QUINSIGAMOND
Community College

www.QCC.edu

2011|2012 Catalog

Welcome

A message from the President

Dear Student,

Welcome to Quinsigamond Community College, and thank you for taking interest in QCC for your educational pursuits. I am proud to say that about three decades ago, I was a community college student myself. The experience was life-changing for me, and I am certain that our committed faculty and staff will encourage you and help provide an equally unique and wonderful opportunity.

Here, at one of the fastest-growing community colleges in the nation, you will be challenged to become the best you can be through quality instruction, tutoring, counseling and advising. Whatever your target may be – certificate, degree, transfer or enrichment – QCC will do all that it can to help you achieve your goals.

Use this QCC catalog as a map to help guide you through our administration, policies, and academic program options. The opportunities for an exciting future are ahead!

Sincerely,
Dr. Gail E. Carberry
President

QUINSIGAMOND
Community College

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Founded in 1885

NEW ENGLAND ASSOCIATION OF SCHOOLS AND COLLEGES ACCREDITED MEMBER

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

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

Commission on Institutions of Higher Education
New England Association of Schools and Colleges
209 Burlington Road
Bedford, MA 01730-1433
(781) 271-0022
E-Mail: cihe@neasc.org

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

These include:

- The Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association
- The Accreditation Review Council On Education in Surgical Technology and Surgical Assisting
- The Commission on Dental Accreditation of the American Dental Association
- The Commission on the Accreditation of Allied Health Education Programs
- The Joint Review Committee for Respiratory Therapy Education
- 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
- The National League for Nursing Accrediting Commission

EQUAL OPPORTUNITY/AFFIRMATIVE ACTION POLICY

Quinsigamond Community College is an Equal Opportunity/Affirmative Action Institution and does not discriminate on the basis of race, color, national origin, gender, age, veteran status, sexual orientation, disability, or marital status in its educational programs, or in admission to, access to, treatment in, or employment in its programs or activities as required by Title VI, Civil Rights Act of 1964: Title IX, Education Amendments of 1972, Section 504, Rehabilitation Act of 1973 and regulations promulgated thereunder, 34 C.F.R. Part 100 (Title VI) Part 106 (Title IX) and Part 104 (Section 504); and the 1991 Americans with Disabilities Act. All inquiries concerning application of the above should be directed to the College's Affirmative Action Officer, Room 223A, 508.854.2777, who is also the Title IX and Section 504 and ADA Coordinator.

College Calendar

FALL TERM, 2011

Labor Day Holiday	September 5	(Monday – No classes)
Classes Begin	September 6	(Tuesday)
All College Day	October 4	(Tuesday – No classes)
Columbus Day Holiday	October 10	(Monday – No classes)
Veterans' Day Holiday	November 11	(Thursday – No classes)
Thanksgiving Recess (No classes)	November 24 – 27	(Thursday – Sunday)
Last Day of Classes/Exams	December 20	(Tuesday)

INTERSESSION TERM, 2012

New Year's Holiday	January 1	(Sunday – No classes)
Classes Begin	January 3	(Tuesday)
Last Day of Classes/Exams	January 13	(Friday)

SPRING TERM, 2012

Martin Luther King, Jr. Holiday	January 16	(Monday –No classes)
Classes Begin	January 17	(Tuesday)
All College Day	February 7	(Tuesday – No classes)
Presidents' Day Holiday	February 20	(Monday – No classes)
Evacuation Day Holiday	March 16	(Friday – Skeleton Day)
Evacuation Day Holiday	March 17	(Saturday - No Classes)
Spring Recess (No classes)	March 11 – 17	(Sunday – Saturday)
Easter Sunday	April 8	(Sunday – No classes)
Patriots Day	April 16	(Monday –No classes)
Last Day of Classes/Exams	May 8	(Tuesday)
Commencement	May 17	(Thursday at 4:00 p.m.)

College Business Hours: 8:00 a.m. to 5:00 p.m. for
Admissions, Registration, Advising, Financial Aid, and Payment Center

QUINSIGAMOND Community College

Quinsigamond Community College, one of twenty-seven colleges and universities in the Commonwealth of Massachusetts' system of public higher education, is committed to providing opportunities to meet the diverse educational needs of adult citizens in the Commonwealth. These opportunities are offered in the belief that an open, stimulating, and supporting environment is essential to individual development. Quinsigamond strives to achieve such an environment by developing programs, services, and policies for the College that seek to reduce social, psychological, geographic, and financial barriers to learning.

As a two-year Associate Degree granting public college, governed by a local Board of Trustees in accordance with the policies established by the Massachusetts Board of Higher Education, Quinsigamond Community College provides unique opportunities specifically created to enhance the economic and social well-being of the Greater Worcester/Central Massachusetts region. The trustees, faculty, and staff are cognizant of the long-term educational needs of this large urban area and its diverse populations.

Quinsigamond Community College endeavors to meet the region's educational needs through a comprehensive selection of transfer, career, and special needs courses and programs. Students may select from the various associate degree programs leading to transfer to state colleges and universities or to most private institutions of higher education, especially the members of the Colleges of the Worcester Consortium. Students seeking immediate employment after two years or less may elect associate degree or certificate programs related directly to the workforce needs of regional business, industry, and social agencies. The special needs of non-traditional students are reflected in the many programs and individualized services available to all students throughout the year.

ABOUT QUINSIGAMOND

Since 1963, Quinsigamond Community College has provided opportunities for a first-rate education and personal growth to thousands of area men and women. Some students choose to prepare for immediate entry into a career field. Some choose to transfer to bachelor's level programs at four-year colleges and universities, and some choose opportunities for personal growth and cultural enrichment.

A true test of any college is how well its students fare, not only in the classroom, but long after they have graduated. At Quinsigamond, we are proud of the success of our graduates: in beginning careers in their chosen fields, in continuing on to bachelor's and graduate level, and in becoming involved in the affairs of their communities.

Quinsigamond graduates can be found throughout Central Massachusetts in responsible positions in business and industry, in health and human services, in engineering and high technology. Quinsigamond takes a personal interest in its students, helping them identify and achieve their individual goals and making a difference in their lives. Quinsigamond responds to individual student needs. We provide a broad range of programs, quality instruction, and support services.

WE RESPOND TO INDIVIDUAL AND COMMUNITY NEEDS

Quinsigamond Community College was established in 1963 to provide access to higher education to residents of Central Massachusetts. Since then, our enrollment has grown from under three hundred to over twelve thousand full-time and part-time day and evening students. Over seventy-eight associate degree and certificate study options reflect the needs of the communities we serve. Our flexible admissions policy, low cost, and extensive financial aid program have made a college education possible for thousands of men and women. The educational experience at Quinsigamond is first-rate. Our faculty teach and guide.

Quinsigamond has been making a difference in the lives of people for over four decades. It can make an important difference in your life.

STATEMENT ON CULTURAL DIVERSITY AND INCLUSION

Quinsigamond Community College affirms its strong support and deep commitment to the continued development and maintenance of an academic community in which the individual dignity and potential of each of its members is given full respect, recognition, and encouragement. Our goal is to provide a college community in which all may study, work securely and productively in an atmosphere characterized by civility and openness to the pursuit of academic excellence in the finest tradition of academia.

Quinsigamond Community College is opposed to acts of harassment, intimidation, or invasion of privacy which interfere with the rights of an individual or group to participate in the activities of the academic community, and these acts shall be considered to be in violation of this policy and may be dealt with appropriately under the applicable College codes and as regulated by statute.

ACCREDITATIONS

Quinsigamond Community College is accredited by the New England Association of Schools and Colleges (NEASC), which accredits schools and colleges in the six New England states. Membership in the Association indicates that an institution has been carefully evaluated and found to meet standards agreed upon by qualified educators. Individual programs of study are also fully accredited by various agencies. These include the following: The Commission on Dental Accreditation of The American Dental Association; The Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association (AOTA); The National League for Nursing Accrediting Commission; The Massachusetts Board of Registration in Nursing; The Joint Review Committee on Education in Radiologic Technology; The Joint Review Committee for Respiratory Therapy Education, The Commission on the Accreditation of Allied Health Education Programs and the National Association for the Education of Young Children.

WE ARE EASY TO FIND

Quinsigamond is only a short drive from most locations in central Massachusetts. Our Main Campus is located on West Boylston Street in north Worcester. We are a short distance from both Rt. 290 and Rt. 190. Our Main Campus is easily accessed via public transportation, the West Boylston Street or Burncoat Street bus routes will bring students to our campus.

The college also offers courses at City Square in the center of downtown Worcester located at 100 Front St. In addition, courses are offered in Southbridge, MA at our brand new location at 5 Optical Drive. QCC's Automotive Technology Program is located in Upton, MA at the Blackstone Valley Regional Technical High School and the College's Hotel and Restaurant Management program is located at the Worcester Senior Center, 128 Providence Street, Worcester.

OUR STUDENT BODY IS DIVERSE

Quinsigamond Community College gives personal attention to individual student needs. Our student body is as diverse as the communities we serve. Some students attend right out of high school; some men and women come to Quinsigamond after several years in the workforce. Some of our students are senior citizens. We have full-time students and part-time students, those preparing for immediate entry into a career, those planning to transfer to bachelor's degree programs, and some who just want to improve their skills to qualify for a promotion.

Many of our students choose to attend to begin a new chapter in their lives. Our students come from almost every city or town in Central Massachusetts — Milford to the Brookfields and Dudley to Princeton. They all have one thing in common — the desire to attain a quality education and a chance to succeed.

Many of our students have families. Many work while attending school. We are sensitive to the needs of the individual students. We provide flexible scheduling, options for full-time or part-time study, on-campus child care, and day time, evening, online and weekend courses.

WHAT MAKES US DIFFERENT

Our Faculty

Quinsigamond's faculty is its most important asset. Our faculty hold advanced degrees in their respective fields of study. Many have published books and served as consultants. They help students succeed whatever their goal. At Quinsigamond, a strong bond is established between faculty and students, witnessed by the fact graduates often return to the campus to visit their former professors.

Our Staff

From the moment a student contacts the College, he/she will know that our staff cares. There are friendly, helpful people throughout the College who want to help students succeed. They will answer questions, guide students through various processes, and take a personal interest in their needs.

FAMILY EDUCATION RIGHTS AND PRIVACY ACT (FERPA)

Quinsigamond Community College abides by the Federal Family Educational Rights and Privacy Act of 1974, Chapter 766 of the General Laws of Massachusetts. No student's academic or personal records will be released without the student's written consent, except to those specifically exempted in the legislation.

Quinsigamond Community College reserves the right to disclose "directory information" in accordance with regulations published by the Department of Health, Education and Welfare for enforcing the Family Rights and Privacy Act of 1974. For the purpose of this institution, "directory information" includes the following information: the student's name, student's address, major field of study, dates of attendance, full-time/part-time status, degree and awards received, and participation in officially recognized activities and sports.

