QUINSIGAMOND Community College

2018-2019 COLLEGE CATALOG

NOVEMBER 2018 ADDENDUM

www.QCC.edu

New England Commission of Higher Education

Quinsigamond Community College is accredited by the New England Commission of Higher Education (formerly the Commission on Institutions of Higher Education of the New England Association of Schools and Colleges, Inc.).

Inquiries regarding the accreditation status by the Commission should be directed to the administrative staff of the institution. Individuals may also contact:

New England Commission of Higher Education
3 Burlington Woods Drive, Suite 100
Burlington, MA 01803-4514

781.425.7785
E-Mail: info@neche.org

Individual Programs of Study are also fully accredited by various agencies:

These include:

- The Accreditation Commission for Education in Nursing
- The Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association
- The Commission on Accreditation of Allied Health Education Programs
- The Commission on Accreditation for Respiratory Care
- The Commission on Dental Accreditation of the American Dental Association
- The Department of Public Health Office of Emergency Medical Services
- The Joint Review Committee on Education in Radiologic Technology
- The Massachusetts Board of Registration in Nursing
- The National Association for the Education of Young Children

Equal Opportunity/Affirmative Action Policy

Quinsigamond Community College is an affirmative action/equal opportunity employer and does not discriminate on the basis of race, color, national origin, sex, disability, religion, age, veteran status, genetic information, gender identity and expression, or sexual orientation in its programs and activities as required by Title IX of the Educational Amendments of 1972, the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, Title VII of the Civil Rights Act of 1964, and other applicable statutes and college policies. The College prohibits sexual harassment, including sexual violence. Inquiries or complaints concerning discrimination, harassment, retaliation or sexual violence shall be referred to the College's Affirmative Action and/or Title IX Coordinator, the Massachusetts Commission Against Discrimination, the Equal Employment Opportunities Commission or the United States Department of Education's Office for Civil Rights.

Clery Statement

Quinsigamond Community College's Annual Security Report is available to the college community. This report includes statistics for the previous three years concerning reported crimes that occurred on campus; in certain off-campus buildings or property owned or controlled by Quinsigamond Community College; and on public property within, or immediately adjacent to and accessible from, the campus. The report also includes institutional policies concerning campus security, such as policies concerning sexual assault, and other matters. A copy of this report can be obtained by contacting the Campus Police or by accessing the following website:

www.QCC.edu/clery

Computer Information Systems - Transfer Option — CITR

Associate in Science

Program Goals:

The Computer Information Systems - Transfer Option is designed to prepare students for transfer to four-year institutions where they can complete the bachelor degree, preparing the students for professional careers in the rapidly-changing field of Computer Information Systems. Students develop good communication skills and the ability for teamwork and leadership roles in their professional careers. Graduates from the Transfer Option with a GPA of 2.50 or higher are guaranteed admission to all Massachusetts state universities and to the University of Massachusetts under the MassTransfer Program.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Analyze and design information systems and database applications solutions to achieve business/organizational goals.
- Implement a designed solution to solve business Information Systems (IS) problems using state-of-the-art programming techniques and application software.
- Apply knowledge of computing and mathematics appropriate to the discipline.
- Think critically and apply the scientific method.
- Present technical solutions effectively.
- Exhibit professional, legal and ethical behavior.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some first semester courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.
- Mathematics: One year of High School Algebra with a grade of "C" or higher; or MAT 095 with a grade of "C" or higher; or appropriate placement score.
- English: Three years of High School English with grades of "C" or higher; or ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score.

CORI, SORI, Finger Printing & Drug Testing:

Prospective students should note that, as a condition of cooperative education employment, Criminal Offender Record Information (CORI) and Sex Offender Registry Information (SORI) checks, finger printing, and drug testing may be required

Additional Cost:

See the Program Fees on page 34.

- Students enrolled in CIS 229, CIS 232, CIS 245, CIS 246, and CIS 247 will be required to bring their own laptop to class.

Location:

- This program may be completed at QCC Worcester (Main Campus).
- This program may be completed face-to-face.
- This program may be completed 50% or more online.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for prior learning. Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 11.0101.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

Program Contact Email: cis@qcc.mass.edu

Additional Information:

- Some courses may utilize a virtual laboratory; contact the Program Coordinator for minimum hardware and software requirements.

Computer Information Systems - Transfer Option — CITR — Associate in Science

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 1 • Apply and get accepted to this program (Program Code: CITR). • Register for and successfully complete all courses to graduate in five semesters. • Attend Transfer Services events. For information see www.QCC.edu/transfer. • Complete CIS 111 and CIS 121. • Complete ENG 101 and MAT 100.				
Introduction to Information Technology	CIS 105	F/S/SU	3	
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3	
Introduction to Programming with C++	CIS 121	F/S	3	Coreq: CIS 111 or CIS 115
Composition I	ENG 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
College Algebra	MAT 100	F/S/SU	3	MAT 099 with a grade of "C" or higher; or approp place score
		Total	15	
Semester 2 • Meet with a QCC Transfer Services Advisor (Room 61A). See www.QCC.edu/transfer. Attend Transfer Services events. • Complete CIS 223, ENG 102, and MAT 123.				
Financial Accounting I	ACC 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score, MAT 090 with a grade of "C" or higher; or approp place score
.NET Programming I	CIS 223	S	3	CIS 111 or CIS 115, CIS 121
Principles of Macroeconomics	ECO 215	F/S/SU	3	Coreq: ENG 101
Composition II	ENG 102	F/S/SU	3	ENG 101
College Mathematics I: Pre-Calculus	MAT 123	F/S/SU	3	MAT 100 or approp place score
		Total	15	
Semester 3 (Summer) • Complete MAT 124.				
College Mathematics II: Trigonometry	MAT 124	F/S/SU	3	MAT 123 or approp place score
Humanities Elective	---	F/S/SU	3	
		Total	6	
Semester 4 • Meet with representatives of four-year schools to discuss/begin the transfer application process. • Complete PHY 101.				
Web Page Development I	CIS 134	F/S	3	Coreq: CIS 111
Introduction to Java	CIS 226	F	3	CIS 121
.NET Programming II	CIS 232	F/S	3	CIS 223
Discrete Mathematics	MAT 125	F/S	3	MAT 123 or approp place score
Physics I	PHY 101	F	4	MAT 148 or Coreq: MAT 124
		Total	16	
Semester 5 • Continue with/complete the transfer application process. • Submit an Intent to Graduate Form, located on *The Q*.				
Principles of Microeconomics	ECO 216	F/S/SU	3	Coreq: ENG 101
Physics II	PHY 102	S	4	PHY 101
Speech Communication Skills	SPH 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Humanities Elective	---	F/S/SU	3	
Social Science Elective	---	F/S/SU	3	
		Total	16	
Total Credits Required:			**68**	

For information on electives, see p. 345-346.

Electronics Engineering Technology - Biomedical Instrumentation Option — EEBI

Associate in Science

Connections:

The following certificate(s) can be completed along with this associate degree:

- Electronics Engineering Technology - Electronics Technology Certificate, Electronics Engineering Technology - Photonics Certificate

Program Goals:

The Electronics Engineering Technology - Biomedical Instrumentation Option prepares students to enter the workforce as an essential member of a medical organization, calibrating, troubleshooting, and maintaining the electronic instrumentation equipment that is vital to today's technology-driven healthcare industry. Graduates may also continue their education toward a bachelor degree in Engineering Technology.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Communicate effectively through verbal and written means.
- Apply the concepts and methods of mathematics to the solution of technical problems.
- Apply the concepts of Physics to the solution of technical problems.
- Write technical reports using a word processor.
- Collect, sort and analyze data using a spreadsheet.
- Operate electronic test equipment such as multi-meters, function generators and oscilloscopes.
- Troubleshoot and configure computer networks.
- Troubleshoot and repair basic electronic systems.
- Identify key areas of human anatomy and physiology.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some first semester courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.

CORI, SORI, Finger Printing & Drug Testing:

Criminal Offender Record Information (CORI) and Sex Offender Registry Information (SORI) checks may be required of students enrolled in EET 299. Finger printing and drug testing may be required of students enrolled in EET 299.

Additional Cost:

See the Program Fees on page 34.

Location:

- This program may be completed at QCC Worcester (Main Campus).
- This program may be completed face-to-face.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for prior learning. Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 15.0303.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

Program Contact Email:

electronics@qcc.mass.edu

Electronics Engineering Technology - Biomedical Instrumentation Option — EEBI — Associate in Science

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 1 • Apply and get accepted to this program (Program Code: EEBI). • Register for and successfully complete all courses to graduate in four semesters. • Complete ELT 103 and ELT 121. • Complete ENG 101. • MAT 147 and MAT 148 recommended if primary goal is employment; MAT 123 and MAT 124 recommended for transfer.				
Windows Client Operating Systems	CSC 141	F/S/SU	4	
Electronics I	ELT 103	F/S	4	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score, MAT 095 with a grade of "C" or higher; or approp place score
Digital Circuits	ELT 121	F/S	4	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score, MAT 095 with a grade of "C" or higher; or approp place score
Composition I	ENG 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
College Mathematics I: Pre-Calculus or	MAT 123	F/S/SU	3-4	MAT 100 or approp place score
Mathematics for Technicians I	MAT 147			MAT 095 with a grade of "C" or higher; or approp place score
		Total	18-19	
Semester 2 • Meet with a QCC Career Services Representative and attend Workshops. See www.QCC.edu/career-services. • Complete ELT 104 and ELT 130.				
Networking Technologies	CSC 234	F/S/SU	4	Coreq: CSC 141
Electronics II	ELT 104	F/S	4	ELT 103
Embedded Microcontrollers	ELT 130	S	4	ELT 103, ELT 121
College Mathematics II: Trigonometry or	MAT 124	F/S/SU	3-4	MAT 123 or approp place score
Mathematics for Technicians II	MAT 148			MAT 147
		Total	15-16	
Semester 3 • Meet with Program Coordinator to discuss readiness for EET 299. • Meet with a Career Services Representative for Job Search Assistance services. • Complete ENG 102 or ENG 105; ENG 105 recommended if primary goal is employment after graduation.				
Pre Cooperative Education Seminar	CPS 298	F/S	0	
Instrumentation and Control Technology	ELM 251	F/S	4	ELT 104, ELT 130
Composition II or	ENG 102	F/S/SU	3	ENG 101
Technical Writing	ENG 105			
Physics I	PHY 101	F	4	MAT 148 or Coreq: MAT 124
ELT or ELM Program Elective (200-level)	---	F/S/SU	4	

For information on electives, see p. 345-346.

