 3.0 and meet the admission requirements of a Healthcare program (see Programs of Study listing on pages 51 and 52) they will be guaranteed admission on a space available basis.

\*If student meets the ENG 100 based on a placement score, PSY 101 can be substituted.



2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

## COURSE REVISION PROPOSAL

1. Course Number and Name : BIO 105 Principles of Ecology

2. Originator: Maggie Crowell Murray

Date: November 15, 2013

3. Division Dean: Nancy Schoenfeld

Date: November 15, 2013

4. Brief Description of the Proposal:

Update the catalog description to better reflect the current curriculum and to adjust math and English prerequisites.

5. Effective Date: Fall 2013

6. Recommended by the Science & HS Division Date: 11/15/12  
Comment:

7. AA Leadership Team: [Signature] Date: 11/28/12  
Recommended: ☒ Not Recommended: ☐  
Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12  
Recommended: ☐ Not Recommended: ☐  
Comments:

9. Learning Council: [Signature] Date: 12/11/12  
Recommended: Y2 12/11/12 Not Recommended: ☐

Comments: Tabled by 2/3 vote Prerequisites  
Friendly Amendment: to accept course description change

10. VP/Academic Affairs: [Signature] Date: 12/11/12  
Approved: ☒ Not Approved: ☐  
Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**COURSE REVISION PROPOSAL**

Type of Revision: <input checked="" type="checkbox"/> Description <input type="checkbox"/> Prerequisite <input type="checkbox"/> Corequisite <input type="checkbox"/> Number <input type="checkbox"/> Name <input type="checkbox"/> #credits <input type="checkbox"/> Elective Type <input type="checkbox"/> other (explain)	
Course Discipline or Department: Natural Sciences	Division: Human Services and Science
Current Course Number: BIO 105	
Current Course Name: Principles of Ecology	
Current Course Description (as it appears in the college catalog): BIO 105 Principles of Ecology                      4 Credits This course examines the fundamental concepts of ecology. Topics include ecosystem formation within the context of habitat, population, community, biodiversity, evolution, global change and conservation. The laboratory component emphasizes the basic concepts of field research. Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or appropriate placement score. Corequisite ENG 101    F/S/SU	
Proposed Description (include all proposed changes):  BIO 105 Principles of Ecology                      4 Credits This course examines the fundamental concepts of ecology. Topics include ecosystem formation within the context of habitat, population, community, biodiversity, evolution, sustainability and global change. The laboratory component focuses on the collection and interpretation of data based on computer simulations of renowned ecological field studies. Prerequisites: ENG 100 or appropriate placement score and MAT 090 with a "C" or better on the MAT 090 departmental final exam or appropriate placement score    F/S/SU	
Rationale for the change:  The proposed changes primarily update the course to its current curriculum. BIO 105 Principles of Ecology is currently taught completely online. The laboratories use Simbiotic mathematical models to simulate data collected in well-known ecological studies such as Isle Royale and The Exclusion Principle. Since the course is online the laboratory focus is no longer on working "in the field". The course requires a basic understanding of graphs and graphing. All of the required mathematical principles are taught in the class as part of the curriculum. As a result, MAT 090 should be a sufficient prerequisite. The corequisite of ENG 101 is changed to a prerequisite of ENG 100 primarily because these are synonymous in the current QCC registration set-up.	
Provide a description of any change in course content.	
Does the course revision affect another department? Please confer with the coordinator of the affected department. Affected department(s) Math	
If this change affects a program grid, please submit a current and proposed program grid for each program affected	
Please submit a syllabus to your dean with all of the revisions included.	

2012-2013  
QUINSIGAMOND COMMUNITY COLLEGE

NEW COURSE PROPOSAL

1. Course Number and Name: HUS 244 Human Services Practicum II

2. Originator: Jeffrey Clements

Date: November 15, 2012

3. Division Dean: Nancy Schoenfeld

Date: November 15, 2012

4. Brief Description of the Proposal:

This is a new course, HUS 244 Human Services Practicum II, which is part of the curriculum revision of the Human Service Associate Degree that was approved 8 May 2012.