ELECTRONIC COMMUNICATION POLICY

The college uses Qmail as an official means of communication with students. All students are expected to read their college email regularly and respond appropriately. If students choose to forward their Qmail to another email provider, they are still responsible for receiving all college communications. The college also has an Emergency Alert text messaging system. Students can choose to sign up for this service through The Q, the college's student and faculty portal.

Admissions

ADMISSIONS

Quinsigamond Community College believes that everyone should have an opportunity to further his/her education. Whether a student strives to attain an Associate Degree, Certificate or selected courses for personal and professional growth, our Admissions Staff will gladly help him/her through every step of the process.

Quinsigamond Community College has established minimum academic requirements for admission to most programs which are designed to help assure academic success. Information about minimum requirements can be found in the Programs of Study section of this catalog.

Applicants who do not meet the minimum academic criteria for admission may still enroll at Quinsigamond. They can take courses to meet the minimum requirements as a non-degree student, or as a student enrolled in the General Studies Program.

HOW TO APPLY

1. You may apply online or download an Admissions application at www.QCC.edu. Applications are also available in the Admissions Office at Quinsigamond Community College or High School Guidance Departments. You may also call the Admissions Office at 508.854.4262 to request an application.

2. Submit your online application. Mail the Certification Form and application fee. Return your paper application and application fee to the Admissions Office located in Room 201, of the Harrington Learning Center or via mail at Quinsigamond Community College, 670 West Boylston Street, Worcester, MA 01606-2092. The fee is $20.00 for in-state students or $50.00 for out-of-state students. This fee is non-refundable and may be waived if it causes unusual financial hardship. To qualify for the In-State Resident tuition rate, applicants must certify continuous residence in Massachusetts during the six months preceding the application and be a permanent resident of the U.S. Applicants can contact the Admissions Office for details.

3. Quinsigamond Community College requires an official high school transcript, diploma or General Equivalency Diploma (G.E.D.). If an applicant cannot obtain proof of a high school diploma, or the equivalency, he/she can submit a written request of an exception to this requirement by contacting the Director of Admissions. Applicants should ask their high school to forward a transcript of their grades directly to the Admissions Office (including the first marking period of the senior year).

4. Applicants who have never obtained a high school diploma or a G.E.D. may qualify for admission to the College and possibly be eligible for Financial Aid under a U.S. Department of Education Title IV Regulation. This regulation uses a process called "Ability to Benefit", and it allows for applicants to take certain approved tests in English and Mathematics, and if they score high enough, the College may waive the requirement for a high school diploma for admission to most programs. Applicants may call the Admissions Office at 508.854.4262 for detailed information about this process.

ADMISSION TO HEALTH SCIENCE PROGRAMS

Students who meet the established Admissions requirements for the Health Science Programs (Dental Assisting, Dental Hygiene, Medical Assisting, Nurse Education, Occupational Therapy, Paramedic Technology, Practical Nursing, Radiologic Technology, Respiratory Therapy, and Surgical Technology) will be accepted on a rolling basis until the September class is full. Nurse Education also accepts a class in January. Students who cannot be accepted due to space limitations will be offered acceptance in subsequent semesters. Qualified students will be given the option of being placed on a waiting list until it is determined that there is sufficient space to accept qualified applicants.

Applicants who do not meet the Admissions requirements will be asked to meet with a Careers Advisor to develop a Student Academic Plan. This plan will prepare students to meet the Admissions requirements for the Health Science Program of their choice.

JANUARY ADMISSIONS (Spring Semester)

Applications for admission to the College for the Spring Semester are accepted on a space-available basis. Some programs are not offered in the Spring Semester, and Mathematics course offerings vary from year to year. Students should contact the Admissions Office to find out if the program they are interested in will be offered for the January start-date.

UNDECLARED STUDENTS

Prospective students who wish to enroll in individual courses and do not wish to pursue a degree or certificate can enroll at Quinsigamond Community College as Undeclared Students. All course prerequisites apply to Undeclared Students in the same manner as degree-seeking students. Credits earned in the Undeclared Student status may be applied to a degree or certificate curriculum. Undeclared students are not eligible for financial aid.

TRANSFER STUDENTS

Applicants who have previously attended college are requested to submit an official college transcript to Quinsigamond Community College. Transfer Student applicants are still required to submit an official high school transcript, diploma or G.E.D. Certificate — even if they currently hold an undergraduate or graduate degree. To satisfy the college residency requirement, a minimum of 15 credits must be completed at Quinsigamond Community College to receive a degree or certificate.

An official transcript, issued from a regionally accredited post secondary institution is required to receive transfer credit. Credit is awarded for courses completed with a grade of "C", or better, provided these courses are applicable to the student's Quinsigamond major. Applicants may also transfer "D" grades if their quality point average (QPA) is 2.0, or higher, at the institution from which they are transferring. However, "D" grades are only accepted in lower sequence courses and only if they have completed the upper sequence of the same course with a grade of "C", or better.

CAMPUS TOURS

Both individual and group campus tours are available. To schedule a tour, please visit www.QCC.edu or call the Admissions Office at 508.854.4262.

INTERVIEWS AND CAMPUS TOURS

Interviews may be required for particular programs.

STATE IMMUNIZATION REQUIREMENTS

Massachusetts State Law requires that all full-time students and all students enrolled in Health Career Programs provide proof of immunization to measles, mumps, rubella, tetanus-diphtheria and hepatitis B.

Students in health-related fields and some other programs should expect to receive information on additional health requirements from their academic department. Immunization documentation is requested during the application process.

PLACEMENT TESTING

All new and currently enrolled students are required to take the Accuplacer Placement Test before registering for English, Math and courses requiring a prerequisite of English or Math.

The Accuplacer Placement Test is a computerized test that helps determine the appropriate level at which students should begin their math and English courses. Most of the test is not timed and the majority of the questions are multiple-choice. Students can choose to take the entire test (English and Math) during one testing period, or take the English and math test at different times. The entire test takes approximately two and a half hours. An Academic Advisor will use the results to help students select the appropriate courses during registration.

Students who do not attain college-level placement in both English and Mathematics will be recommended into an appropriate level developmental course where students may acquire learning experiences geared to preparing them for college-level course work. These courses are especially helpful to students who have been away from the classroom for several years, or who did not receive exposure to college-level preparation during their secondary school years.

It is important to prepare for taking the Accuplacer Placement test. A study guide with practice questions can be accessed online at www.aims.edu/student/assessment/studyguides/index.htm

All students who wish to take the Placement Test may log into www.QCC.edu/advising.html and set up an appointment online or call 508. 854.4308. Students should remember to bring photo identification with them to the test.

It is not necessary to take the Accuplacer Placement Test if a student has transcripts showing that they have taken college level English and Math at another accredited college. Students should bring their transcripts to their advising appointment.

Students for whom English is a Second Language (ESL) may also take a computerized assessment test in the Academic Advising Center located in Room 61A. The CELSA test requires students to complete a story or conversation by choosing the correct answer. It is a timed test of forty-five minutes.

NEW ENGLAND REGIONAL STUDENT PROGRAM

Quinsigamond Community College participates in the New England Regional Student Program (RSP), which provides tuition savings every year to thousands of New England residents. Students from any of the six New England states can enroll in certain academic programs, not offered at institutions in their home state, at the Massachusetts in-state tuition rate plus 50%. Contact the Admissions Office at 508.854.4262 for specific details. Information is also available at www.nebhe.org.

INTERNATIONAL STUDENTS

International Students must submit the admissions application at least 60 days before the beginning of the semester. Only students who have a secondary school diploma or who have passed an equivalency test, and can speak, read, write and understand English well enough to take a full-time program will be considered for admission. If a student's native language is not English, he/she will be asked to demonstrate their ability to understand English. International Students must demonstrate adequate financial support for the time they will be attending Quinsigamond Community College. Financial support can be verified by providing a certificate of finances or a certification of sponsorship. A sponsor must be a United States citizen or a permanent resident. International Students who have student visas are required to enroll in a minimum of 12 credits during each semester. Information about International Student regulations, admission, and fees is available from the Admissions Office at 508.854.4262.

TECH PREP PATHWAYS/ARTICULATION AGREEMENTS

Quinsigamond Community College has established agreements with local Comprehensive and Vocational/Technical High Schools for aiding students in making the transition to higher education. Some of these agreements come under the Regional "Tech Prep" or "2 + 2" Programs. These agreements state the conditions and criteria that must be met by graduating high school students to receive advanced placement and college credit. However, certain restrictions apply. Students should consult their guidance counselor, or call the Tech Prep Pathways Coordinator at 508.854.2755.

TWELFTH YEAR PROGRAM

Quinsigamond Community College offers the Twelfth Year Program to local high school districts that wish to allow their current students the opportunity to complete high school graduation requirements through concurrent enrollment at QCC. Participation in this program is limited to high school seniors (and in some cases, juniors) who have been properly prepared for appropriate college-level work. High school guidance counselors are expected to lead in the process of identifying potential applicants and assisting students with the application process. In addition, coursework to be taken at QCC is determined collaboratively by the students and appropriate high school guidance personnel. It is the responsibility of the student and parent to consult with the Guidance Office and Principal to ensure that courses selected will meet the requirements for high school graduation.

Criteria for Acceptance

To be eligible for acceptance into the Twelfth Year Program, a student must meet the following criteria:

- Be currently enrolled in high school
- Have completed high school English courses with grades of "B" or better
- Have an overall "B" average
- Demonstrate satisfactory disciplinary history in his/her student profile
- Place into College-level English (ENG 101) and Beginning Algebra (MAT 095) on the QCC Computerized Placement Test
- Complete the QCC Twelfth Year application process within the established timelines

For more information, contact the Admissions Office at 508.854.4262.

READMISSION TO THE COLLEGE

Students who have previously attended Quinsigamond Community College and have not attended the College for four consecutive semesters, either due to withdrawal or academic failure, must apply to be readmitted. Students must submit a new application.

Upon academic failure, or withdrawing from a health or high demand program, students are required to meet with their Program Coordinator to establish guidelines for readmission. Students will be considered only once for readmission to all health programs. Specific steps for readmission can be obtained in the Admissions Office or from the appropriate academic department.

ADMISSION REQUIREMENTS

The chart below lists the Academic Admissions Requirements for the QCC programs other than Health. In order to be eligible for admission, the student must meet the course and grade requirements in either the High School (H.S.) columns or the QCC Equivalency columns, or have completed courses at an accredited college.