Course Title	Course #	Semester Offered	Credits	Prerequisites
		Total	15	
Semester 4 • Complete EET 299 (with Program Coordinator approval). • Submit an Intent to Graduate Form, located on *The Q*.				
Principles of Human Biology	BIO 100	F/S/SU	4	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Cooperative Work Experience	EET 299	F/S/SU	3	CPS 298, ELT 104, ELT 130
Mechatronic Systems	ELM 258	F/S	4	ELT 130
ELT or ELM Program Elective (200-level)	---	F/S/SU	4	
Social Science Elective	---	F/S/SU	3	
		Total	18	
Total Credits Required:			**66-68**	

For information on electives, see p. 345-346.

Manufacturing Technology — MP

Associate in Science

Connections:

The following certificate(s) can be completed along with this associate degree:

- Manufacturing Technology - CNC Technologies Certificate, Manufacturing Technology - Computer Aided Design Certificate, Manufacturing Technology Certificate

Program Goals:

The Manufacturing Technology associate degree program is designed to prepare graduates to enter the field of advanced manufacturing. Students will gain an understanding of materials and manufacturing processes as well as the quality systems in place in modern industry. Using safe working practices, students will learn to operate and maintain a variety of production equipment. Since there is a strong focus on applied mathematical and scientific knowledge in advanced manufacturing, students will obtain an advanced understanding of electrical, pneumatic, and hydraulic systems. Use of PC's, communication skills, CNC machine tools, and CAD/CAM software will allow successful graduates to enhance their ability to add value to any manufacturing environment. Graduates will be able to apply lean principles and automation techniques to improve process and product efficiency and quality.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Apply mathematical and scientific concepts to solve manufacturing problems.
- Understand the process of product development through design and experimentation.
- Supervise and manage a variety of manufacturing systems.
- Work in multicultural and multidisciplinary teams to assess and improve system performance.
- Practice safe working protocols to nurture ethical responsibilities.
- Communicate technical information both verbally and in written form.
- Use modern tooling, skills, and techniques for effective manufacturing systems practice.
- Understand the behavior of a variety of material properties as they relate to manufacturing processing.
- Apply accurate design methodology and use industry standard CAD/CAM software to improve quality and production.
- Identify problems before they occur and design a solution.
- Understand and manage product variability as defined by quality systems.
- Apply advanced methods of analysis, synthesis, and control of manufacturing systems.
- Safely operate, program, and setup a variety of CNC equipment.
- Measure manufacturing process variables and draw credible technical conclusions.
- Apply lean principles in the operation and development of production systems.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some first semester courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.

CORI, SORI, Finger Printing & Drug Testing:

Criminal Offender Record Information (CORI) and Sex Offender Registry Information (SORI) checks are not required. Finger printing and drug testing are not required.

- CORI/SORI checks, finger printing, and drug testing may be required of students enrolled in MNT 299.

Additional Cost:

See the Program Fees on page 34.

- Graduates may be required to meet at off-campus locations and are expected to provide their own transportation to these venues. Types of venues used vary each semester, but may include company tours outside of class and/or training at other local educational facilities.
- Students should anticipate additional expenses for professional certification examinations.

Location:

- This program may be completed at QCC Worcester (Main Campus); other local locations may be used to enhance the educational experience of the student.
- This program may be completed face-to-face.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for prior learning. Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

- To evaluate technical credit for prior learning, students should contact the Program Coordinator.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 15.0613.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

Program Contact Email:

Manufacturing@qcc.mass.edu

Additional Information:

- The courses in this program are aligned with national standards as set by National Association of Manufacturers (NAM), Manufacturing Skills Standards Council (MSSC), and the statewide standards as defined by the Manufacturing Advancement Center Workforce Innovation Collaborative (MACWIC).
- During the course of this program, students will be required to take industry prescribed certifications. See program grid for details.
- Certifications:
  - MACWIC Level 1-3. Manufacturing Advancement Center Workforce Innovation Collaborative (MACWIC): www.macwic.org/.
  - OSHA 30. Occupational Safety and Health Administration: www.osha.com.
  - FANUC CERT (Certified Education Robot Training) - Handling Tool Operations and Programming: http://robot.fanucamerica.com.
  - Certified SolidWorks Associate (CSWA): www.solidworks.com/sw/support/796_ENU_HTML.htm?pid=446.

Manufacturing Technology — MP — Associate in Science

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 1 • Apply and get accepted to this program (Program Code: MP). • Register for and successfully complete all courses to graduate in four semesters. • Complete MAT 123 and MAT 124 for transfer goal; Complete MAT 147 and MAT 148 for employment goal. • Complete MNT 101 and MNT 108. • MNT 100 and MNT 108 include certification exams.				
Introduction to Microcomputer Applications	CIS 111	F/S/SU	3	
College Mathematics I: Pre-Calculus or	MAT 123	F/S/SU	3-4	MAT 100 or approp place score
Mathematics for Technicians I	MAT 147			MAT 095 with a grade of "C" or higher; or approp place score
Manufacturing Safety	MNT 100	F/S	3	ENG 095 with a grade of "C" or higher; or approp place score, MAT 095 with a grade of "C" or higher; or approp place score
Mechanical CAD I	MNT 101	F/S	3	MAT 095 with a grade of "C" or higher; or approp place score
Basic Machine Operation	MNT 108	F/S	3	MAT 095 with a grade of "C" or higher; or approp place score
		Total	15-16	
Semester 2 • Meet with a QCC Career Services Representative and attend Workshops. See www.QCC.edu/career-services. • Complete ENG 101. • Complete MNT 106 and MNT 115.				
Composition I	ENG 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
College Mathematics II: Trigonometry or	MAT 124	F/S/SU	3-4	MAT 123 or approp place score
Mathematics for Technicians II	MAT 148			MAT 147
Quality	MNT 106	F/S	4	Coreq: MNT 101
Manufacturing Processes I	MNT 110	F/S	3	
Maintenance and Instrumentation in Manufacturing	MNT 115	F/S	3	
		Total	16-17	
Semester 3 • Meet with Program Coordinator to discuss readiness for MNT 299. • Meet with a Career Services Representative for Job Search Assistance services. • Complete MNT 103 and MNT 210. • Complete PHY 101. • MNT 103, MNT 210, and MNT 217 include certification exams.				
Pre Cooperative Education Seminar	CPS 298	F/S	0	
Composition II or	ENG 102	F/S/SU	3	ENG 101
Technical Writing	ENG 105			
Solid Modeling	MNT 103	F/S	3	ERG 101 or MNT 101
CNC Programming	MNT 210	F	4	Coreq: MNT 101, MNT 108
Process Automation & Robotics	MNT 217	F	3	CIS 111, Coreq: MNT 115

For information on electives, see p. 345-346.

Course Title	Course #	Semester Offered	Credits	Prerequisites
Physics I	PHY 101	F	4	MAT 148 or Coreq: MAT 124
		Total	17	
Semester 4 • Complete MNT 215 and MNT 216. • Complete MNT 299 (with Program Coordinator approval). • MNT 215 and MNT 218 include certification exams. • Submit an Intent to Graduate Form, located on *The Q*.				
Computer-Aided Manufacturing	MNT 215	S	4	MNT 101, MNT 210
Manufacturing Processes II	MNT 216	S	4	MNT 102 or MNT 103, MNT 210
Lean Manufacturing and Six Sigma	MNT 218	S	3	MNT 106
Cooperative Work Experience & Seminar	MNT 299	F/S/SU	3	CPS 298, Approval of Program Coordinator
Physics II	PHY 102	S	4	PHY 101
		Total	18	
Total Credits Required:			**66-68**	

For information on electives, see p. 345-346.

Respiratory Care — RS

Associate in Science

Program Goals:

The Respiratory Care associate degree program prepares students for a career as advanced level Respiratory Care practitioners. Graduates of this program are eligible to attempt the credentialing examinations offered by the National Board for Respiratory Care. Upon successful completion of this process, graduates receive the Registered Respiratory Therapist (RRT) credential.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Assume the role of the Respiratory Therapist in ways that reflect integrity, responsibility, ethical practice and an evolving identity as a professional healthcare provider committed to evidence-based practice.
- Effectively communicate verbally, non-verbally, in writing or with computer-based technology with the patient, family and other health professionals.
- Utilize Respiratory Care theoretical concepts in the comprehensive delivery of care, and apply and evaluate clinical information relevant to their roles as advanced level Respiratory Care practitioners.
- Make judgments in Respiratory Care practice that integrate science and evidence-based medicine to provide safe, quality care and promote the pulmonary health of patients, families and communities.
- Employ relationship-centered interventions that are caring, compassionate, protective, therapeutic, and respectful of human differences.
- Collaborate with inter-professional teams to foster open communication, mutual respect, and shared decision-making to achieve quality patient care.
- Demonstrate technical proficiency in all skills necessary to fulfill their roles as advanced level Respiratory Care practitioners.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some first semester courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.
- Must take the Accuplacer Placement Test to determine mathematics and English levels, if no college level courses were previously completed.
- Mathematics: minimum grade of "B" in MAT 098 or MAT 099 or test into MAT 100-level or above.
- Biology: minimum grade of "B" in high school biology or "B" in BIO 101 (recommended) or other college biology class.
- Chemistry: minimum grade of "B" in high school chemistry or "B" in CHM 090.
- Qualifying mathematics, one chemistry, and one biology course must be taken within five years of application.
- English: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score.
- Required TEAS V or TEAS composite score of 65% must be achieved within two attempts of taking the test.
- GPA of 3.00 or equivalent in high school or 3.00 in college with minimum 10 credits; or 550 Battery Average on GED; or HiSET 45.
- Attendance at a Health Information Session.
- Attend one Respiratory Care class.
- Review of program website and career video.