5. Effective Date: Spring 2014

6. Recommended by the Science & HS Division Date: 11/15/12  
Comments:

7. AA Leadership Team: Jim Brown Date: 11/28/12  
Recommended: ☒ Not Recommended: ☐  
Comments:

8. VP/Academic Affairs: [Signature] Date: 11/28/12  
Recommended: ☒ Not Recommended: ☐  
Comments:

9. Learning Council: [Signature] Date: 12/11/12  
Recommended: ☒ Not Recommended: ☐  
Comments:

10. VP/Academic Affairs: [Signature] Date: 12/11/12  
Approved: ☒ Not Approved: ☐  
Comments:

**2012-2013**  
**QUINSIGAMOND COMMUNITY COLLEGE**  
**NEW COURSE PROPOSAL**

Course Discipline/Division: <b>Human Services; Human Services and Science division</b>	
Course Number: <b>HUS 244</b>	
Course Name: <b>Human Services Practicum II</b>	
Prerequisites and/or corequisites (confer with affected department coordinator): <b>HUS 243 Practicum I prerequisite</b>	
CIP code (check with IRaP Office): 44.0000	
Effective Term/year: <b>Spring 2014</b>	
<p>Give a rationale for the new course. Be sure to indicate whether this course replaces another course.  <b>This is a new course, HUS 244 Human Services Practicum II, which is part of the curriculum revision of the Human Service Associate Degree that was approved 8 May 2012.</b></p>	
<p>Is the course content similar to other courses now offered? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>          If yes, attach a statement for the coordinator of the department offering the similar course.</p>	
<p>Please indicate if this course will serve as any of the following types of electives  <input type="checkbox"/> Elective  <input checked="" type="checkbox"/> Discipline specific (name the discipline) <b>Human Services</b>  <input checked="" type="checkbox"/> Program specific (name the program) <b>Human Services</b>  <input type="checkbox"/> Multiple perspective (confer with the Liberal Arts Coordinator)</p>	
<p>Is this course required for a program? If yes, submit a separate Program Revision Proposal or New Program Proposal. <b>Yes. Already approved 8 May 2012</b></p>	
Expected enrollment per term: <b>30</b>	Expected enrollment per year: <b>30</b>
<p>Will any of the following be required:                    Additional staff <input type="checkbox"/>      Additional space <input type="checkbox"/>      Additional equipment <input type="checkbox"/>          Provide a rationale for any needs indicated above and include approximate cost of equipment.</p>	
Library print and non-print resources in support of this course: \$500	

## Course Materials

Course number: <b>HUS 244</b>														
Course name: <b>Human Services Practicum II</b>														
Credits: <b>4</b>														
Lecture Hours: <b>30</b>	Lab hours:	Clinic Hours: <b>130</b>												
<p>General course description and prerequisites (as it will appear in the catalog):</p> <p><b>HUS 244 Human Services Practicum II - 4 credits</b>          This course provides a continuation of the technical competency and skills building through 130 hours of directed, professionally supervised individual and group work in a human service agency. Students demonstrate sensitivity to diverse populations and proficiency in developing, interpreting, implementing, and documenting helping interventions. Students understand the appropriate use of supportive services, group facilitation, conflict resolution, and system change strategies; and use appropriate written and verbal communication skills to document their work.</p> <p><b>Prerequisites:</b> HUS 243; Spring</p>														
<p>All required texts and paperbacks, including information on publisher and edition used (provide a suggested text): <b>Baird, Brian, N. (2011). The internship, practicum, and field placement handbook: A guide for the helping profession. Pearson, New Jersey</b></p>														
<p>Instructional Objectives (list): This course is designed to prepare the students educationally, experientially, and cognitively for work as a Human Service Provider. The students will be prepared to provide direct and/or supportive care to consumers; to empower clients, to navigate and network the human service systems as well as maintaining self-care and support systems for themselves. They will also gain knowledge about educational and career opportunities for self-growth.</p>														
<p>Teaching procedures: (provide suggested teaching methodology): <b>Teaching procedures will include but not be limited to the facilitation of class discussion and process of experiential learning in field placement, written assignment to evaluate and document competency skills, small group work, student presentations, guest speakers, case presentations and role-playing.</b></p>														
<p>Course topics and/or assignments and/or required and/or supplemental reading (provide a list of suggested course topics): <b>Confidentiality; Crisis management/intervention; Communication; Self-care; Documentation; Boundaries; research/reading; peer topic discussions; Service delivery; Networking; Participant empowerment; Program/employee/student development</b></p>														
<p>Other information:</p> <p><b><u>COURSE REQUIREMENTS</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">1.</td> <td style="width: 85%;">Student Evaluation Practicum Site Supervisor.....</td> <td style="width: 10%; text-align: right;">40%</td> </tr> <tr> <td>2.</td> <td>Seminar Participation.....</td> <td style="text-align: right;">30%</td> </tr> <tr> <td>3.</td> <td>Competency Evaluation.....</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>4.</td> <td>Monthly evaluations (site).....</td> <td style="text-align: right;">10%</td> </tr> </table>			1.	Student Evaluation Practicum Site Supervisor.....	40%	2.	Seminar Participation.....	30%	3.	Competency Evaluation.....	20%	4.	Monthly evaluations (site).....	10%
1.	Student Evaluation Practicum Site Supervisor.....	40%												
2.	Seminar Participation.....	30%												
3.	Competency Evaluation.....	20%												
4.	Monthly evaluations (site).....	10%												