PROGRAM	H.S. Alg.	QCC Alg. 1 Equivalent	H.S. Alg.	QCC Alg 2 Equivalent	H.S. Math	QCC Math Equivalent	H.S. Eng.	QCC Eng. Equivalent	Additional Requirements
Applied Arts (Computer Graphic Design)	C	* MAT 095 C					3 yrs C	** ENG 091 C	
Automotive Technology	C	* MAT 095 C					3 yrs C	** ENG 091 C	10
Ford Maintenance & Light Repair Program Certificate									10
Basic Engineering									1
Biotechnology Certificate	C	* MAT 095 C							
Business Administration Career									2
Business Administration Transfer	C	* MAT 095 C					3 yrs C	** ENG 091 C	
Business Administration Transfer - Fast Track	C	* MAT 095 C					3 yrs C	** ENG 091 C	3
Computer Information Systems	C	* MAT 095 C					3 yrs C	** ENG 091 C	
Computer Science									8
Computer Systems Engineering Technology									2
Criminal Justice							3 yrs C	** ENG 091 C	
Early Childhood Education									4
Electromechanical Technology									2
Electronics Technology									2
Energy Utility Technology									7
General Studies									5
General Studies – Energy Utility Option									6
Hotel/Restaurant Management	C	* MAT 095 C					3 yrs C	** ENG 091 C	
Human Services									9
Liberal Arts	C	* MAT 095 C					3 yrs C	** ENG 091 C	
Manufacturing Technology									2
Telecommunications Technology									2

MINIMUM ADMISSION REQUIREMENTS/COURSE EQUIVALENTS:
Any applicant who does not meet the minimum requirements or their course equivalents listed above, should contact the Admissions Office at 508.854.4262, to set up an interview with an Admissions Counselor. Upon review of one's academic background and a consultation with the appropriate academic department, we will inform the student if his or her background is equivalent to the requirements listed above. All required courses must be completed with a minimum grade of "C." If one has any questions please call the Admissions Office at 508.854.4262.

* Or place into MAT 099 or higher on the QCC Math Assessment Test
** Or place into ENG 100 or higher on the QCC English Assessment Test
1 No specific admissions criteria for this program but students should note that most required courses carry minimum prerequisites of ENG 100 and MAT 124.
2 No specific admissions criteria for this program but students should note that many required courses have ENG and/or MAT prerequisites.
3 Two years full-time work experience; letter of intent; interview with Fast Track Mentor; attendance at Fast Track orientation workshop.
4 Students must assess into ENG 100 or higher before enrolling in ECE courses.
5 No specific admissions criteria for this program.
6 Completion of Energy Utility Technology Certificate
7 Applicants must assess into MAT 099 or higher and ENG 100 or higher.
8 There are no specific admissions criteria for this program but students should note that most required courses carry minimum prerequisites of CIS 111, ENG 100 and MAT 124.
9 Applicants must assess into ENG 100 or higher.
10 Must have valid driver's license
PLEASE NOTE: A High School Diploma or G.E.D. is required for admission to all programs.

ADMISSION REQUIREMENTS - HEALTH PROGRAMS

The chart below lists the Academic Admission Requirements for the Health Care Programs. In order to be eligible for admission, you must meet the course and grade requirements in either the High School (H.S.) columns or the QCC Equivalency/Alternative columns, or have completed courses at an accredited college.

	QCC Alg. 1 Equivalent	QCC Alg. 2 Equivalent	H.S. Bio	QCC Bio. Alternative	H.S. Chem.	QCC Chem. Equivalent	QCC Eng.	Standardized Test	GPA	Additional Requirements
Program										
Allied Dental Services										Applicants must first successfully complete ADA Certificate program at QCC or another institution accredited by the CODA. Dental Office Mgmt and Sales/Mktg. applications must hold current DANB CDA status Attendance at a Health Information Session
Health Sciences	£MAT 095 C		C	^BIO C	C	CHM 090 C	ENG 100 C			
Dent. Office Mgmt	£MAT 095 C						ENG 100 C			
Dent. Sales/Mktg.	£MAT 095 C						ENG 100 C			
Dental Assisting Cert.	£MAT 095 C		C	<BIO C	C	CHM 090 C	ENG 100 C	**HOBET V Composite Score 45%**		
Dental Hygiene		#MAT 099 B	B	^BIO B	B	CHM 090 B	ENG 100 B	**HOBET V Composite Score 52%**	▪3.0	4 hr dental office observation: DA grads see catalogue for waiving the "B" requirement Attendance at a Health Information Session
Complementary Health	£MAT 095 C		C	^BIO C			ENG 100 C			Certification or licensure with a minimum of 650 hours of training in an recognized area of naturalistic, holistic or conventional healthcare
Paramedic Technology			C	^BIO C			ENG 100 C			EMT-Basic certification and 1 year experience verified by employer
EMT Paramedic Cert.										EMT-Basic certification and 1 year experience verified by employer
EMT Intermediate Cert.										EMT-Basic certification and 1 year experience verified by employer
Medical Assisting Cert.	£MAT 095 C						ENG 100 C			Attendance at a Health Information Session
Medical Support Specialist	£MAT 095 C						ENG 100 C			Attendance at a Health Information Session

ADMISSION REQUIREMENTS - HEALTH PROGRAMS (cont'd)

Program	QCC Alg. 1 Equivalent	QCC Alg. 2 Equivalent	H.S. Bio	QCC Bio. Alternative	H.S. Chem.	QCC Chem. Equivalent	QCC Eng.	Standardized Test	GPA	Additional Requirements
Nurse Education		#MAT 099 B	B	^BIO B			ENG 100 B	**TEAS V 53%/English 53%/Reading 54%/Math 40%/Science**		Evening Nurse Education additional requirements include BS/BA or MS/MA Attendance at a Health Information Session
Advanced Placement LPN		#MAT 099 B	B	^BIO B			ENG 100 B	**TEAS V 53%/English 53%/Reading 54%/Math 40%/Science**		Graduate of an accredited LPN Program, current LPN license in the state of MA, BIO 111 & BIO 112 with C grade or better, ENG 101 & PSY 101 Attendance at a Health Information Session
Advanced Placement Paramedic		#MAT 099 B	B	^BIO B			ENG 100 B	**TEAS V 53%/English 53%/Reading 54%/Math 40%/Science**		Current MA Paramedic Certification, BIO 111 & BIO 112 with C Grade or better, ENG 101 & PSY 101 Attendance at a Health Information Session
Occupational Therapy Assist		#MAT 099 B	B	^BIO B			ENG 100 B	**HOBET V Composite Score 52%**	▪3.0	Attendance at a Health Information Session
Practical Nursing Cert.	£MAT 095 B						ENG 100 B	**TEAS V Composite Score 45%**		Attendance at a Health Information Session
Radiologic Technology		#MAT 099 B	B	^BIO B			ENG 100 B	**HOBET V Composite Score 52%**	▪3.0	Review of program web site, Career video, 4-hr clinical observation and Interview with program faculty Attendance at a Health Information Session
Respiratory Care		#MAT 099 B	B	^BIO B	B	CHM 090 B	ENG 100 B	**HOBET V Composite Score 52%**	▪3.0	Attendance at one Professional Lecture Course, Career Video Review, 4-hr clinical observation Attendance at a Health Information Session

ADMISSION REQUIREMENTS - HEALTH PROGRAMS (cont'd)

	QCC Alg. 1 Equivalent	QCC Alg. 2 Equivalent	H.S. Bio	QCC Bio. Alternative	H.S. Chem.	QCC Chem. Equivalent	QCC Eng.	Standardized Test	GPA	Additional Requirements
Program										
Surgical Technology Cert.	£MAT 095 C						ENG 100 C	**HOBET V Composite Score 45%**		Attendance at a Health Information Session

Notes: ~Mathematics and science courses must be taken within the past 5 years of the date of application. Courses used for this purpose, for which a grade was recorded ("A" through "F") may be repeated only once. Students who have completed Mathematics and English courses at the high school level must take QCC's Mathematics and/or English Assessment Test to qualify for the program. An applicant who tests into a mathematics and/or English course at a higher level than that established as a minimum admission requirement shall be deemed to have satisfied the minimum admission requirement for that subject matter. An applicant who completes an English course above English 100, with a transferable grade, shall be deemed to have satisfied the minimum admission requirement for that subject matter. An Applicant who completes a college level chemistry or college level math with a transferable grade shall be deemed to have satisfied the minimum admission requirement for that subject matter.

Math skills for Allied Health Careers MAT 098 will also meet the prerequisite for the Health programs that require MAT 099 however MAT 098 does not meet the prerequisite for a college level math course

* There is no time on the Biology course used to meet the prerequisite for Paramedic Technology degree or certificate. An applicant who holds an EMT-I certificate meets the Biology prerequisite for both Paramedic programs.

▪ High School GPA or College GPA (minimum 10 college credits) GED Battery Score of 550

^ BIO 101 is recommended because BIO 101 is a prerequisite for A&P I

** DA grads see catalogue for waiving of DH admission requirements of "B" or higher in Eng, Math, Bio and Chem

***TEAS and HOBET tests can only be taken a maximum of twice at any location to meet requirements. **TEAS and HOBET cannot be taken twice individually. It is a combination of two times for both tests.**

<BIO 140 is recommended for Dental Assisting

£If the student passes the math final exam or receives a B or better in the course, the math requirement is met

Technical Performance Standards

In this section, you can review the working conditions and physical demands for specific occupations related to selected QCC programs of study. This information is provided to assist you in making college and career decisions. Please note that once you are admitted to the program you select, you will be required to satisfy the technical standards in order to successfully complete the program.

Please follow the instructions below.

- Follow the link(s) below or visit the Massachusetts Career Information System (MassCIS) website at: http://masscis.intocareers.org/loginmain.aspx?SiteType=3
- You can access MassCIS by matching your local town (or Post Office) with the correct ZIP Code. For example, select "Worcester" from the drop down list titled "City or Town" and then, type "01606" in the Zip Code box.
- Once you are logged in, the link(s) below will bring you to a specific occupational page related to a QCC Program of Study, or you can use the "Global Search" function in the upper right corner to search for an occupation by title.
- Once you are on a specific "Occupations" page, review the links on the left.
- To view technical standards information, click on "Working Conditions" and "Physical Demands".
- You may also benefit from reviewing the sections on "Skills & Abilities" and "Knowledge".