CORI, SORI, Finger Printing & Drug Testing:

Criminal Offender Record Information (CORI), Sex Offender Registry Information (SORI), and National Background checks are required in the program, either annually or every semester. Finger printing and drug testing may be required. Finger printing and drug testing results must meet clinical requirements. An issue with CORI/SORI, National Background, finger printing and/or drug testing could prevent a student from participating in a clinical/field rotation, which could result in dismissal from the program.

- Students should be aware that a prior or current history of criminal or sexual offense may negatively impact the applicant's ability to obtain a limited work permit while a student in the program, and/or a license to practice within the Commonwealth of Massachusetts after graduation.

Additional Cost:

See the Program Fees on page 34.

- Students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, parking fees at clinical sites, licensing

examinations, CPR certification, health immunizations and physical exams, and any required skills remediation.

Location:

- This program may be completed at QCC at the Healthcare and Workforce Development Center in downtown Worcester.
- This program may require students to travel to clinical sites that are within a 75-mile radius of the College.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for prior learning. Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

- If an applicant holds the CRT credential awarded by the National Board for Respiratory Care, or has successfully completed courses at a CoARC accredited school of Respiratory Care, then he or she may apply for advanced standing/credits toward a degree from QCC.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 51.0908.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

Program Contact Email:

respiratorycare@qcc.mass.edu

Additional Information:

- The Quinsigamond Community College Respiratory Care program is fully accredited by the Commission on Accreditation for Respiratory Care (CoARC), PO Box 54876, Hurst, TX 76054-4876, www.coarc.com.
- Licensure by the MA Department of Public Health is required to work as a Respiratory Therapist within the Commonwealth of Massachusetts (for more information on licensure contact: MA Department of Public Health, Division of Health Professions on Licensure, www.state.ma.us/reg/boards/rc).
- Courses in both Respiratory Care and Liberal Arts are required in the program curriculum. Respiratory Care courses include clinical experiences in area hospitals, rehabilitation/long-term care facilities and home care settings, as well as classroom study and laboratory practice on campus.
- All clinical experiences are under the supervision of QCC Respiratory Care faculty, and entrance into all clinical agencies will require a standardized school uniform and identification nametag.
- Students accepted to the Respiratory Care program must:
  - Obtain Healthcare Provider level BLS/CPR certification prior to beginning the program.
  - Provide documentation of immunization currency and satisfactory health status, and be cleared by the Health Compliance Officer by August 15 of the respective year.
  - Maintain health insurance throughout the student's enrollment.
  - Provide annual TB test results.
- All students must achieve a grade of "C" or higher in all Respiratory Care (RCP) courses and in PHY 103, BIO 111, BIO 112, and BIO 232. In addition, students must also satisfy all course and program requirements, including regulations on conduct, professionalism, and attendance.
- In addition, the student must demonstrate satisfactory performance in both the clinical and laboratory setting.
- Readmission is not guaranteed and is based on space availability and recommendation by faculty. Please review the readmission policy outlined in the QCC Handbook.
- A Social Security Number is mandatory for all NBRC examinations.

General Studies - Pre-Pharmacy Option — GSPH

Associate in Arts

Program Goals:

The General Studies - Pre-Pharmacy Option provides students with the first two years of a strong academic foundation required for transfer to four-year or six-year bachelor or Ph.D. degree programs in Pharmacy or related biological or biochemistry fields.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Demonstrate the academic and technical skills necessary for admission to a four or six year pharmacy program.
- Demonstrate the ability to be an effective team member.
- Demonstrate effective written and verbal communication skills.
- Understand the fundamental scientific principles necessary for continuation in pharmacology or a related field.
- Demonstrate a high standard of math competency.
- Utilize critical thinking and scientific methodology.
- Demonstrate application of scientific knowledge to common pharmacy and biological sciences practices.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some first semester courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.
- Mathematics: MAT 123 with a grade of "B" or higher; or appropriate placement score.
- English: ENG 096 with a grade of "B" or higher; or appropriate placement score.
- Chemistry: One year of High School Chemistry with a grade of "B" or higher; or CHM 090 with a grade of "B" or higher; or appropriate placement score.

CORI, SORI, Finger Printing & Drug Testing:

Criminal Offender Record Information (CORI) and Sex Offender Registry Information (SORI) checks are not required. Finger printing and drug testing are not required.

Additional Cost:

See the Program Fees on page 34.

Location:

- This program may be completed at QCC Worcester (Main Campus).
- This program may be completed face-to-face.
- This program may be completed 50% or more online.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for prior learning. Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 51.1103.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

Program Contact Email:

prepharm@qcc.mass.edu

General Studies - Pre-Pharmacy Option — GSPH — Associate in Arts

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 1 (Fall) • Apply and get accepted to this program (Program Code: GSPH). • Register for and successfully complete all courses to graduate in five semesters. • Attend Transfer Services events. For information see www.QCC.edu/transfer. • Complete ENG 101 and MAT 122.				
Principles of Biology I	BIO 107	F/S/SU	4	MAT 099 with a grade of "C" or higher; or approp place score, Coreq: ENG 101
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of High School Chemistry, MAT 099 with a grade of "C" or higher; or approp place score
Composition I	ENG 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Statistics	MAT 122	F/S/SU	3	MAT 095 with a grade of "C" or higher; or approp place score
		Total	14	
Semester 2 (Spring) • Meet with a QCC Transfer Services Advisor (Room 61A). See www.QCC.edu/transfer. Attend Transfer Services events.				
Principles of Biology II	BIO 108	F/S	4	BIO 107
General Chemistry II	CHM 106	F/S/SU	4	CHM 105
Composition II	ENG 102	F/S/SU	3	ENG 101
College Mathematics II: Trigonometry	MAT 124	F/S/SU	3	MAT 123 or approp place score
		Total	14	
Semester 3 (Summer) • Meet with Academic Advisor to choose Electives required for program.				
Introduction to Psychology	PSY 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Speech Communication Skills	SPH 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Economics Elective	---	F/S/SU	3	
		Total	12	
Semester 4 (Fall) • Meet with representatives of pharmacy schools to discuss/begin the transfer application process. • Confirm that MassTransfer general education transfer block can be completed. • Submit transfer application to pharmacy school during October/November.				
General Microbiology or	BIO 231	F/S	4	BIO 107
Medical Microbiology	BIO 232	F/S/SU		BIO 112 or CHM 105 or CHM 123
Organic Chemistry I	CHM 201	F/S/SU	4	CHM 106 or CHM 124
Calculus I	MAT 233	F/S/SU	4	MAT 124

For information on electives, see p. 345-346.

Course Title	Course #	Semester Offered	Credits	Prerequisites
History Elective	---	F/S/SU	3	
		Total	15	
Semester 5 (Spring) • Prepare for interview with pharmacy colleges for admission. • Submit an Intent to Graduate Form, located on *The Q*.				
Organic Chemistry II	CHM 202	F/S/SU	4	CHM 201
General Physics I	PHY 105	F/S/SU	4	MAT 233
Political Science Elective	---	F/S/SU	3	
Psychology Elective (200-level) or Sociology Elective (200-level)	---	F/S/SU	3	
		Total	14	
Total Credits Required:			**69**	

For information on electives, see p. 345-346.

Liberal Arts - Biology Option — LABI

Associate in Arts

Program Goals:

The Liberal Arts - Biology Option provides a curriculum with an emphasis on courses that the student will need to transfer to a bachelor degree program in the biological sciences or a pre-professional field. This program also provides a well-rounded foundational education in the liberal arts disciplines while fostering and honing high-level communication and critical reasoning skills which are vital for success in a bachelor degree program or professional career.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Apply general chemistry principles to biological systems.
- Demonstrate a foundational understanding of general biology principles including evolution and organismal diversity, cell structure and function, metabolism and enzyme function, and genetics.
- Demonstrate a proficiency in mathematics to support future STEM courses in fields such as biology, chemistry, physics, and environmental science.
- Utilize critical thinking skills and the scientific method to investigate scientific principles and solve complex problems.
- Utilize the broad-based liberal arts curriculum in the fine arts, humanities, mathematics, natural sciences, and social and behavioral sciences to examine the role of biology in society.
- Demonstrate the multiple perspectives that derive from knowledge and awareness of cultures and cultural practices.
- Demonstrate high-level communication skills (verbal, written, graphic, and numerical) across the full span of the liberal arts disciplines.
- Utilize interlibrary catalog/loan systems and electronic databases and to distinguish between reliable and non-reliable sources, whether print, cinematic, televisual, or web.
- Demonstrate a technical proficiency in computer technology and in the various scientific instrumentation utilized in the curriculum.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some required courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.

CORI, SORI, Finger Printing & Drug Testing:

Criminal Offender Record Information (CORI) and Sex Offender Registry Information (SORI) checks are not required. Finger printing and drug testing are not required.

Additional Cost:

See the Program Fees on page 34.