1. Each student will be evaluated by her/his site supervisor at the end of the semester. Based on the feedback from the evaluation form a final grade for the placement performance will count as 40% of the student's total grade for the course. The instructor will conduct site visit(s) as a part of the students overall evaluation process.
2. Seminar attendance is required and expected. Due to the nature of the seminar involvement in dialogue, practicum discussion and the learning experience attendance is required. Evaluating seminar participation can be somewhat subjective; therefore it is up to each student to take the initiative to be sure that the instructor knows the students' perspectives and experience in being a "practitioner" in the field.
3. Competency Evaluation: The student will self-evaluate their skill and competency using the National Skills Standards for Direct Support Practitioners. The student will be given the assignment on the first day of class and be expected to work on the evaluation throughout the semester.
4. Monthly evaluations: The student is responsible for providing the site supervisor with a monthly evaluation form that will be submitted to the Practicum Instructor which comprises 10% of the final course grade.

**m. Plagiarism**

(p. 236 Student Handbook 2011-2012)

Our purpose in the classroom is to seek the truth; this work requires trust and honesty between teacher and student. If we are not honest about what we know and don't know, our learning will always be impaired. Because our teaching and learning depends on this honest communication, we expect all students to understand what plagiarism is and why it is unacceptable. Plagiarism means taking someone else's ideas or words and presenting them as one's own. The offense can take many forms including cheating on a test, passing in a paper taken from the Internet or from another student, or failing to properly use and credit sources in an essay. Sometimes the issue is subtle, involving getting too much help on an assignment from someone else. In every instance, plagiarism means cheating both oneself and the owner of the source. Since the cheating sabotages a student's learning experience, consequences range from no credit for the assignment to failure for the course and possible expulsion from the college.

Please submit a syllabus for this new course to your dean.

List the Student Learning Outcomes for this course in the table below. Recommendations for writing SLOs can be found in the *General Information for Academic Affairs Proposals* document that is available on the QCC's Intranet under Frequently Used Forms (Academic Governance Forms).

COURSE STUDENT LEARNING OUTCOMES FOR HUS 244 Practicum II	
Upon completion of the course, students will be able to:	
1	Document 130 hours of supervised placement hours.
2	Demonstrate and document the professional principles of sound counseling/interviewing skills with attention to comprehensive listening skills.
3	Identify and document a minimum of 3-5 formal and informal collaterals in the Human Service delivery system within the students practicum site.
4	Assess their level of competency through journaling and completion of a capstone core competency project based on the 12 National Community Support Skill Standards.
5	Complete an individualized professional portfolio.
6	Document awareness of state and federal mandates applicable to their practicum placement and at the local, regional, national, and global level.
7	Apply ethical and legal standards in providing services and maintaining client documentation.
8	Demonstrate multicultural competency in both oral and written communication.

How does the course support general education? Using the chart below, indicate the degree or level of connection between the course and outcome as indicated here.

I – Introductory/Background – There is an indirect relationship between the course and the outcome. The outcome itself is not the focus of the course but at least one element of the course serves as a building block to the achievement of the final outcome. For example, course elements may provide the knowledge, skills or attitudes necessary for the ultimate achievement of the outcome.

M – Intermediate/Transitional – There is more of a direct relationship between the course and the outcome than Introductory. A mixture of course elements supports the final achievement of the outcome, but the final integration of knowledge, skills and attitudes necessary for its achievement is not accomplished in this course. For example, knowledge, skills and/or attitudes (at least 2 of the 3) required for achievement of the outcome may be the focus of the course or course element, but the integration of all three is not.

E – Emphasized – There is a direct relationship between the course and the outcome. At least one element of the course focuses specifically on the complex integration of knowledge, skills and attitudes necessary to perform the outcome.