QCC Degree Program	Massachusetts Career Information System (MassCIS) Website
Applied Arts	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100093&TopicNum=0 Occupation: Graphic Designers
Automotive Technology	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100251&TopicNum=0 Occupation: Automobile Mechanic
Biotechnology	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100443&TopicNum=0 Occupation: Science Technicians
Computer Information Systems – Application Specialist Option	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100046&TopicNum=0 Occupation: Computer Support Specialists
Computer Information Systems – Database Option	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100057&TopicNum=0 Occupation: Database Administrators

QCC Degree Program	Massachusetts Career Information System (MassCIS) Website
Computer Information Systems – Programming Option	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100046&TopicNum=0 Occupation: Computer Support Specialists
Computer Information Systems – Web Development Option	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100522&TopicNum=0 Occupation: Web Developers
Computer Science Transfer	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100045&TopicNum=0 Occupation: Computer Programmers
Computer Systems Engineering Technology	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100495&TopicNum=0 Occupation: Computer Systems Administrators
Computer Systems Engineering Technology – Computer Forensics Option	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100280&TopicNum=0 Occupation: Computer Security Specialists
Dental Assisting	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100058&TopicNum=5
Dental Hygiene	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100059&TopicNum=0
Early Childhood Education	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100270&TopicNum=0 Occupation: Childcare Workers
Electronics Technology; Electromechanical Technology	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100312&TopicNum=0 Occupation: Engineering Technicians
Elementary Education	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100309&TopicNum=0 Occupation: Elementary School Teachers
Energy Utility Technology	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100361&TopicNum=0 Occupation: Line Installers & Repairers
Fire Science	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100318&TopicNum=0 Occupation: Fire Fighters

QCC Degree Program	Massachusetts Career Information System (MassCIS) Website
Heating, Ventilation, Air Conditioning	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100340&TopicNum=0 Occupation: Heating & Cooling System Mechanics
Hotel/Restaurant Management – Foodservice Management Option	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100183&TopicNum=0 Occupation: Restaurant Managers For additional information on Hospitality Management Programs of Study: http://masscis.intocareers.org/info2.aspx?FileID=Prog&FileNum=280300&TopicNum=0
Hotel & Restaurant Management-Hospitality Management Option	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100102&TopicNum=0 Occupation: Hotel & Motel Managers For additional information on Hospitality Management Programs of Study: http://masscis.intocareers.org/info2.aspx?FileID=Prog&FileNum=280300&TopicNum=0
Manufacturing Technology	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100312&TopicNum=0 Occupation: Engineering Technicians For additional information on Manufacturing Engineering Technologists: http://online.onetcenter.org/link/summary/17-3029.06
Medical Assisting	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100125&TopicNum=0
Nurse Education	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100179&TopicNum=0
Occupational Therapy Assisting	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100392&TopicNum=0
EMT-Paramedic	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100070&TopicNum=0
Practical Nursing	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100117&TopicNum=0
Polysomography	Refer to Respiratory Therapist
Physical Therapy Assistant	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100410&TopicNum=0
Radiologic Technology	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100129&TopicNum=0

QCC Degree Program	Massachusetts Career Information System (MassCIS) Website
Respiratory Care	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100182&TopicNum=0
Surgical Technology	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100203&TopicNum=0
Telecommunications Technology	http://masscis.intocareers.org/info2.aspx?FileID=Occ&FileNum=100173&TopicNum=0 Occupation: Communications Equipment Mechanics

Student Services

Student Services is a network of resources, programs and services designed to provide students at Quinsigamond Community College with the necessary support for the teaching and learning process. The following are descriptions of the services available:

CAREER AND ACADEMIC PLANNING

- Courses in Career Counseling
- Advising (Advising Center, Health Careers Advising & Faculty Advisors)
- CAPS Seminars/Workshops
- Career Placement Services
- Cooperative Education
- Experience Based Education (EBE) Services
- Transfer Services
- Training and Education Center
- Adult Learning Center
- CAPS Checklist (*C*areer, *A*cademic and *P*ersonal *S*uccess)

ACADEMIC SUPPORT AND RESOURCES

- Alden Library and Harrington Learning Center
- Learning & Tutoring Centers
  - Math Center
  - Communication Skills Center
  - Individual Learning Center
- Harrington Computing Lab

COUNSELING AND STUDENT SUPPORT

- Counseling Services
- Disabilities Services
- Veterans Services
- Campus Ministry

STUDENT ACTIVITIES AND STUDENT LIFE

- Fuller Student Center
- Athletic Center

IMPORTANT PLACES AND SERVICES

- Financial Aid Office
- Student Payment Center
- Bookstore
- Cafeteria
- The Children's Center
- Public Safety

Career and Academic Planning Services

QCC is committed to helping students begin their career and academic planning *early on* by:

- Identifying career field(s) that are best suited to the student's interests, abilities, and life goals;
- Deciding on a college program of study;
- Choosing the right courses;
- Taking the next steps towards obtaining meaningful employment, transferring to another college, or fulfilling a personal or professional outcome; and
- Building an individualized web-based Career, Academic and Personal Success Plan (CAPS Plan).

SPECIFIC COURSES AND SERVICES FOR CAREER AND ACADEMIC PLANNING

Courses in Career Counseling

Students are strongly encouraged to take one of the two courses offered at QCC to assist with career and academic planning: ORT 110, *Strategies for College and Career,* PSY 115, *Self-Assessment and Career Planning* (See course description section of catalog). All students enrolled in the General Studies Program are required to take ORT 110 or PSY 115 prior to attaining 20 credits. Students in the above courses may complete an individualized web-based Career, Academic and Personal Success Plan (CAPS Plan) that is used to help the student develop and implement career and academic goals.

Advising Services: Faculty Advisor, Advising Center, and Health Careers Advising

Advisors assist students in developing and implementing their career and academic planning goals including registering for courses. Students are provided contact information for their Academic Advisor by letter shortly after the start of each semester and again right before the advising period begins. Students are assigned one of the following: a Faculty Advisor, Health Careers Advising Center, or the Advising Center, as their Advisor. Advisor Lists, including faculty office location, phone number, and office hours are located in the Advising Center (Room 61A) and the Registrar's Office (Room 152A).

Faculty Advisors

Students are encouraged to contact their Faculty Advisor during the semester to discuss topics and questions related to career and academic planning. It is recommended that students make appointments with their Advisor before course registration period begins for the next semester. Faculty Office Hours and contact information are posted outside the faculty office door. If a student's schedule conflicts with faculty office hours, the student can contact the faculty to arrange another meeting time.

Advising Center Room 61A 508.854.4308

Students who have the Advising Center listed as their Advisor are encouraged to contact the Center during the semester to discuss topics and questions related to career and academic planning. It is recommended that students make appointments with the Advising Center before the course registration period for the next semester begins. Students can make appointments by calling the number listed above or visiting www.QCC.edu/advising.html.

Health Careers Advising Room 61A 508.854.4308

Students who are interested in pursuing any of the college's Health Careers Programs of Study receive career and academic planning services from Health Careers Advising. Trained Health Careers Advisors are available to help students gain a better understanding of health programs and to prepare for entrance into specific health programs of study. It is recommended that students make appointments with the Health Careers Advising before the course registration period for the next semester begins. Students can make appointments by calling the number listed above or visiting www.QCC.edu/advising.html.

CAPS Workshops

Throughout the semester CAPS (Career, Academic, and Personal Success) workshops are offered for current QCC students and individuals who are considering enrolling at the college. Topics addressed include: understanding career assessment results, developing strategies and resources for career research, and linking assessment results and research to QCC Degree and Certificate Programs. Students may log on to the Advising website www.QCC.edu/advising.html for workshop times and locations.

Career Placement Services Room 272A 508.854.4439

Career Placement Services are available for students to conduct their own job search or to be assisted by staff members. Workshops are offered on job search techniques, resume writing, and interviewing. Resource materials available for use include books, videos, and computers for Internet searches, resume writing, and quiet tables for constructing your employment package. One-on-one assistance is available by appointment. Students seeking full-time, part-time, permanent, or Cooperative Education positions have access to a variety of open positions posted on QCC's exclusive electronic job board. Career placement services for students include events such as on-campus recruiting, career fairs, and on-campus company presentations.

Cooperative Education — Room 272A — 508.854.4439

Cooperative Education is the opportunity to earn academic credit while gaining valuable experience in the work place. This study option is for students who are already working in their field of study, or who obtain a position related to their field of study. Co-op students, with assistance from an instructor, develop working/learning goals and outcomes that can be assessed for credit toward their degree. Students seeking credit through this study option pay full registration and tuition fees.

Experience-Based Education (EBE) — Room 272A — 508.854.4439

Credit for Prior Learning

At Quinsigamond, students may be able to earn credit for knowledge attained through non-academic training, life or work experience. The "Academic Information" section of the catalog (page 43) contains more information or the above office may be contacted.

Transfer Services — Room 58A — 508.854.4404

Transferring "In" to QCC

Contact QCC Admissions Office — HLC, 2nd Floor — 508.854.4262
or the Registrar's Office — Room 152A — 508.854.4257

Applicants who have previously attended college are required to submit an official college transcript to Quinsigamond Community College. Transfer Students, are still required to submit an official high school transcript, or G.E.D. Certificate — even if they currently hold an undergraduate or graduate degree. To satisfy the residency requirement, a minimum of 15 credits must be completed at Quinsigamond Community College to receive a degree or certificate.

Transfer students from regionally accredited post secondary institutions can expect to receive transfer credit for courses completed with a grade of "C", or better, provided these courses are applicable to a Quinsigamond major. "D" grades may also transfer if the quality point average (QPA) is 2.0, or higher, at the institution from which the student is transferring. However, "D" grades are only accepted in lower sequence courses and only if the student has completed the upper sequence of the same course with a grade of "C", or better.

Transfer "Out" of QCC

Contact Transfer Office — Room 58A — 508.854.4404
Transfer Office website: http://www.qcc.mass.edu/transfer/

Start your Bachelor's Degree at QCC

Quinsigamond Community College is committed to helping students attain Bachelor's degrees by providing a variety of resources:

- Transfer Office website
- *Walk-In* Transfer Information Sessions
- Transfer Fairs and Campus Visits
- Classroom Presentations
- Monthly items in the student newspaper, *The Open Door*
- Transfer Office Resource Library, including internet-accessible computer
- Individual advising

Where do QCC students transfer?

Each semester and year, QCC students transfer all over the region and all over the country. Local favorites include Assumption College, Clark University, and Worcester State University, but we also send students to such far off destinations as Washington State University, The University of Tampa, and the University of Nevada-Las Vegas, among others.

Ways to transfer

Some students come to QCC to complete one course, or one semester, before continuing at a four-year college. Others stay through to graduation and take advantage of the benefit of an Associate's degree, including transfer agreements with a variety of Baccalaureate partner institutions. Regardless of how short or how long a student attends QCC, it's helpful to think of transfer in terms of pathways. Go to "Transfer Pathways" at the QCC Transfer Office website to learn more.

Transfer Agreements

QCC is pleased to offer our graduates a variety of transfer agreements to help them continue at different four-year institutions.

- Articulation agreements with private colleges and universities, as well as individual academic departments at state colleges and universities, for various Associate degree programs.
- MassTransfer program with Massachusetts State Universities and University of Massachusetts campuses, which guarantees student acceptance, transfer of credit, and discounted tuition in comparable programs.