Location:

- This program may be completed at QCC Worcester (Main Campus).
- This program may be completed face-to-face.
- This program may be completed 50% or more online.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for prior learning. Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 26.0101.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

Program Contact Email:

biology@qcc.mass.edu

Liberal Arts - Biology Option — LABI — Associate in Arts

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 1 • Apply and get accepted to this program (Program Code: LABI). • Register for and successfully complete all courses to graduate in four semesters. • Attend Transfer Services events. For information see www.QCC.edu/transfer. • Complete BIO 107, ENG 101, and MAT 122. • Complete prerequisite(s) for MAT 123.				
Principles of Biology I	BIO 107	F/S/SU	4	MAT 099 with a grade of "C" or higher; or approp place score, Coreq: ENG 101
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of High School Chemistry, MAT 099 with a grade of "C" or higher; or approp place score
Composition I	ENG 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Statistics	MAT 122	F/S/SU	3	MAT 095 with a grade of "C" or higher; or approp place score
		Total	14	
Semester 2 • Meet with Academic Advisor to review choices (CHM 201, PHY 101, or PHY 105) that depend on transfer plans and mathematics prerequisite(s) completed. • Meet with a QCC Transfer Services Advisor (Room 61A). See www.QCC.edu/transfer. Attend Transfer Services events. • Complete BIO 108.				
Principles of Biology II	BIO 108	F/S	4	BIO 107
General Chemistry II	CHM 106	F/S/SU	4	CHM 105
Composition II	ENG 102	F/S/SU	3	ENG 101
College Mathematics I: Pre-Calculus	MAT 123	F/S/SU	3	MAT 100 or approp place score
Social Science Foundational Elective	---	F/S/SU	3	
		Total	17	
Semester 3 • Meet with representatives of four-year schools to discuss/begin the transfer application process. • Confirm that MassTransfer general education transfer block can be completed.				
Principles of Genetics	BIO 262	F/S	4	BIO 108, MAT 122
Organic Chemistry I or	CHM 201	F/S/SU	4	CHM 106 or CHM 124
Physics I or	PHY 101	F		MAT 148 or Coreq: MAT 124
General Physics I	PHY 105	F/S/SU		MAT 233
College Mathematics II: Trigonometry	MAT 124	F/S/SU	3	MAT 123 or approp place score
Literature, Philosophy, or Language Elective	---	F/S/SU	3	
U.S. or World History Survey Elective	---	F/S/SU	3	
		Total	17	
Semester 4 • To meet MassTransfer, the Multiple Perspectives Elective must also be a Humanities Elective course. • Continue with/complete the transfer application process. • Submit an Intent to Graduate Form, located on *The Q*.				
General Microbiology or	BIO 231	F/S	4	BIO 107
Cell Biology	BIO 259			
Organic Chemistry II or	CHM 202	F/S/SU	4	CHM 201
Physics II or	PHY 102	S		PHY 101
General Physics II	PHY 106	F/S/SU		MAT 234, PHY 105
Creative Arts Elective	---	F/S/SU	3	
Multiple Perspectives in Humanities Elective	---	F/S/SU	3	
		Total	14	
Total Credits Required:			**62**	

For information on electives, see p. 345-346.

Liberal Arts - Environmental Science Option — LAES

Associate in Arts

Program Goals:

The Liberal Arts - Environmental Science Option provides students with a strong academic foundation in the environmental, natural, and physical sciences. Graduates are prepared to transfer to a bachelor degree program in the environmental field.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Demonstrate scientific literacy by explaining the process of scientific reasoning and applying scientific principles in both laboratory and field settings.
- Develop critical thinking and/or observation skills, and apply them to the analysis of a problem or question related to the environment.
- Utilize the English language to communicate and interact effectively, in both written and oral formats, to a variety of individuals and diverse groups of human beings.
- Apply mathematical concepts, including statistical methods, to study environmental phenomena (including field and laboratory data).
- Understand the natural environment and its relationships with human activities.
- Demonstrate an ability to integrate the many disciplines and fields that intersect with environmental concerns.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some required courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.

CORI, SORI, Finger Printing & Drug Testing:

Criminal Offender Record Information (CORI) and Sex Offender Registry Information (SORI) checks are not required. Finger printing and drug testing are not required.

Additional Cost:

See the Program Fees on page 34.

Location:

- This program may be completed at QCC Worcester (Main Campus).
- This program may be completed face-to-face.
- This program may be completed 50% or more online.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for prior learning. Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 03.0104.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

- For the purpose of the articulation agreement with UMass Lowell:
  - It is recommended that students intending to transfer as an Environmental Science major to UMass Lowell complete Physics II (PHY 102).
  - If the student intends to pursue the Environmental Geoscience option at UMass Lowell, it is recommended that the student also complete Calculus II (MAT 234).
  - Students must receive a minimum grade of "C-" in all courses within the program for transferability to UMass Lowell.

Program Contact Email:

envscience@qcc.mass.edu

Liberal Arts - Environmental Science Option — LAES — Associate in Arts

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 1 • Apply and get accepted to this program (Program Code: LAES). • Register for and successfully complete all courses to graduate in five semesters. • Meet with Academic Advisor to choose courses consistent with academic plan. • Attend Transfer Services events. For information see www.QCC.edu/transfer. • Complete ENG 101 and MAT 123.				
Principles of Biology I	BIO 107	F/S/SU	4	MAT 099 with a grade of "C" or higher; or approp place score, Coreq: ENG 101
General Chemistry I	CHM 105	F/S/SU	4	CHM 090 or one year of High School Chemistry, MAT 099 with a grade of "C" or higher; or approp place score
Composition I	ENG 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
College Mathematics I: Pre-Calculus	MAT 123	F/S/SU	3	MAT 100 or approp place score
		Total	14	
Semester 2 • Meet with a QCC Transfer Services Advisor (Room 61A). See www.QCC.edu/transfer. Attend Transfer Services events.				
Principles of Biology II	BIO 108	F/S	4	BIO 107
General Chemistry II	CHM 106	F/S/SU	4	CHM 105
Composition II	ENG 102	F/S/SU	3	ENG 101
College Mathematics II: Trigonometry	MAT 124	F/S/SU	3	MAT 123 or approp place score
		Total	14	
Semester 3 (Summer)				
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Speech Communication Skills	SPH 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
		Total	6	
Semester 4 • Meet with representatives of four-year schools to discuss/begin the transfer application process. • Complete MassTransfer block audit to determine eligibility for transfer to public colleges. • Complete Liberal Arts - Environmental Science Option degree audit.				
Calculus I	MAT 233	F/S/SU	4	MAT 124
Physics I	PHY 101	F	4	MAT 148 or Coreq: MAT 124
Climate and Weather: Causes and Effects	SCI 104	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score, MAT 095 with a grade of "C" or higher; or approp place score
Integrated Science: Earth and Space	SCI 105	F/S/SU	4	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score, MAT 095 with a grade of "C" or higher; or approp place score
		Total	15	
Semester 5 • Continue with/complete the transfer application process. • Complete MAT 122. • Submit an Intent to Graduate Form, located on *The Q*.				
Statistics	MAT 122	F/S/SU	3	MAT 095 with a grade of "C" or higher; or approp place score
Introduction to Ethics	PHI 131	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Sustaining Earth's Environment	SCI 110	F/S	4	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score, MAT 095 with a grade of "C" or higher; or approp place score
Economics Elective (200-level)	---	F/S/SU	3	
		Total	13	
Total Credits Required:			**62**	

For information on electives, see p. 345-346.

Liberal Arts - Psychology Option — LAPY

Associate in Arts

Program Goals:

The Liberal Arts - Psychology Option prepares students for transfer to four-year colleges and universities at which they can continue their education in the field of psychology.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Demonstrate familiarity with the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
- Understand and apply basic research methods in psychology, including research design, data analysis and interpretation.
- Respect and use critical and creative thinking, skeptical inquiry, and, when possible, the scientific approach to solve problems related to behavior and mental processes.
- Understand and apply psychological principles to personal, social, and organizational issues.
- Weigh evidence, tolerate ambiguity, act ethically and reflect other values that are the underpinnings of psychology as a discipline.
- Acquire, analyze, organize, and utilize data to determine appropriate solutions to myriad work/life/personal challenges.
- Demonstrate comprehensive scientific, mathematical and computer/technological competencies.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some first semester courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.

CORI, SORI, Finger Printing & Drug Testing:

Criminal Offender Record Information (CORI) and Sex Offender Registry Information (SORI) checks are not required. Finger printing and drug testing are not required.

Additional Cost:

See the Program Fees on page 34.

Location:

- This program may be completed at QCC Worcester (Main Campus).
- This program may be completed face-to-face.
- This program may be completed 80% or more online.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for prior learning. Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 42.0101.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

Program Contact Email:

psychology@qcc.mass.edu

Liberal Arts - Psychology Option — LAPY — Associate in Arts

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 1				
• Apply and get accepted to this program (Program Code: LAPY). • Register for and successfully complete all courses to graduate in four semesters. • Attend Transfer Services events. For information see www.QCC.edu/transfer. • Complete ENG 101 and MAT 122.				
Composition I	ENG 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Critical Thinking and Problem Solving	HUM 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Statistics	MAT 122	F/S/SU	3	MAT 095 with a grade of "C" or higher; or approp place score
Introduction to Psychology	PSY 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Speech Communication Skills	SPH 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
		Total	15	
Semester 2				
• Meet with Academic Advisor to choose Program Electives consistent with academic and career plan. • For the Program Electives (Semesters 2 and 4), choose: PSY 123, PSY 124, PSY 252, PSY 253, PSY 261, or PSY 262. • Meet with a QCC Transfer Services Advisor (Room 61A). See www.QCC.edu/transfer. Attend Transfer Services events.				
Composition II	ENG 102	F/S/SU	3	ENG 101
Research Methods in Psychology	PSY 251	F/S/SU	3	ENG 101, MAT 122, PSY 101
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Program Elective	---	F/S/SU	3	
U.S. or World History Survey Elective	---	F/S/SU	3	
		Total	15	
Semester 3				
• Meet with representatives of four-year schools to discuss/begin the transfer application process. • Meet with Academic Advisor to discuss Foreign Language requirement at potential transfer institution(s). • Confirm that MassTransfer 34-credit general education transfer block can be completed.				
General Biology: Core Concepts	BIO 101	F/S/SU	4	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score, MAT 095 with a grade of "C" or higher; or approp place score
Psychological Statistics	PSY 250	F/S/SU	3	ENG 101, MAT 122, PSY 101
Creative Arts Elective	---	F/S/SU	3	
Foreign Language Elective	---	F/S/SU	3	
Multiple Perspectives Elective	---	F/S/SU	3	
		Total	16	
Semester 4				
• Continue with/complete the transfer application process. • Submit an Intent to Graduate Form, located on *The Q.*				
Anatomy & Physiology I	BIO 111	F/S/SU	4	BIO 101 or High School Advanced Placement Biology, Coreq: ENG 101
Elective	---	F/S/SU	3	
Foreign Language Elective	---	F/S/SU	3	
Program Elective	---	F/S/SU	3	
Program Elective	---	F/S/SU	3	
		Total	16	
Total Credits Required:			**62**	

For information on electives, see p. 345-346.