CONNECTION OF HUS 244 TO GENERAL EDUCATION STUDENT LEARNING OUTCOMES	I,M,E
Communication Skills: Students will write and speak effectively.	E
Information Literacy: Students will locate, evaluate and apply reliable and appropriate information.	E
Quantitative Reasoning: Students will apply the concepts and methods of mathematics to solve problems.	I
Scientific Reasoning: Students will relate scientific methods of inquiry to the acquisition of knowledge.	M
Technical Literacy: Students will utilize computer and emerging technologies effectively.	M
Aesthetics: Students will appreciate the variety of human experiences as expressed through the arts.	I
Multiple Perspectives: Students will demonstrate knowledge and appreciation of diverse cultures.	E
Ethics: Students will develop an awareness of personal obligations and responsibilities in one's community of influence.	E
Impact of Technology: Students will reflect on the impact of scientific and technological advances on the individual, society and the environment.	M
Civic Literacy: Students will demonstrate awareness of the responsibilities of local, national and international citizenship.	E

If the course is required in a program or it is an elective in a program, please indicate how the course contributes to the Program Student Learning Outcomes. List the Program Student Learning Outcomes and indicate the degree or level of connection between the course and outcome as I, M, or E. Please delete this table if it is not applicable.

CONNECTION OF HUS 244 to PROGRAM STUDENT LEARNING OUTCOMES FOR Human Services		
1	Understand the past, present and future of human services.	I
2	Demonstrate the ability to effectively perform empathic listening, observation and interactional skills with individuals, groups, families and community.	E
3	Conduct intake interview and provide a basic assessment of human need.	E
4	Apply core interpersonal skills within the helping relationship.	E
5	Be prepared for group facilitation and participation.	E
6	Utilize knowledge of formal and informal networks in the human services delivery system	E
7	Apply fundamental legal and ethical standards in providing client services and maintaining participant records.	E
8	Advocate for participants needs utilizing a strength-based culturally competent dynamic.	E
9	Conduct 250 hours of fieldwork in a human services agency/organization.	E
10	Identify, explain and apply the 12 National Community Support Skill Standards for human service delivery.	E
11	Be eligible to sit for the Human Services-Board Certified Practitioner (HS-BCP) Exam.	E



# HUMAN SERVICES — Associate in Science (Program Code: HA)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 English Composition & Literature I Introduction to Human Services The Helping Relationship: Human Services Delivery Introduction to Psychology	ENG 101	F/S/SU			3	ENG 100 or approp place score
	HUS 101	F/S/SU			3	ENG 100 or approp place score
	HUS 121	F/S/SU			3	ENG 100 or approp place score
	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
	SOC 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 2 English Composition & Literature II Introduction to Aging Group Process for Human Services Community Service: Delivering Human Services	ENG 102	F/S/SU			3	ENG 101
	GRT 101	F/S/SU			3	ENG 100 or approp place score
	HUS 125	F/S/SU			3	HUS 101, HUS 121
	HUS 141	F/S/SU			3	ENG 100 or approp place score, HUS 101, HUS 121
	PSY 231	F/S			3	PSY 101
Semester 3 Cultural Competence for Human Service Workers Legal Concepts & Ethics in Human Services Chemical Dependency Speech Communication Skills Human Services Practicum I	HUS 221	F/S/SU			3	ENG 100 or approp place score, HUS 101, SOC 101
	HUS 231	F/S/SU			3	HUS 101, HUS 121, HUS 141
	PSY 273	F/S/SU			3	PSY 101
	SPH 101	F/S/SU			3	Prel/Coreq ENG 101
	HUS 243	F			4	HUS 101, HUS 141, PSY 231
Semester 4 Human Services Practicum II Elective Elective Liberal Arts Elective Mathematics or Science Elective Total credits required	HUS 244	S			4	HUS 243
	---				3	
	---				3	
	---				3	
	---				3-4	
					62-63	

<p><b>The Degree:</b> Associate of Science</p> <p><b>The Program:</b> Coursework is designed to prepare students to attain core knowledge and competencies for an entry-level human service worker.</p> <p><b>Admission Requirements:</b></p> <ul style="list-style-type: none"> <li>High School Diploma or GED (refer to page 9)</li> <li>QCC English assessment test and Must place into ENG 100 or higher.</li> </ul> <p><b>The Next Step:</b></p> <ul style="list-style-type: none"> <li>This program has transfer articulation agreements</li> <li>More information on transfer is available on pages 22-23 or at <a href="http://www.qcc.mass.edu/transfer">www.qcc.mass.edu/transfer</a> <i>Former joint admissions program</i></li> </ul> <p><b>Program Coordinator:</b> Jean Kennedy 508.854.2744 <a href="mailto:jkenney@qcc.mass.edu">jkenney@qcc.mass.edu</a></p> <p><b>Program Notes:</b> If a student has prior or current experience in human services, academic credit may be obtained from several Experience-Based Education alternatives. These credits can be applied to the Associate Degree or the Certificate.</p> <p><b>Note:</b> A CORI (Criminal Offender Record Information) SORI (Sexual Offenders Record Information) check is required for student Practicum.</p> <p><b>Technical Performance Standards:</b> There are no specific Technical Performance Standards defined for this program.</p>
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