More information about scholarships and financial aid is available at the "Financing College" page at the QCC Transfer Office website (www.qcc.mass.edu/transfer).

Articulation agreements

QCC has developed articulation agreements with four-year colleges to permit our graduates to transfer to a range of academic programs and to advance toward their four-year degrees more easily, quickly, and affordably. These agreements vary from school to school, and department to department. They may guarantee one or more of the following: acceptance (general or program specific), full transfer of QCC courses, Junior-level standing, and access to opportunities for transfer scholarships. Visit the "Articulations" page at the QCC Transfer Office website (www.qcc.mass.edu/transfer) for specific academic program included in agreements.

QCC has articulation agreements with the following private institutions:

American International College	Regis College
Anna Maria College	Rochester Institute of Technology
Assumption College	Suffolk University
Becker College	University of Mass-Dartmouth
Clark University	Nichols College
Emmanuel College	Vermont Technical College
Mass College of Pharmacy & Health Sciences	Worcester Polytechnic Institute

Articulation agreements with individual academic departments of State Universities and University campuses

Fitchburg State University
Framingham State University
Westfield State University (online Business Administration)
UMass-Boston
UMass-Lowell

MassTransfer

Mass*Transfer* provides QCC students with straightforward options toward the completion of associate and baccalaureate degrees at Massachusetts State Universities and University of Massachusetts campuses. Mass*Transfer* has two main components:

- Guarantee of admission, transfer of credit, and tuition reduction for students who graduate from approved* with associate degrees (each benefit based on the student's final grade point average) linked to baccalaureate programs;

- Guarantee of meeting baccalaureate general education requirements across institutions through the completion of a specified group of courses called the Mass*Transfer* Block (with the receiving institution able to add no more than six additional credits/two courses).

*Approved QCC programs include: Business Administration-Transfer, Computer Science-Transfer, Early Childhood Education-Transfer, General Studies, General Studies-Community Health, General Studies-Deaf Studies, General Studies-Elementary Education, general Studies-Health Care, Liberal Arts

MassTransfer involves the following State Universities and University campuses:

Bridgewater State University	Worcester State University
Fitchburg State University	UMass-Amherst
Framingham State University	UMass-Boston
Mass College of Liberal Arts	UMass-Dartmouth
Salem State University	UMass-Lowell
Westfield State University	

For details on the Mass*Transfer* policy, please visit the QCC Transfer Office website (www.qcc.mass.edu/transfer), and look under "*MassTransfer Information*."

The *MassTransfer* policy for any student in the Massachusetts public higher education system who completes the *MassTransfer* Block will apply beginning fall 2010, regardless of initial date of enrollment.

For students who matriculated at QCC prior to Fall 2009, the following Massachusetts public higher education transfer programs will apply:

- MassTransfer
- Joint Admissions
- Tuition Advantage Program

Students who fall under these earlier policies will be required to complete their associate degrees by August 2013 and must matriculate at a Massachusetts State University or University of Massachusetts campus by Fall 2014.

For details on these transfer programs, including the steps involved access them, please visit the QCC Transfer Office website, and look under "*Joint Admissions-CTC-TAP Information.*"

The Education Compact for Early Childhood Education and Elementary Education

This statewide plan was developed to increase teacher diversity in the workforce, broaden teaching opportunities for community college students, and prepare students for acceptance into teacher preparation programs at four-year colleges. At QCC, students enrolled in the Early Childhood Education-Transfer and General Studies- Elementary Education option are eligible to participate in the Education Compact.

To be guaranteed admission and granted transfer credit in teacher preparation programs, students must be enrolled in one of the eligible programs (as above), follow and complete that prescribed curriculum, graduate from QCC with minimum 2.75 GPA, and successfully pass the Communication & Literacy skills portion of MTEL exam prior to admission at state university.

Special Scholarships for QCC graduates

Scholarships are available to QCC graduates who transfer to four-year colleges and universities. Most scholarships require students to have GPAs of 3.0-3.5 or higher. To be eligible, a student must apply and be admitted to the four-year institution, graduate from QCC, and meet any additional scholarship application requirements as stated.

Massachusetts Public Higher Education system scholarships include:
UMass Amherst --Community College Academic Honors Scholarship
UMass Boston --Foster Furcolo Scholarship Program
UMass Dartmouth --Chancellor's Transfer Scholarship
UMass Lowell --Community College Transfer Scholarship, Phi Theta Kappa Scholarship
Fitchburg State University --Transfer Merit Scholarship
Worcester State University --Transfer Scholarship
Mass College of Liberal Arts –Academic Recognition Scholarship, Academic Merit Scholarship, Phi Theta Kappa Scholarship
Salem State University --Academic Transfer Scholarship, Phi Theta Kappa Scholarship

Local Private College and University scholarships include:
American International College –Joint Admissions Scholarships, Transfer Scholarships
Phi Theta Kappa Scholarships
Anna Maria College – QCC Partnership Grant
Assumption College --Desautels Scholars, Pesse Scholars
Boston University/Metropolitan College –Community Scholar Academic Scholarship
Clark University –Transfer Achievement Scholarship, Phi Theta Kappa/PTK All-USA Scholarships, Transfer Leadership Scholarship, Quinsigamond Community College Scholarship
Worcester Polytechnic Institute –Phi Theta Kappa Scholarship

Community and Professional Association Scholarships include:
Greater Worcester Community Foundation (nearly 100 different scholarship categories)
Jack Kent Cooke Undergraduate Transfer Scholarship
New England Transfer Association Scholarship
Phi Theta Kappa Scholarships (limited to PTK student members)

More information about scholarships and financial aid is available at the "Scholarships" page at the QCC Transfer Office website (www.qcc.mass.edu/transfer).

QCC Training and Education Center CitySquare 508.751.7900
The Training and Education Center offers instructor-led (Worcester and Southbridge) and online classes, workshops, certificate programs and seminars that reflect the current needs of employers in numerous industries. Additionally, we offer personal enrichment classes that cater to a variety of interests and hobbies. Some of our popular courses include: Phlebotomy/EKG Technician, Pharmacy Technician, Nurse Assistant/Home Health Aide, Sterile Surgical Processing, Medical Transcription, Medical Coding and Billing, Personal Care Assistant, TEAS Review Classes, Microsoft Office, Personal Fitness Trainer, Community and Medical Interpreting, Stand-Up Comedy, Reiki I&II, and General and Self-Hypnosis. THE CENTER ALSO OFFERS CUSTOMIZED TRAINING TO EMPLOYERS TO HELP THEM MEET THEIR BUSINESS OBJECTIVES. The Training and Education Center is here to serve the community and we look forward to the opportunity to provide the knowledge and skills that students need. Please call to request a catalog.

Adult Community Learning Center CitySquare 508.751.7903
QCC's Adult Community Learning Center is dedicated to providing its students with the skills necessary to help them make a positive impact on their lives. The Adult Learning Center offers free classes and instructional materials for those preparing to take the GED test, and those seeking to advance their skills in reading, writing, and math. The Center offers four levels of English as a Second Language classes that are small to further facilitate one-to-one interaction. Through instruction that includes face-to-face and online formats, students gain the basic reading, writing, math, and English communication skills that will allow them to eventually become digitally literate, inventive thinkers, effective communicators, and productive individuals. State-of-the-art computer technology is available for the students' use.

CAPS Checklist *Career, Academic and Personal Success*

QCC *CAPS* is a Road Map designed to help students navigate through and succeed in college. QCC *CAPS* allows students to develop a Plan that charts out their academic and career goals and tells them *how* to get there. We expect that students may need extra assistance and direction when they first start college and their Advisor plays a major role at this stage. As students move along, they will be prepared to take more responsibility for their own college planning and success.

A detailed view of the CAPS Checklist appears in the Student Handbook. Progress on his/her CAPS Checklist can be discussed with the student's Academic Advisor.

QCC *CAPS* is divided into four Stages, according to the number of credits that students complete. Each Stage has a *CAPS* Checklist- a guide that tells the student and his/her advisor what needs to happen before he or she moves on to the next stage.

STAGE ONE	STAGE TWO		STAGE THREE	STAGE FOUR
Advisor assumes primary responsibility	Advisor & Student share responsibility		Student begins to assume responsibility	Student assumes primary responsibility
A	As	AS	aS	S
0 – 15 credits →	15 – 30 credits	→	30 – 45 credits →	45 – 60 credits
	A = Advisor		**S = Student**	

Stage ONE 0– 15 Credits

Advisor assumes primary responsibility.

1. USE THE "Q" (student portal) for college communication and information https://confucius.qcc.mass.edu/ics
2. CAREER AND ACADEMIC PLANNING: Do you know what you want to study at QCC?
3. ADVISING, CAREER PLANNING AND COURSE REGISTRATION: Prepare for Advising Session
4. TRANSFER SERVICES: Connect with this office if you are planning to transfer
5. CAREER PLACEMENT: Connect with this office for co-op, employment, volunteer or service learning opportunities
6. QCC PROCESSES, PROCEDURES AND INFORMATION: Understand all college processes. See student handbook
7. QCC SERVICES AND RESOURCES: Learn about and utilize college resources as needed
8. STUDENT LIFE FULLER CENTER: Get involved with a variety of college activities

Stage TWO 15– 30 Credits

Advisor and Student begin to share the responsibility.

1. USE THE "Q" (student portal) for college communication and information https://confucius.qcc.mass.edu/ics
2. CAREER AND ACADEMIC PLANNING: Do you know what you want to study at QCC?
3. ADVISING, CAREER PLANNING AND COURSE REGISTRATION: Prepare for Advising Session
4. TRANSFER SERVICES: Connect with this office if you are planning to transfer
5. CAREER PLACEMENT: Connect with this office for co-op, employment, volunteer or service learning opportunities
6. QCC PROCESSES, PROCEDURES AND INFORMATION: Understand all college processes. See student handbook
7. QCC SERVICES AND RESOURCES: Learn about and utilize college resources as needed
8. STUDENT LIFE FULLER CENTER: Get involved with a variety of college activities

Stage THREE 30–45 Credits

Student begins to assume more responsibility, Advisor assists.

1. USE THE "Q" (student portal) for college communication and information https://confucius.qcc.mass.edu/ics
2. CAREER AND ACADEMIC PLANNING: Have you researched careers within your program of study?
3. ADVISING, CAREER PLANNING AND COURSE REGISTRATION: Prepare for Advising Session
4. TRANSFER SERVICES: Connect with this office if you are planning to transfer
5. CAREER PLACEMENT: Connect with this office for co-op, employment, volunteer or service learning opportunities
6. QCC PROCESSES, PROCEDURES AND INFORMATION: Understand all college processes. See student handbook
7. QCC SERVICES AND RESOURCES: Learn about and utilize college resources as needed
8. STUDENT LIFE FULLER CENTER: Get involved with a variety of college activities

Stage FOUR 45–60 Credits

Student assumes responsibility.