Criminal Justice — CJ

Associate in Science

Connections:

The following certificate(s) can be completed along with this associate degree:

- Law Enforcement Certificate

Program Goals:

The Criminal Justice associate degree program provides students with a broad academic background in the area of criminal justice and the opportunity to develop the skills needed for pursuing a public service career in policing, corrections, courts, probation, parole, federal agencies, the private sector, or transfer to a four-year institution.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Communicate ideas and information; plan, organize, and evaluate projects.
- Work in teams and with diverse populations and constituencies.
- Apply problem-solving techniques.
- Use technology appropriate to their fields.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some first semester courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.

CORI, SORI, Finger Printing & Drug Testing:

Criminal Offender Record Information (CORI) and Sex Offender Registry Information (SORI) checks are not required. Finger printing and drug testing are not required.

Additional Cost:

See the Program Fees on page 34.

Location:

- This program may be completed at QCC Worcester (Main Campus) or at QCC Southbridge.
- This program may be completed face-to-face.
- This program may be completed 100% online.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for DANTES and CLEP Exams (six credit maximum). Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

- Note: As required by the Massachusetts Department of Higher Education for the ongoing approval for participation in the Police Career Incentive Pay Program (PCIPP), also known as the "Quinn Bill Program", the QCC Criminal Justice program has instituted a policy since May 1, 2003 that:
  - No credit toward graduation is awarded for pre-college or remedial work;
  - Only credit from a regionally accredited institution of higher education is transferrable to the QCC Criminal Justice program; and
  - No academic credit is awarded within the Criminal Justice program for life experience, or training through the military, police academy, or other training.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 43.0107.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

Program Contact Email:

criminaljustice@qcc.mass.edu

Criminal Justice — CJ — Associate in Science

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 1 • Apply and get accepted to this program (Program Code: CJ). • Register for and successfully complete all courses to graduate in four semesters. • Complete ENG 101. • Complete prerequisite(s) for the Mathematics Elective or Lab Science Elective.				
Cultural Anthropology or	ANT 111	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Introductory Sociology (Principles)	SOC 101			
Introduction to Criminal Justice	CRJ 101	F/S/SU	3	ENG 091 with a grade of "C" or higher; or approp place score
Composition I	ENG 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Introduction to Psychology	PSY 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
		Total	12	
Semester 2 • Meet with a QCC Career Services Representative and attend Workshops. See www.QCC.edu/career-services. • If considering transfer, meet with a QCC Transfer Services Advisor (Room 61A). See www.QCC.edu/transfer. • Complete the Mathematics Elective or Lab Science Elective.				
Multicultural Diversity in Criminal Justice	CRJ 110	F/S	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Criminal Law	CRJ 111	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Composition II	ENG 102	F/S/SU	3	ENG 101
Speech Communication Skills	SPH 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Mathematics Elective or Lab Science Elective	---	F/S/SU	3-4	
		Total	15-16	
Semester 3 • If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process. • Meet with a Career Services Representative for Job Search Assistance services.				
Criminal Investigation	CRJ 207	F/S/SU	3	ENG 101
Technologies in Criminal Justice	CRJ 208	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
United States Government	PSC 201	F/S/SU	3	ENG 101
The Dynamics of Racial & Ethnic Relations	SOC 211	F/S/SU	3	ENG 101
Juvenile Delinquency & the Juvenile Justice System	SOC 212	F/S/SU	3	ENG 101
		Total	15	

For information on electives, see p. 345-346.

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 4 • Continue with/complete the transfer application process. • Submit an Intent to Graduate Form, located on *The Q*.				
Evidence & Court Procedure	CRJ 211	F/S/SU	3	ENG 101
Criminology	CRJ 213	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Legal and Ethical Concepts in Human Services or	HUS 231	F/S	3	CRJ 101 or HUS 101
Introduction to Ethics	PHI 131	F/S/SU		ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
State & Local Government	PSC 221	F/S/SU	3	ENG 101
Elective	---	F/S/SU	3	
Criminal Justice Elective	---	F/S/SU	3	
		Total	18	
Total Credits Required:			**60-61**	

For information on electives, see p. 345-346.

Human Services — HA

Associate in Science

Connections:

The following certificate(s) can be completed along with this associate degree:

- Direct Support Certificate, Human Services Certificate

Program Goals:

The Human Services associate degree program prepares students for a career as an entry-level human service practitioner; it also serves as a pathway for career development and advancement for non-degree workers in the field of human services. Graduates are prepared to transfer to a four-year program.

Student Learning Outcomes:

Upon completion of the program, graduates will be able to:

- Understand the past, present and future of human services.
- Demonstrate the ability to effectively perform empathic listening, observation and interactional skills with individuals, groups, families and community.
- Conduct intake interviews and provide a basic assessment of human needs.
- Apply core interpersonal skills within the helping relationship.
- Be prepared for group facilitation and participation.
- Utilize knowledge of formal and informal networks in the human services delivery system.
- Apply fundamental legal and ethical standards in providing client services and maintaining participant records.
- Advocate for participants needs utilizing a strength-based culturally competent dynamic.
- Identify, explain and apply the 12 National Community Support Skill Standards for human service delivery.
- Be eligible to sit for the Human Services-Board Certified Practitioner (HS-BCP) Exam.

Admissions Process:

Admissions inquiries should be directed to admissions@qcc.mass.edu. Prospective students may apply to the program of their choice by following the enrollment steps at www.QCC.edu/enrollment-steps.

Program Admissions Requirements:

Students should note that some first semester courses carry minimum prerequisites. Refer to the program grid.

- High School Diploma or GED/HiSET.
- English: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score.

CORI, SORI, Finger Printing & Drug Testing:

Criminal Offender Record Information (CORI) and Sex Offender Registry Information (SORI) checks are required. Finger printing and drug testing are not required.

- CORI/SORI checks are required for all students before fieldwork/practicum placement; students should be aware that a court record, active or inactive, may prevent them from completing curriculum/fieldwork requirements.

Additional Cost:

See the Program Fees on page 34.

- Registration for the practicums (HUS 243 and HUS 244) includes a fee for liability/malpractice insurance.

Location:

- This program may be completed at QCC Worcester (Main Campus) or at QCC Southbridge.
- This program may be completed face-to-face.
- This program may be completed 50% or more online.

Technical Performance Standards:

See the Technical Performance Standards on page 21. (Note: Not all programs have technical performance standards).

Credit for Prior Learning:

Students enrolled in this program may be able to earn academic credit for prior learning. Please contact Career Services & Credit for Prior Learning (Room 272A) at careerservices@qcc.mass.edu or 508.854.4439.

- For students attending QCC for career development and that have 5-7 years of prior experience in the field of human services, a portfolio may be a viable option for credit for prior learning.

Career Outlook:

Please consult the Massachusetts Career Information System at https://masscis.intocareers.org/ or the Occupational Outlook Handbook at www.bls.gov/ooh/ for specific occupational information. The CIP code for this program is 44.0000.

Transfer Articulations & Opportunities:

Prospective students may learn more about transfer articulation agreements at www.QCC.edu/agreements. More information regarding transfer opportunities is available at www.QCC.edu/transfer.

Program Contact Email: doewest@qcc.mass.edu

Additional Information:

- The Human Services Department Student Handbook has a grid outlining the order in which courses should be taken; if taking two, three, four, or five courses per semester, it is imperative that prerequisites be accomplished to prevent barriers to graduating.

Human Services — HA — Associate in Science

Course Title	Course #	Semester Offered	Credits	Prerequisites
Semester 1 • Apply and get accepted to this program (Program Code: HA). • Register for and successfully complete all courses to graduate in four semesters. • Complete ENG 101.				
Composition I	ENG 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Introduction to Human Services	HUS 101	F/S/SU	3	ENG 096 with a grade of "C" or higher; or approp place score
The Helping Relationship: Delivering Human Services	HUS 121	F/S/SU	3	ENG 096 with a grade of "C" or higher; or approp place score
Introduction to Psychology	PSY 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
Introductory Sociology (Principles)	SOC 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
		Total	15	
Semester 2 • Meet with a QCC Career Services Representative and attend Workshops. See www.QCC.edu/career-services. • If considering transfer, meet with a QCC Transfer Services Advisor (Room 61A). See www.QCC.edu/transfer. • Plan for Practicum: ° Complete prerequisite(s) for HUS 243 (refer to Human Services Department Student Handbook). ° Register by April 1 for HUS 243 with Practicum Coordinator. ° Complete required Practicum entry paperwork, including CORI/SORI review prior to placement.				
Composition II	ENG 102	F/S/SU	3	ENG 101
Introduction to Aging	GRT 101	F/S/SU	3	ENG 096 with a grade of "C" or higher; or approp place score
Group Process for Human Services	HUS 125	F/S/SU	3	HUS 101, HUS 121
Community Service: Delivering Human Services	HUS 141	F/S/SU	3	ENG 101, HUS 101, HUS 121
Introduction to Counseling	PSY 231	F/S/SU	3	PSY 101
		Total	15	
Semester 3 • If considering transfer, meet with representatives of four-year schools to discuss/begin the transfer application process. • Meet with a Career Services Representative for Job Search Assistance services. • Complete Career Portfolio as part of Practicum Capstone Paper seminar process. • Complete HUS 243.				
Cultural Competence for Human Service Workers	HUS 221	F/S/SU	3	CRJ 101 or HUS 101, ENG 101, SOC 101
Legal and Ethical Concepts in Human Services	HUS 231	F/S	3	CRJ 101 or HUS 101
Human Services Practicum I	HUS 243	F	4	HUS 101, HUS 141, PSY 231
Chemical Dependency	PSY 273	F/S/SU	3	PSY 101

For information on electives, see p. 345-346.