1. USE THE "Q" (student portal) for college communication and information https://confucius.qcc.mass.edu/ics
2. CAREER AND ACADEMIC PLANNING: Continue career research and begin steps towards employment or transfer.
3. ADVISING, CAREER PLANNING AND COURSE REGISTRATION: Prepare for Advising Session
4. TRANSFER SERVICES: Connect with this office if you are planning to transfer
5. CAREER PLACEMENT: Connect with this office for co-op, employment, volunteer or service learning opportunities
6. QCC PROCESSES, PROCEDURES AND INFORMATION: Understand all college processes. See student Handbook
7. GRADUATION: Prepare for completion of your degree or certificate
8. ALUMNI OPPORTUNITIES: Stay Connected with QCC

ACADEMIC SUPPORT AND RESOURCES

Alden Library, Harrington Learning Center (HLC) 508.854.4581

The Alden Library is a member of the C/WMARS resource sharing network which provides QCC students access to over six million items. Our library has over 60,000 books, videos, DVDs and over 40,000 e books available to support QCC's academic programs. Subscriptions to 200 print periodicals, representing a wide variety of newspapers, professional journals, and popular magazines, supplement the many electronic reference and periodical databases. These electronic resources, which provide thousands of full text articles, can also be accessed off campus.

Group study rooms of all sizes are available in the HLC for two or more students who would like to study or work on group projects. There are many computers available for library research. A professional librarian is available every hour that the library is open. Librarians, the original search engines, are happy to show students the fastest and most efficient way to find information for course related research projects or for personal and career development.

For information about Alden Library hours, services and policies visit www.qcc.mass.edu/library

Tutoring Centers, and Academic Computing Center

The Communication Skills Center, the Individualized Learning Center (ILC), and the Math Center provide services to assist students in realizing their fullest potential. They can help students strengthen their background in English, math, science, health care, social science, business, and humanities. They can also help students overcome a variety of "learning barriers" through individualized help. Students taking online classes, students at other QCC sites and on the main campus, are welcome to access our online tutoring services as well. All of these services are free of charge.

The Math Center Room 206, HLC 508.854.7487

The Math Center, the mathematics tutoring center located on the second floor of the Harrington Learning Center, provides free drop-in tutoring on a one-to-one and group basis. The Math Center also provides a variety of math resources for students taking math and related courses at Quinsigamond Community College. The Math Center has a large staff of tutors, 26 computers with appropriate software, course textbooks, solutions manuals, CPT review materials, and graphing calculators for students.

Transition Center Room 222L, HLC 508.854.7552

The primary mission of the Transition Center is to implement a Student Success Plan aimed at increasing persistence in college by helping each student develop transitional skills within tutoring sessions. After attaining these requisite skills, students will be able to successfully utilize the general tutoring centers in the Harrington Learning Center (HLC).

Students work with transition tutors who receive ongoing training aimed at meeting their individual needs. Students may schedule one-on-one tutoring appointments and/or utilize drop-in sessions. Tutor sessions take place in a more private, less distracting location. During sessions, students develop an individualized student success plan aimed at helping them transition more smoothly into college. Also, students will learn the process of forming a study group with their classmates.

In the Transition Center students develop a Student Success Plan. This plan is designed so they will become proficient in at least eight out of eleven transition skills. A sample of these skills include:

- Learning Styles
- Time Management
- Notetaking
- Study Skills
- Self Advocacy

Please contact us at the number listed above or email: transitioncenter@qcc.mass.edu for more information about the Transition Center.

The Communication Skills Center Room 208, HLC 508.854.4287

Housed in a modern, state-of-the-art, three story learning center, the Communication Skills Center at Quinsigamond Community College is an English-based tutoring center that serves all QCC students. The Communication Skills Center is the home of progressive computer technology and hosts over thirty writing workshops each calendar year. Students seeking assistance with writing, reading, reasoning, researching, time management, and test-taking, are welcome and encouraged to visit. Appointments or walk-in service are available.

Individualized Learning Center Room 205 HLC 508.854.4279

The Individualized Learning Center provides a place for any QCC student to work with our tutoring staff. We employ both professional and peer tutors in a number of disciplines. Online tutoring is offered by SMARTHINKING.COM. Students can log in the QCC portal for all tutor schedules both in- house and online. Click on the student services tab on "the Q" Our computers are available for those students working with a tutor in one of the subjects we tutor. We have a wide variety of software which supports classroom instruction.

Tutoring is free for all QCC students. Appointments are advised. ILC tutors are available for the following subjects:

Accounting	Economics
Anatomy & Physiology	Microbiology
Biology	Nursing
Chemistry	Physics-solutions available at desk
Computer Science	Psychology
Dental Hygiene	Sociology
Early Childhood	Spanish

The Harrington Academic Computing Center Room 379A 508.854.4370
Computers are available to students for academic projects, papers, research and other assignments.

COUNSELING AND STUDENT SUPPORT

Counseling Services assists students with support and resources when confronted with personal, family or social problems. Referrals to college and community resources are made, based on need and request. Specific workshops and annual screenings for depression, anxiety and eating disorders are provided. This office provides liaison services for students who are Department of Transitional Assistance recipients. All services are free, voluntary and confidential.

Disability Services

Room 246A Voice 508.854.4471
TTY 508.854.4524

QCC is committed to provide access for students with disabilities. Disability Services assists students who have documented learning, medical, physical, and/or emotional/psychiatric disabilities. Reasonable accommodations for students are determined on an individual basis. The following are the more frequently requested accommodations:

-Assistive Technology
-Extended Time on Tests
-Interpreters of American Sign Language
-Note takers

Students with disabilities who would like assistance must schedule an intake/planning appointment with Disability Services and provide appropriate documentation of the disability. For more information please contact Disability Services at disabilityservices@qcc.mass.edu

Veterans Services

Room 152A 508.854.4270

For Veterans, the Coordinator of Records and Registration or the Staff Associate in the Registrar's Office are a valuable resource. The Coordinator and the Staff Associate will help veterans with the preparation, certification and submission of their documents.

STUDENT LIFE

Fuller Student Center/Campus Activities

508.854.4225

The Fuller Student Center provides a warm and welcoming atmosphere for all students. Space to study, relax, or play a game of pool, checkers, chess, and cards with friends is available here. The patio and lawn provide the perfect place for lunch, a game of Frisbee, or a relaxing break from class. Campus clubs and organizations have office space and mailboxes in The Fuller Student Center. Through participation in campus activities, students have the opportunity to develop leadership and interpersonal skills. Each semester, educational, social, cultural, and recreational events are held designed to appeal to the entire College community and their families.

The Open Door

508.854.4285

Students staff "The Open Door", our student newspaper. We are always looking for journalists, cartoonist, artists, graphic designers, and poets to add their work to the paper.

Student Senate

508.854.7413

The Student Senate, elected by the student body each year, involves students in College affairs and assists the staff in the Office of Student Life in planning and carrying out campus events.

Campus Ministry

Room 105S 508.854.4300

The Campus Ministry seeks to enable students, administrators, faculty, and staff to grow spiritually as they work and study in the college setting. Through religious services, interfaith programs, socials, and pastoral counseling, the Campus Ministry seeks to bring a religious dimension into the everyday life and conversation of the college community.

Numerous opportunities exist for students to get involved in both the campus and the community. In addition to course work, students can look forward to a comprehensive Student Life Program at Quinsigamond Community College.

Athletic Center

508.854.4317

The QCC Athletic Center includes a basketball court, two newly updated fitness areas and locker room facilities with saunas. QCC offers an extensive intramural program that includes yoga/pilates, circuit training classes, indoor cycling, zumba, martial arts, boot camp, fittrek, hoop dance classes, basketball, indoor soccer, volleyball, flag football, and table tennis. Intercollegiate sports offered at QCC include Men's and Women's basketball, baseball and softball. QCC has a strong tradition of recruiting talented student-athletes. The baseball team has won the New England Junior College Championship and the Northeast Association World Series and has appeared in several National Junior College Athletic Association (NJCAA) World Series. Our basketball teams have also achieved much success: Women's Basketball earned 2nd place in both the State and Regional Tournaments in the 2006-2007season and the Men's Basketball won both the State and Regional Championship as well as finishing 5th place in the Nation at the NJCAA Tournament for the 2006-2007 season.

IMPORTANT PLACES AND SERVICES

Student Payment Center
Room 65A 508.854.4560

Students can pay their bills, set up a payment plan, waive their health insurance, obtain transcripts, pay parking tickets, and receive financial aid checks. These services are also available on The Q, the college's student and faculty portal.

Bookstore
"A" Building, Lower Level 508.854.4237

Textbooks, trade books, laptops, software, trade books, supplies, greeting cards, gifts, QCC insignia items and more are available at the Campus Store. The Campus Store accepts cash, major credit cards, personal checks and financial aid. Please check us out online at http://bookstore.qcc.mass.edu. "Like us" on Facebook.

Cafeteria
"A" Building Lower Level

The main cafeteria is located in the "A" building, lower level and serves a great selection of menu items, from full meals to snacks. The Café, located in The Harrington Learning Center, serves light fare and is open every week night until 8:00 PM. Both locations accept cash and major credit cards.

The Children's School/Child Study Center
508.854.4220

Our on-campus child development facility provides early education and care for preschool children ages 2.9 to 5 years old. We are licensed by the Department of Early Education and Care and accredited by the National Association for the Education of Young Children. The school provides a rich learning environment for young children and is also a model training site for college students. We are open for the full year to meet the many needs of students, staff, and families. Applications are accepted on an ongoing basis. Please call 508.854.4220 or email janel@qcc.mass.edu for more information.

Public Safety
136 Athletic Center EMERGENCIES 508.854.4444
Non-emergencies 508.854.4221

Campus Safety at QCC involves the entire community working together in an effort to provide a safe and secure campus environment. The department provides educational and safety programs for the campus community and is proactive in prevention and security. To fulfill this goal, the department seeks community involvement, encourages interactive relations and a combined police and community approach to problem solving. Sworn Campus Police Officers provide 24-hour service to the campus.

Crime Awareness and Campus Security

In compliance with the Crime Awareness and Campus Security Act of 1990, the Department of Public Safety annually prepares a separate pamphlet for distribution to the college community. www.qcc.mass.edu/safety/campus_safety_report.htm

Tuition and Fees

APPLICATION FEE FOR NEW STUDENTS

- Massachusetts Residents..... $20.00
  Non-refundable.
- All Other Applicants..... $50.00
  Non-refundable.