Course Title	Course #	Semester Offered	Credits	Prerequisites
Speech Communication Skills	SPH 101	F/S/SU	3	ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or approp place score
		Total	16	
Semester 4 • Continue with/complete the transfer application process. • Complete Capstone Paper and all required paperwork documenting Practicum experience. • Successfully complete HUS 244. • Submit an Intent to Graduate Form, located on *The Q*.				
Human Services Practicum II	HUS 244	S	4	HUS 243
Elective	---	F/S/SU	3	
Elective	---	F/S/SU	3	
Liberal Arts Elective	---	F/S/SU	3	
Mathematics Elective or Science Elective	---	F/S/SU	3-4	
		Total	16-17	
Total Credits Required:			**62-63**	

For information on electives, see p. 345-346.

ALH 138 Pharmacy Technician Clinical Co-Operative Externship

The externship prepares students for a career as a pharmacy technician. Students learn compounding skills, mathematical calculations, and how to use reference materials. Students then work in a pharmacy and learn how to perform as a pharmacy technician. They practice their communication skills; familiarize themselves with the layout of a pharmacy and its daily and monthly operation. Students experience data entry and third-party billing, inventory and compounding. Students also practice writing resumes, interviewing, and professional skills.

Credits: 6

Semester Offered: S

Prerequisites: ALH 137

ALH 151 Medical Office Administration I

This course introduces medical office procedures, including appointment scheduling, medical records creation and maintenance, phone communication, inventory of supplies, and computers in the medical office. Students become competent in the use of office equipment and the composing of different types of letters. The course introduces verbal and non-verbal methods of communication skills.

Credits: 3

Semester Offered: F

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score

Corequisites: ALH 102

ALH 152 Medical Office Administration II

This course examines legal relationships of physicians, staff and patients, contractual agreements, professional liability, malpractice, medical practice acts, informed consent and bioethical issues. Emphasis is placed on legal terms, professional attitudes, and the principles and basic concepts of ethics and laws involved in providing medical care. Additionally, students acquire entry-level skills with the use of electronic medical record (EMR) software.

Credits: 3

Semester Offered: S

Prerequisites: ALH 151

ALH 200 Pathopharmacology

This course enhances scientific foundational knowledge obtained in prerequisite biological sciences enabling application of pathophysiological and pharmacological concepts necessary for safe administration of medications to patients. This course emphasizes the importance of pharmacogenetics (individual response to medications based on genetics) and pharmacokinetics (specific individualized response to medications given for health promotion, treatment and symptom management across the lifespan of diverse populations).

Credits: 3

Semester Offered: F/S/SU

Prerequisites: BIO 112

American Sign Language

ASL 111 Beginning American Sign Language I

This course introduces American Sign Language (ASL), a method of visual/gestural communication used by deaf people in the United States and Canada. Students learn visual readiness skills to recognize and express spatial relationships and to use appropriate non-manual signals, such as facial expressions and body movements. Course topics include communicative functions, vocabulary, grammar, and cultural aspects of the deaf community. The course also covers functional communication to help students understand the needs and history of the deaf as well as their Community. Students learn the differences between American Sign Language and oral communication for the deaf.

Credits: 3

Semester Offered: F/S/SU

ASL 112 Beginning American Sign Language II

This course emphasizes visual readiness skills and conversational skills by utilizing grammatical principles, language functions, and cultural behaviors. Students explore the functions of language and identify cultural behaviors characteristic of deaf people. Students increase their fluency in American Sign Language: describing behavior, making requests, and giving directions, etc.

Credits: 3

Semester Offered: F/S/SU

Prerequisites: ASL 111

ASL 113 Introduction to Deaf Studies

This course utilizes a multi disciplinary perspective to emphasize issues and values affecting the American Deaf Community. Topics include the causes of hearing loss, the speech and hearing process, various manual sign systems, professions in the field of deafness, current events in the Deaf community, various aspects of deaf communication, technology and its impact on communication, educational philosophies, and the history of the Deaf in the United States.

Credits: 3

Semester Offered: S

Prerequisites: ASL 111

ASL 114 Issues in Deaf Society

This course explores relevant issues confronting the deaf members of the Deaf Community. Students examine issues that deal with community/cultural advocacy and advancement, confronting audism, cultural differences, educational, economic and legal barriers and deaf contributions to society. Students focus on preparing themselves for career fields where their constituents are deaf/Deaf or use ASL.

Credits: 3

Semester Offered: F/S

Prerequisites: ASL 111, ASL 113

ASL 200 Deaf Community Practicum

This course emphasizes practical experience by involving students in various educational or human service settings that service the Deaf Community. Students utilize receptive and expressive skills as well as their knowledge of Deaf Culture through first hand interaction and exposure. Students integrate their hands on experience with related readings, classroom discussions and student presentations. This course has a community based learning component.

Credits: 3

Semester Offered: F/S

Prerequisites: ASL 112, ASL 113, CORI/SORI Check

ASL 211 Intermediate American Sign Language I

This course focuses on further development of visual-spatial orientation and manipulations skills, sign vocabulary, and complex sentence structures. Students continue learning strategies for opening, sustaining, and closing general conversations on a range of topics. The course concentrates on developing the abilities to question, narrate, and give increasingly detailed descriptions of activities, interactions, plans, and directions. Students learn how to communicate clearly and express themselves in a culturally appropriate way.

Credits: 3

Semester Offered: F/S

Prerequisites: ASL 112

Concepts of AC, capacitance, and inductance are presented. Impedance, R-L-C circuits, and impedance networks are introduced. In the laboratory, students use a variety of test equipment including analog and digital meters, oscilloscopes, and function generators in order to analyze a variety of circuit configurations using experimental and mathematical techniques.

Credits: 4

Semester Offered: F/S

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score, MAT 095 with a grade of "C" or higher; or appropriate placement score

Please Note: Three hours lecture, three hours laboratory

ELT 104 Electronics II

This course examines theoretical and practical electronics, solid state fundamentals, transistors, power supplies, amplification systems, oscillators, pulse generators, and miscellaneous electronic circuitry. Students learn the practical and theoretical behavior of electronic control devices such as diodes, transistors, Zener diodes, field-effect transistors (FETs), thyristors, and logic gates. Students construct amplifiers, power supply circuits, oscillator circuits, and other circuits involving control devices.

Credits: 4

Semester Offered: F/S

Prerequisites: ELT 103

Please Note: Three hours lecture, three hours laboratory

ELT 120 Introduction to Photonics

This course provides students with an introduction to the fundamentals of optics, including the nature of light, light sources, and light propagation and interaction with matter in terms of geometrical optics and physical (wave) optics. This course gives students the opportunity to learn how to apply the principles of optics in a laboratory setting to conduct experiments and solve real world problems.

Credits: 4

Semester Offered: F/S

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score, MAT 099 with a grade of "C" or higher; or appropriate placement score

Please Note: Three hours lecture, three hours laboratory

ELT 121 Digital Circuits

This course explores digital fundamentals including number systems, digital code, logic gates, Boolean algebra, combinational logic, and flip-flops. Students learn the functions of the basic digital circuits used in all areas of Electronics. Students learn the operation of a digital electronic circuit, troubleshooting components of digital electronic circuits, binary and hexadecimal number systems, and Boolean rules and laws used to describe and construct gate networks.

Credits: 4

Semester Offered: F/S

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score, MAT 095 with a grade of "C" or higher; or appropriate placement score

Please Note: Three hours lecture, three hours laboratory

ELT 130 Embedded Microcontrollers

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.

Credits: 4

Semester Offered: S

Prerequisites: ELT 103, ELT 121

Please Note: Three hours lecture, three hours laboratory

ELT 222 Photonics Technology

In this course, students apply the principles learned in Introduction to Photonics to investigate the operation and applications of modern photonic systems, including lasers, optical fibers, and detectors. Students learn how photonic systems operate, and apply those systems to analyze and solve real world problems.

Credits: 4

Semester Offered: F/S

Prerequisites: ELT 120

Please Note: Three hours lecture, three hours laboratory.

Elementary Education

EDU 101 Elementary Education: Teaching and Learning

This course provides students with a view of elementary schools as they are today. Historical, philosophical and pedagogical perspectives are examined. Students examine curriculum, teaching strategies and assessment models to gain insight and acquire skills in current methodologies employed in elementary settings. A pre-practicum of 24 hours beyond classroom time is required. This practicum will be assigned by the Elementary Education Coordinator. Please note: Students are required to be fingerprinted and have a recent CORI/SORI on file to participate in the fieldwork which is required for successful completion of the course..

Credits: 3

Semester Offered: F/S

Prerequisites: ENG 096 with a grade of "C" or higher; or appropriate placement score

EDU 102 Theory to Practice: The Elementary School Learner

This course examines prominent theories of teaching and learning in elementary education. Students review social, emotional and cognitive developmental processes involved in learning for typical and atypical learners. The course also covers insights into motivational theories, the affective aspects of learning and classroom management. Students are required to participate in a field experience (pre-practicum) of 15 hours beyond classroom time in an elementary school setting. Please Note: Students must have a recent CORI/SORI on file to participate in the fieldwork which is required for successful completion of the course.

Credits: 3

Semester Offered: F/S

Prerequisites: ENG 096 with a grade of "C" or higher; or appropriate placement score

EDU 103 Foundations of Multicultural Education & Diversity

This course examines the relationship of cultural values and social contexts to the formation of the child's self-concept and success in the educational environment. An examination of the role of prejudice, stereotypes, institutional racism and sexism, and cultural incompatibilities in education will be included. Emphasis on considering different world views, preparing future teachers to offer an equal educational opportunity to children of all cultural groups, and considering course concepts in relationship to the work environment.

Credits: 4

Semester Offered: F/S

Prerequisites: ENG 101, PSY 123

EDU 200 Foundations of Reading

This course provides an opportunity for future early childhood and elementary level teachers to develop a strong foundation in the best practices of literacy instruction. Essential areas of reading instruction will be addressed: understanding phonological and phonemic awareness, the use of phonics, vocabulary development, fluency, comprehension, assessment, and writing. Students will gain knowledge in the mechanics of the reading process and will practice designing effective instruction for various student populations. A pre-practicum of 24 hours beyond classroom time is required. This practicum will be assigned by the Elementary Education Coordinator. Please note: Students are required to be fingerprinted and have a recent CORI/SORI on file to participate in the fieldwork which is required for successful completion of the course.

Credits: 3

Semester Offered: F/S

Prerequisites: EDU 101

EDU 201 Curriculum and Instruction in the Elementary School

This course provides an overview of curriculum planning and instruction, addressing the needs of all learners in an elementary school setting. Topics include classroom management, designing learning environments, assessment systems and communicating with families. State and national standards are integrated into instructional methods in the areas of language arts, social studies, math, science, health and technology. A field experience (pre-practicum) of 15 hours beyond classroom time is required. Please Note: Students must have a recent CORI/SORI on file to participate in the fieldwork which is required for successful completion of the course.

Credits: 3

Semester Offered: F/S

Prerequisites: EDU 101

EDU 202 Children with Special Needs

This course explores ways of meeting the needs of children with differing abilities. Students examine ways to construct and design environments to support children and their families. This course covers evolving social policies and legislation supportive of children with special needs and their families, and students complete a 24-hour pre-practicum program for children with special needs.

Credits: 4

Semester Offered: F/S

Prerequisites: ENG 101, PSY 123

Emergency Medical Technician

EMT 101 Basic Emergency Medical Technology

This course is designed to train individuals who respond to emergency calls for immediate care to the critically ill or injured and who transport patients to a medical facility. Students develop skills to determine the extent of illness or injury and establish priorities for emergency care. Topics include techniques in opening and maintaining an airway, cardiac resuscitation, controlling hemorrhage, treating shock, immobilizing fractures, assisting childbirth, managing behavioral emergencies, and light rescue skills including freeing patients from entrapment.

Credits: 7

Semester Offered: F/S/SU

EMT 108 Introduction to Advanced Pre-Hospital Care

This course provides paramedic students with the principles of advanced pre-hospital care and EMS operations under varying circumstances including operations and paramedic roles and responsibilities. There is an added emphasis on personal wellness and injury and illness prevention, the medical-legal aspects of emergency care and ethics, the Incident Command System, and managing resources at the emergency scene, particularly at scenes involving multiple ambulances and multiple agencies. Time is devoted to rescue operations, and an overview of hazardous material is presented. The student is made aware of their role in protecting the crime scene. An overview is provided in rural EMS, to raise awareness of the special circumstances that many providers face regarding distance, terrain, weather conditions, and EMS staffing.

Credits: 4

Semester Offered: F/S

Corequisites: BIO 100 or BIO 111, EMT 109, EMT 110, EMT 112, EMT 114

EMT 109 Pharmacology for Advanced Pre-Hospital Care

This course covers the general principles of pharmacology and the methods of calculating drug doses. The main focus is the nature and effects of drugs administered by paramedics in the treatment of patients in the clinical and field setting.

Credits: 2

Semester Offered: F/S

Corequisites: BIO 100 or BIO 111, EMT 108, EMT 110, EMT 112, EMT 114

EMT 110 Patient Assessment and Human Systems

This course covers the theory, skills, and terminology needed to perform physical assessment, including overview of basic anatomy and physiology, systematic assessment of the patient, the process of obtaining the patient's medical history, procedures in performing the physical examination and a concise method of recording the findings.

Credits: 2

Semester Offered: F/S

Corequisites: BIO 100 or BIO 111, EMT 108, EMT 109, EMT 112, EMT 114

EMT 112 Patient Assessment/ Pharmacology Laboratory Component

This course provides a comprehensive laboratory experience designed to familiarize the student with the practical aspects of medical patient assessment, including primary and secondary survey. In addition, both drug dose calculations and medication administration are practiced. The recording of patient data and the oral patient report is emphasized and demonstrated.

Credits: 1

Semester Offered: F/S

Corequisites: BIO 100 or BIO 111, EMT 108, EMT 109, EMT 110, EMT 114

EMT 114 Life Span and Healthcare Issues for Pre-Hospital Care

This course provides an analysis of normal anatomy and physiology and the disease processes of the female reproductive system, life span development, geriatric patients, and those patients who are challenged. This course also views interventions for the chronic-care patient, and those who may be victims of abuse and neglect.

Credits: 4

Semester Offered: F/S

Corequisites: BIO 100 or BIO 111, EMT 108, EMT 109, EMT 110, EMT 112

EMT 115 Advanced Pre-Hospital Care

The first half of this course focuses on pathophysiology common to all disease processes: shock, acid-base, and airway. The second half covers the pathophysiology of the pulmonary, nervous, gastrointestinal, and genitourinary systems. It reviews IV fluid administration and medical math, briefly reviews the anatomy and physiology of each topic covered, and uses a scenario-based approach to assessment and management.

Credits: 4

HUS 141 Community Service: Delivering Human Services

This course includes fieldwork in human service agencies in the Worcester area. Students learn about the various roles of the human service practitioner and explore multiple aspects of service delivery through the observation and "shadowing" of professionals. Students select three areas of interest within mental health, substance abuse, homeless/outreach, developmental disabilities, gerontology, adolescent behavior management and family/community based services. Visiting a minimum of three agencies during the semester increases students' awareness of community resources and understanding of services provided to agency participants. The course also covers effective communication styles, agency systems and system theory, effective joining styles, establishing strong work habits and ethics, assertiveness skills, self-awareness, and self-management.

Credits: 3

Semester Offered: F/S/SU

Prerequisites: ENG 101, HUS 101, HUS 121

HUS 143 Direct Support Practicum

Students contract for a minimum of 10 hours per week at a practicum placement and a weekly seminar at the College. Practicums are supervised by an agency staff person and by the course instructor, who visits the sites and maintains weekly contact with the students. Students demonstrate sensitivity to diverse populations and satisfactory proficiency in developing, interpreting, implementing, and documenting helping interventions. They 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.

Credits: 3

Semester Offered: F/S

Prerequisites: HUS 101

HUS 145 Special Topics in Developmental Disabilities

This course is designed for human service professionals who work as direct support workers for the Department of Development Disabilities. Students enrolled in this course will gain a deeper understanding and appreciation of issues that may have been presented in previous human service classes. In addition, they will further develop their skills in working with both clients and their families. Topics covered in this course include person centered thinking, teaching and learning, diversity, health and wellness, sexuality, humans rights, grief and loss, and working with families.

Credits: 3

Semester Offered: S

Prerequisites: HUS 101, HUS 131

HUS 151 Families and Children with Special Health Care Needs

This course focuses on understanding family systems and development for families with children who have special healthcare needs. Family-centered, strength-based model provides the foundation of the course. Students explore the impact of disabilities and special healthcare needs on family development and functioning; cultural and societal dynamics; home-based intervention and respite care; and the role of service providers in creating professional partnerships. Students receive 20 hours of practical experience including agency orientation, parent networking and self-advocacy groups.

Credits: 3

Semester Offered: F/S

Prerequisites: HUS 101

HUS 221 Cultural Competence for Human Service Workers

This course prepares human service workers in developing awareness and skills to provide culturally competent services to meet the needs of a changing population. Students examine three core principles: the worker must be self-reflective and examine biases within themselves and their profession; the worker must have core knowledge about minority group value systems, beliefs about health and personal problems, histories, traditions and natural systems of support inherent in one's culture; and the worker must be able to demonstrate an integration of this knowledge and personal reflection with practice skills.

Credits: 3

Semester Offered: F/S/SU

Prerequisites: CRJ 101 or HUS 101, ENG 101, SOC 101

HUS 231 Legal and Ethical Concepts in Human Services

This course examines ethical and legal issues that confront human service workers. Students begin by investigating the core values that are the foundation of helping services and examine the issues of social justice and consumer rights. Topics of consumer privacy, confidentiality, duty to disclose, and boundary dilemmas are covered in depth. Examples from Massachusetts's laws and cases are used to help learners understand their legal responsibilities and effectively collaborate with professionals from the justice system. Throughout the course, students develop an understanding of the legal system and how it impacts human service issues.

Credits: 3

Semester Offered: F/S

Prerequisites: CRJ 101 or HUS 101

HUS 243 Human Services Practicum I

This course provides training in technical competency and skills building through 120 hours of directed, professionally supervised individual and group work in a human service agency. Students demonstrate sensitivity to diverse populations and satisfactory proficiency in developing, interpreting, implementing, and documenting helping interventions. They 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. (Only open to students enrolled in the Human Services Program).