ALL CREDIT COURSES (except as noted)*

- Massachusetts Residents..... $178.00/credit*
  ($24.00 tuition/$154.00 Educational Services fee)
- All other Students $384.00/credit*
  ($230.00 tuition/$154.00 Educational Services fee)

REQUIRED FEES

- Registration Fee .....$55.00 per semester
- Student ID Fee .....$30.00 once per academic year
- Student Activity Fee.....$25.00 Fall and Spring Semesters only
- Lab Fee .....$45.00 per lab course
- Technology/Energy Fee
  $ 70 students registered 1-8 credits/Fall & Spring semester
  $125 students registered 9+ credits/Fall & Spring semester
  $ 35 students registered 1-8 credits/Summer semester
  $ 65 students registered 9+ credits/Summer semester
  $ 20 students registered 1-8 credits/Intersession semester
  $ 35 students registered 9 + credits/Intersession semester

REQUIRED FEES (cont'd)

- Compulsory Health Insurance ..... $866.00/Academic Year**
- Allied Health Insurance
  - Health Programs..... $ 20.00/per Academic year
  - EMT Paramedic Programs ..... $ 80.00/per Academic year
- Parking Fee ..... $20.00/Fall and Spring Semesters only

SPECIAL FEES

- Credentialing Fee..... $50.00 per credit
  - Military $10.00 per credit
  - CCE $10.00 per credit
- Challenge Examination Fee..... $50.00 per credit
- Portfolio Assessment Fee..... $65.00 per credit

ALL RATES ARE SUBJECT TO CHANGE WITHOUT NOTICE

* Tuition and fees are subject to change.

** Students entering in the Spring Semester will be charged only $579.00. Massachusetts law requires that each student registered for 9 or more credits must purchase this insurance unless the student can show evidence of comparable coverage under another health insurance policy.

PROGRAM FEES (QCC Program Fees Effective Fall 2009)

Program	Maximum Charge Per Semester
Health	
Dental Hygiene	$1,800.00
Dental Assisting Certificate	$700.00
Nurse Education	$700.00
Occupational Therapy Assistant	$700.00
Practical Nursing	$700.00
Respiratory Care	$700.00
Radiologic Technology	$700.00
Surgical Technology	$450.00
Paramedic Technology	$450.00
EMT Intermediate	$450.00
EMT Paramedic	$450.00
Biotechnology Technician	$350.00
Medical Assisting	$350.00

Program	Maximum Charge Per Semester
Electronics	
Electronics Technology	$35.00/credit or $400.00 max
Electronics Technology Biomedical Option	$35.00/credit or $400.00 max
Electronics Technology Electronics Option	$35.00/credit or $400.00 max
Electromechanical Technology	$35.00/credit or $400.00 max
Computer	
Computer Systems-Engineering Technology	$35.00/credit or $400.00 max
Computer Systems-Engineering Technology Forensics Option	$35.00/credit or $400.00 max
Applied Arts Computer Graphics Design	$35.00/credit or $400.00 max
Auto	
Ford Maintenance and Light Repair Program	$300.00
Automotive Technology	$300.00

ALL RATES ARE SUBJECT TO CHANGE WITHOUT NOTICE

PAYMENT OF TUITION AND FEES

Students will receive a bill for tuition and fees, which must be paid in full prior to the billing due date. If the student has applied for and received a financial aid award or a third-party award (ex: private scholarship, Massachusetts Rehabilitation authorization, etc.), it will be deducted from the semester balance. QCC offers a payment plan for every semester except Intersession. Students should check the billing packet or inquire in the payment center room 65A.

OTHER EXPENSES

Students should anticipate expenses each semester for required textbooks (which are available in the Bookstore) and/or materials for each course. For textbook availability and prices, please visit the QCC bookstore link on The Q, the college's student and faculty portal.

REFUNDS OF TUITION AND FEES

To receive any refund of tuition and fees, a student must officially withdraw from a class or classes. All eligible refunds will be based upon the withdrawal date and the refund schedule for the semester.

Please Note: All tuition and fee amounts are subject to change without notice.

Students who have officially withdrawn from the College may be eligible for a refund of tuition and fees. Please refer to the semester Tuition and Fee Refund Policy in the schedule booklets and on The Q.

REFUND LIMITATIONS

- Official withdrawal must be made in the Registrar's Office, Room 152, in the Administration Building.
- Any waivers must be submitted to the Business Office/Student Payment Center prior to the semester deadline to be considered for a refund or adjustment.
- Mandatory health insurance premiums are not refundable to any student.
- Students will be refunded only that portion of the tuition and fees paid by them; financial aid and other contracted agency payments will be refunded directly to the paying party.

RETURN OF FEDERAL AND STATE FUNDS FOR STUDENTS WHO WITHDRAW

If the student withdraws from the College or stops attending classes prior to the 60% point of the semester, financial aid will be pro-rated based on the number of days attended. If financial aid was disbursed before the student withdraws, the student may be required to pay back some of the money, based on a federal determination of his/her eligibility as of the date withdrawn. Additional information is available in the Financial Aid Office.

TUITION EXEMPTIONS

Tuition Exemptions are granted to those people who meet the requirements outlined below. Tuition Exemptions apply only to the cost of tuition, but do not include the cost of fees, textbooks, or supplies. Tuition Exemptions are not applicable to Tutorials, Challenge Examinations, or any other individualized learning experience.

- Veterans' Tuition Exemptions:
  Veterans, as defined by MGL Chapter 4, Section 7, may qualify to take credit courses tuition-free, provided the veteran is eligible and has submitted a copy of his/her DD214 separation papers. There may be other eligibility requirements for this tuition exemption, so veterans should contact the Registrar's Office, Room 152A for further information.
- National Guard Tuition Exemptions:
  Members of the Massachusetts National Guard may qualify for tuition-free courses, provided they meet the eligibility requirements. For further information, contact the Business Office, Room 220A.
- Senior Citizens Tuition Exemptions:
  Senior citizens, age sixty years or older, qualify for tuition-free courses. For further information about this tuition exemption, contact the Registrar's Office, Room 152A.
- Exemption for Clients of the Massachusetts Rehabilitation Commission and Commission for the Blind:
  MRC and MCB clients may be eligible for tuition-free courses consistent with the policies of the Massachusetts Board of Higher Education. Please contact the agencies offices for details.
- Members of the Armed Forces Tuition Exemptions:
  An active member of the Armed Forces (Army, Navy, Marine Corps, Air Force, or Coast Guard) stationed and residing in the Commonwealth of Massachusetts may qualify to take credit courses tuition-free. For eligibility requirements, contact the Registrar's Office, Room 152A.
- Native American Tuition Exemptions:
  Native Americans, as certified by the Bureau of Indian Affairs, may qualify to take credit courses tuition-free. For eligibility requirements, contact the Registrar's Office, Room 152A.

STUDENT BILLING: FREQUENTLY ASKED QUESTIONS

Will there be a fee increase for the Fall semester?

For Massachusetts' residents, the tuition and fee cost is currently $158.00 per credit hour. For Non-Massachusetts' residents and international student, the tuition and fee cost is $364.00 per credit hour but figures are subject to change.

What does the Student ID fee cover?

Students pay for a Student ID once per academic year. If a student already has an ID, they will need to have the card validated each academic year.
This fee is used to pay expenses associated with the learning center, library services, and the athletic center. Students need to have a student ID in order to pick up any financial refund check, sell back books at the Bookstore, or receive a sales tax waiver for cafeteria purchases.

What does the Student Activity fee cover?

Students pay for a Student Activity fee for the Fall and Spring semesters only. This fee is used to pay expenses associated with campus student activities, organizations, and the athletic center.

What is a Technology/Energy Fee?

This fee is used to pay expenses associated with computing labs, electronic equipment, classroom equipment, computer software, audio-visual hardware, database management systems, laptop computers, and telecommunications systems. The energy portion of this fee is to help support the increasing energy costs and usage throughout the College. This fee varies per semester and is based on the number of registered credits.

What is a Lab Fee?

This fee is used to support and supply the scientific laboratories on campus. This fee is assessed for every lab class.

Can I waive the new Technology/Energy fee, Student activity fee, and Student ID fee because I do not use the school facilities except to attend class?

These fees are mandatory and cannot be waived. All students must have a Student ID. The Technology/Energy fee is assessed to all students and supports the college technology and energy costs.

What is the Registration Fee?

The Registration fee supports the administrative effort of the College. These services include Assessment Testing, Advising, Financial Aid, and Payment Center.

If I withdraw from a course, can I get all my money back?

There is a specific Refund Policy for each semester. For the first eight calendar days of class (or equivalent if in Summer or Intersession semesters), a 100% refund of tuition and fees is granted. The next eight calendar days of classes, a 50% refund of tuition and fees is granted. After the first 16 days of classes (or equivalent if in Summer or Intersession), no refunds of tuition or fees will be granted. Please see semester brochures for exact dates. Students must officially withdraw from the College. Students who are receiving financial aid should consult with the Financial Aid Office before withdrawing. Financial aid eligibility may be affected.

Do I need to pay for the Compulsory Health Insurance at QCC if I already have Health Insurance?

Students with comparable health insurance do not need to purchase the insurance through the school. They will need to fill out the insurance waiver form online within 30 days of the start of school. Make sure that all requested information is completed, log onto www.universityhealthplans.com and complete the waiver form.

Where do I go to pay my bill?

Payments may be made in the QCC Business Office, 670 West Boylston Street, Worcester, MA 01606-2092 or at the Payment Center, Room 65A, which is open from 8:00 a.m. to 7:00 p.m., Monday through Thursday, and 8:00 a.m. to 5:00 p.m. on Friday. Students may also pay online by logging on to The Q, the college's student and faculty portal.

When will my financial aid refund check be ready?

Students will receive a check for the excess financial aid after all charges have been paid to QCC. The financial aid is processed on their student account in the middle of the semester. Once the funds are available, refund checks will be processed weekly and made available for student pick up at the Payment Center in Room 65A. Students need their student id or a picture id to pick up their check.

Once I pay my parking fee and receive a parking decal, will I be able to park at all locations?

The parking decal covers designated student parking at our main campus in Worcester on West Boylston Street and in Southbridge at 5 Optical Drive. Additional parking fees may be charged for off-site instruction. (Example: parking at the QCC Mall campus is an additional cost)

I do not park on campus. Can I waive my parking fee?

Students who do not park on campus may waive their parking fee online through the "Q" (the student & faculty portal). Any questions, please contact the payment center at 508.854.4560.

What are program fees?

Certain High Demand and Equipment intense programs have semester fees associated with the Program Major to help support the needs of the program. (See QCC Program Fees on pages 29 and 30)

Does the College have a Payment Plan?

The college has a payment plan for every semester except Intersession. Please check with the Payment Center or the billing packets for information and brochure.