Credits: 4

Semester Offered: F

Prerequisites: HUS 101, HUS 141, PSY 231

HUS 244 Human Services Practicum II

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.

Credits: 4

Semester Offered: S

Prerequisites: HUS 243

Humanities

HUM 101 Critical Thinking and Problem Solving

This course focuses on the development of reasoning and problem solving skills by analyzing controversial public issues and practical everyday problems. Students explore problem solving strategies, argumentation, cultural differences in reasoning, inductive and deductive logic, cause and effect reasoning and the role of perception in thinking. Other topics include studying the scientific method, propaganda, manipulation of language in advertising and political speeches, and the use of emotional appeals in public discourse. Students write argumentative essays to explore different facets of the course topics.

Credits: 3

presentations, unit tests, journal work, and research-supported philosophical essay writing.

Credits: 3

Semester Offered: S

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score

PHI 104 Introduction to the Art of Loving

This course examines the various attitudes toward love and objects of love in the world from the interdisciplinary perspectives of philosophy, literature, and psychology. Students consider the philosophical complexities of love in the context of social, cultural, and psychological issues.

Credits: 3

Semester Offered: F

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score

PHI 121 World Religions

This course examines the nature of religious experience through the history of the world religions and their cultural contexts. Students study the essential nature of the religious experience, the origin and role of religion, major religions and their personalities, and the essential world views of cultures.

Credits: 3

Semester Offered: SU

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score

PHI 123 Native American Belief Systems

This course examines the belief systems of Native Americans of North, Central, and South America. Students study the nature and role of beliefs systems, such as world views, their spiritual and philosophical dimensions, and those factors which shaped such beliefs in Native American societies.

Credits: 3

Semester Offered: S

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score

PHI 131 Introduction to Ethics

This course focuses on philosophical principles for human action. Students critically examine major issues in ethics, morality, and values such as: What is a human act? To what extent are we free and have choices? What is the nature of responsibility? What constitutes happiness, good, and evil?

Credits: 3

Semester Offered: F/S/SU

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score

PHI 201 Judaism, Christianity and Islam

This course examines three western religions which trace their history back to Abraham: Judaism, Christianity and Islam. Students study the terminology and concepts used in the academic study of religion and apply them to the study of Judaism, Christianity and Islam with respect to: major beliefs, spiritual practices, sacred texts, organizational structure, historical development and cultural influences. Students analyze the role(s) of religion with respect to some current issues and global conflicts.

Credits: 3

Semester Offered: F/S

Prerequisites: ENG 101

PHI 203 Philosophy of Technology

This course examines from a philosophical perspective uses of technology, cyberspace, technological forms of communication, ethical and ecological implications of technology, and technology's effects on human bodies. Students consider how technological objects influence who possesses knowledge and power; what they insinuate about gender, race, and class; and how they impact social practices. Students explore various definitions of the term "technology," and reassess their relationship to technology.

Credits: 3

Semester Offered: S

Prerequisites: ENG 101

PHI 250 Special Topics in Philosophy

This course critically examines in-depth a selected topic in philosophy. Students read intensively and produce a significant work of scholarship on the topic. The topic may vary from semester to semester.

Credits: 3

Semester Offered: S

Prerequisites: ENG 101, Two Philosophy courses

Physical Education

PHE 103 Standard First Aid and Personal Safety

This course focuses on the mastery of skills for the administration of Cardio-Pulmonary Resuscitation (CPR), the use of Automatic External Defibrillation (AED), Basic First Aid, and Personal Safety. Students will learn how to recognize life-threatening emergencies, provide basic life support and react to situations related to airway obstruction. Additionally, students will learn how to prevent accidents through safety education by recognizing signs and symptoms and how to provide first aid treatment in emergency situations. Upon successful completion, students earn a nationally recognized certification for First Aid and CPR and AED.

Credits: 3

Semester Offered: F/S

Physics

PHY 101 Physics I

This course focuses on the basic concepts of measurement, kinematics, dynamics, work, energy, power, momentum, rotational motion, thermodynamics, and waves through working with problems and laboratory experiments. Students perform related laboratory experiments and write research-quality laboratory reports. This course is not required for Engineering but may be recommended for students who have not yet completed calculus.

Credits: 4

Semester Offered: F

Prerequisites: MAT 148 or Corequisite: MAT 124

PHY 102 Physics II

This course focuses on selected topics in the areas of waves, optics, and electromagnetism. Students learn how to apply the basic principles of problem-solving techniques. Students perform related laboratory experiments and write research-quality laboratory reports.

Credits: 4

Semester Offered: S

Prerequisites: PHY 101

PHY 103 Physics for Respiratory Care

This course emphasizes those areas applicable to fluids and their properties. Basic concepts of the course are related to clinical practice. The following topics are covered: states of matter, change of state, gas behavior under changing conditions, fluid dynamics, temperature and heat, and fluid pressure.

Credits: 2

Semester Offered: S

Prerequisites: MAT 095 with a grade of "C" or higher; or appropriate placement score; Restricted to Respiratory Care majors only

PSY 235 Counseling Methods

This course presents methods of counseling. Students use an experiential approach to understand and practice specific techniques used in the counseling process including listening, giving and receiving feedback, problem definition, contracting, responsibility, commitment, and evaluation.

Credits: 3

Semester Offered: S

Prerequisites: PSY 231

PSY 250 Psychological Statistics

This course covers how quantitative methods are used to answer questions in psychology. Students examine psychological applications of measures of central tendency, measures of variability, frequency distributions and standardization of scores (z-scores). Students learn to conduct, interpret, and report effect sizes and significance testing for comparing means (z-tests, t-tests and ANOVAs with one and two factors), and for assessing relationships (bivariate correlation and regression) within research scenarios commonly encountered in psychology. Special attention is given to identifying the appropriate statistics to use for a given research question and data set, to ethical issues in data analysis, and to the use of statistical software.

Credits: 3

Semester Offered: F/S/SU

Prerequisites: ENG 101, MAT 122, PSY 101

PSY 251 Research Methods in Psychology

Through instruction in research design and the application of the scientific method to psychology, students learn to evaluate the validity of claims about behavior and mental processes as they appear in both popular media and the professional scientific literature, to design and conduct psychological research, and to report on the results of psychological investigations using APA style. Topics covered include measurement and validity, ethics, survey research, correlational research, experiments with one and with multiple independent variables, identification and control of confounds, and quasi-experiments. Students conduct hands-on psychological studies involving appropriate statistical analyses that will be written up as APA style reports.

Credits: 3

Semester Offered: F/S/SU

Prerequisites: ENG 101, MAT 122, PSY 101

PSY 252 Introduction to Cognition

This course serves as an introduction to the field of cognitive psychology, familiarizing students with theories and research regarding learning, memory, and thinking. Topics include: the history and foundations of cognitive psychology; neural bases; learning, memory and knowledge; language; reasoning and problem-solving; social and emotional influences, and changes in cognition across the lifespan.

Credits: 3

Semester Offered: F/S

Prerequisites: ENG 101, PSY 101

PSY 253 Social Psychology

This course introduces students to the scientific study of how humans influence, relate to, and think about each other as practiced in social psychology. Major topics covered include social cognition, attributions, the self, attitudes and persuasion, conformity, group dynamics, interpersonal relationships, helping behavior, aggression, and prejudice. Themes emphasized throughout the course include the role of culture in influencing social psychological phenomena, the application of the scientific method to the study of social behavior, and the use of social psychological theories to better understand behavior encountered in daily life and in the world around us.

Credits: 3

Semester Offered: F/S

Prerequisites: ENG 101, PSY 101

PSY 261 Theories of Personality

This course introduces personality theories and theorists, definitions of personality, development and structure of personality, motivation, and concepts of self. Students examine various theories of structure and development of personality, human motivation, concepts of self, and the mature personality as proposed by Freud, Skinner, Jung, Fromm, Allport, Rogers, Frankl, and Perls.

Credits: 3

Semester Offered: F/S

Prerequisites: PSY 101

PSY 262 Abnormal Psychology

This course focuses on issues of mental health and mental illness. Topics include examination of various symptoms and causes of mental illness, current trends in treatment, and new developments in community health resources. Students explore the various approaches used to define and treat abnormal behaviors, including the statistical and absolute models, in order to understand and adopt a sensitive approach toward individuals whose behaviors are symptomatic of a disorder.

Credits: 3

Semester Offered: F/S/SU

Prerequisites: PSY 101

PSY 273 Chemical Dependency

This course covers the biological, psychological, and social factors involved in licit and illicit drug use and abuse. Students examine the types of drugs most commonly used and abused; psychosocial consequences of prolonged drug use and abuse; Federal, state, and local regulations governing drug use; efforts made to deal with drug use and abuse and drug related problems; and the nature and varied patterns of drug use and abuse in today's society. The course emphasizes types of drug treatment and counseling and the probable effects of different treatments upon the drug-dependent client.

Credits: 3

Semester Offered: F/S/SU

Prerequisites: PSY 101

Public Health

PHA 100 Survey of Personal Health

This course examines the concept of health and how it relates to all aspects of life. Students gain perspective in assessing and promoting health and healthy lifestyles. Students learn methods to prevent violence and injury, along with reducing risks in specific diseases.

Credits: 3

Semester Offered: F/S/SU

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score

PHA 101 Introduction to Public Health

This course provides an initial overview of public health concepts and practice. The course examines the philosophy, purpose, history, organization, function, tools, and activities of public health practice. Case studies and a variety of practice related exercises serve as a basis for student participation and interaction. The course identifies problems and issues currently facing public health. This course aims at enhancing, facilitating and promoting the use of technologies for obtaining and sharing information.

Credits: 3

Semester Offered: F/S/SU

Prerequisites: ENG 091 with a grade of "C" or higher, ENG 096 with a grade of "C" or higher; or appropriate placement score