There is a non-refundable enrollment fee assessed when a student enrolls in the payment plan, due with his/her first payment.

Is any student eligible for Institutional Aid?

The College has set aside a certain amount in operating funds to support our students. To qualify for these funds students must meet the conditions for need-based Federal and State Financial Aid and complete a FAFSA. This aid helps fill the gap between available Federal and State aid and the cost of attendance. In addition, the institutional advancement group has set aside a certain amount to fund scholarships for students. To qualify for these scholarships students must meet the specific criteria of each individual scholarship. In most cases the Financial Aid Office will notify a student if he or she appears eligible for any of these scholarships. For further information please inquire at the Financial Aid office in room 165 in the Administration Building.

Financial Aid

For students who are in need of financial assistance to help offset the cost of their education, several types of financial aid are available at Quinsigamond Community College. Financial aid may be given in the form of grants, loans, tuition waivers, scholarships, or work-study employment. Eligibility for financial aid is based upon need. "Need" is the difference between how much it will cost to attend college (tuition, fees, books, supplies, etc.) and the financial contribution that the student (or student's family) can make to meet these costs.

WHO IS ELIGIBLE FOR FINANCIAL AID?

Students must meet the following criteria in order to be eligible for financial aid:

1. Be able to demonstrate financial need as determined by filing the Free Application for Federal Student Aid (FAFSA).
2. Make progress toward a degree or certificate, according to the College's Standards of Satisfactory Academic Progress for Federal and State Financial Aid Programs.
3. Be enrolled in an eligible program as defined by the United States Department of Education. This program must lead to a degree or certificate. Students who are undeclared, or have not been admitted to an approved degree or certificate program are not eligible for financial aid.
4. Be in compliance with Selective Service registration requirements.
5. Not be in default on any educational loan or owe a repayment of any educational grant.
6. Be a United States citizen or eligible non-citizen, with a valid social security number.
7. Not have been convicted for possession or the sale of illegal drugs while receiving any financial aid.

APPLYING FOR FINANCIAL AID

To apply for all sources of financial aid at Quinsigamond Community College, students must file the Free Application for Federal Student Aid (FAFSA). Students may apply on-line at www.fafsa.gov. The form is also available at the Financial Aid Office, which is located in Room 165A. The form must be mailed for processing to the Federal Student Aid Programs, and Quinsigamond Community College listed in the College release section. Our federal school code is 002175. Please allow four to six weeks for the form to be processed.

Other information may also be required in order to determine financial aid eligibility. The checklist that follows includes the most common types of documentation needed, and depending upon individual circumstances, further information may be requested:

1. Copy of most recent 1040EZ, 1040A, or 1040, with schedules and W-2's, for student, student's spouse, if married, and parent (when applicable).
2. Verification of sources of yearly amounts of non-taxable income.
3. Verification of citizenship status.
4. Verification of other family members in the household and enrolled in college.

WHEN SHOULD ONE APPLY?

The priority filing deadline for the Fall Semester is April 1. All students having a complete file by this date should have an award notification prior to the tuition and fee due date. Students who complete their file beyond the priority filing deadline will be reviewed for awards on a rolling basis.

Many sources of funding are limited in availability, with the earliest applicants receiving priority consideration. To apply for the Massachusetts State Financial Aid Programs, students must have their Free Application for Federal Student Aid (FAFSA) processed by May 1. Students must reapply for financial aid each academic year.

DETERMINING FINANCIAL NEED

Financial aid from most sources is awarded on the basis of financial need. Once the student meets the other eligibility criteria, the information he or she reports on their aid application will be used in federal formulas to calculate their need and eligibility.

Financial need is determined by taking the cost of education (educational expenses, such as tuition, fees, books, supplies, and other related expenses), and subtracting the amount the student and his/her family are expected to pay toward that cost. Detailed information on how the "cost" of education at Quinsigamond Community College is calculated may be obtained at the Financial Aid Office.

Certain federal loan programs not based on financial need are also available. In order to be considered for these programs, students are encouraged to complete the entire financial aid application process to first determine if they are ineligible for need-based assistance.

REPEATED COURSES

Students will be allowed to repeat (and be counted in their enrollment status for Title IV purposes) any coursework previously taken in their program as long as it is not a result of: (1) more than one repetition of a previously passed course or (2) any repetition of a previously passed course due to the student failing other coursework.

BILLING INFORMATION FOR FINANCIAL AID APPLICANTS

Financial aid awards cannot be applied toward a student's bill until an official award letter is issued from the College. If the student has applied for financial aid, but has not been notified of their eligibility for assistance by the College, he or she must make payment arrangements for the amount due directly with the Payment Center.

Students will need to visit The Q, QCC's online student portal, to see their financial aid award and/or any missing financial aid documents.

Should Quinsigamond Community College become aware of any misrepresented or omitted information in a financial aid application, any funds awarded to the student will become due immediately and payable to either the College or the Department of Education.

RETURN OF FEDERAL AND STATE FUNDS FOR STUDENTS WHO WITHDRAW

If the student withdraws from the College, or stops attending classes, prior to the 60% point of the semester, his or her financial aid will be pro-rated based on the number of days he or she attended. If financial aid was disbursed to the student prior to withdrawal, he or she may be required to pay back a portion of the money, based on a federal determination of the eligibility as of the date he/she withdraws. Additional information is available in the Financial Aid Office.

TYPES OF FINANCIAL AID AVAILABLE

The College will inform the student in writing by means of a Financial Aid Award Letter of the amount of your award. The amount of your award may be adjusted based upon changes in your enrollment status. Your award may consist of any combination of the federal, state, and scholarship programs listed below.

INSTITUTIONAL GRANTS

QCC Grant - The QCC Grant provides financial assistance to students demonstrating financial need who are enrolled in an approved degree or certificate program. A QCC Grant does not have to be repaid.

FEDERAL GRANTS

Federal Pell Grant Program - Federal Pell Grants provide financial assistance to high need students who are enrolled in an approved degree or certificate program. A Federal Pell Grant does not have to be repaid.

Federal Supplemental Educational Opportunity Grants (FSEOG) - A Federal Supplemental Educational Opportunity Grant (FSEOG) is an award to undergraduates enrolled full- or part-time, with exceptional financial need, as determined by the College. Priority is given to Federal Pell Grant recipients. An FSEOG does not have to be repaid. There is no guarantee that every eligible student will be able to receive an FSEOG since the College receives only limited funds each year.

FEDERAL WORK-STUDY PROGRAM

The Federal Work-Study Program offers students an opportunity to earn money through on- or off-campus employment. Students are placed in a position that will provide them with valuable work experience. The Work-Study Program offers off-campus placements in Community Service positions at non-profit agencies. It also offers students an opportunity to tutor in area elementary schools with the America Reads and America Counts Programs.

A student's work schedule and hours may vary according to the amount of the Work-Study award. Students are paid hourly and rates of pay may vary.

FEDERAL STUDENT LOAN PROGRAMS

William D. Ford Federal Direct Loan Program - The Direct Loan Program provides low-interest loans to students enrolled for six or more credits per semester. The payments are at least $50.00 per month until the loan is repaid. Payments for interest or principal do not begin until six months after graduation, periods of enrollment that are less than half-time (six credits), or termination from the College. A variety of repayment options are offered. If the student demonstrates financial need, he or she will receive a Direct Subsidized Loan. Here, interest will not accrue until six months after graduation, periods of enrollment that are less than half-time (six credits), or termination from the College. Borrowers are charged a fixed interest rate of 3.4% for loans disbursed after July 1, 2011. Students who do not demonstrate financial need may apply for a Direct Unsubsidized Loan. The interest on this loan begins to accrue from the date of disbursement. Borrowers are charged a fixed interest rate of 6.8%.

The College receives funding for these loans directly from the United States Department of Education, and repayment is made to the Direct Loan Servicing Center. There is no separate application. Before receiving any loan funds, first-time borrowers must complete an entrance interview as well as a master promissory note. Students will receive more detailed information with their award letters.

Federal Direct PLUS Loans - A Federal Direct PLUS Loan is available to parents of dependent students and is not based upon financial need. The amount of a Federal Direct PLUS Loan may not exceed the cost of education minus any other financial aid. The parents' credit history will be reviewed to establish eligibility. The interest rate on a Federal Direct PLUS Loan is 7.9% fixed. Ordinarily, repayment begins 60 days after the final loan disbursement; however, a deferment may be available while the student is enrolled in school. Students need to complete a FAFSA even if they are only applying for a PLUS loan.

TAX INCENTIVES FOR HIGHER EDUCATION

The tax code provides a variety of tax incentives for families who are saving for, or already paying, higher education costs or are repaying student loans.

You may be able to claim a Hope and Lifetime Learning Credit for the qualified tuition and related expenses of the students in your family (i.e., you, your spouse, or an eligible dependent) who are enrolled in eligible educational institutions. Different rules apply to each credit. If you claim a Hope Scholarship Credit for a particular student, none of that student's expenses for that year may be applied toward the Lifetime Learning Credit.

You may be able to claim a tuition deduction of up to $4,000 of qualified education expenses paid during the year for yourself, your spouse, or your dependent. You cannot claim this deduction if you're filing status is married filing separately or if another person can claim an exemption for you as a dependent on his or her tax return. The qualified expenses must be for higher education.

You may be able to deduct interest you pay on a qualified student loan. And, if your student loan is canceled, you may not have to include any amount in income. The deduction is claimed as an adjustment to income so you do not need to itemize your deductions on Schedule A Form 1040.

For complete details visit www.irs.gov – American Opportunity Credit tax benefits for education: Information Center

MASSACHUSETTS STATE FINANCIAL AID

Community College Access Grant Program – The Community College Access Grant Program was established by the state of Massachusetts to broaden access for the residents of the state to higher education. Funds for this program are awarded through the Mass Cash Grant and Tuition Waiver programs.

MASSGrant Program – The MASSGrant Program is a need-based State Grant Program for residents of the Commonwealth. To apply, students must submit the Free Application for Federal Student Aid (FAFSA) by May 1. Students must be enrolled for a minimum of twelve credits each semester in order to receive the MASSGrant.

Massachusetts Part-Time Grant Program – This need-based state program is available to part-time students enrolled for at least six credits, but less than 12 credits.

Massachusetts Cash Grant Program – This need-based program allows the College to award students funding, not to exceed the student's cost for tuition and fees. Students must be Massachusetts residents and meet all federal eligibility requirements.

Tuition Waivers – Students who demonstrate need are considered for a waiver of tuition at Quinsigamond Community College. Students must meet all eligibility requirements for financial aid programs to qualify for a tuition waiver. Applicants must be residents of Massachusetts. The actual amount of the waiver will not exceed charges for tuition only. The waiver does not apply to books or fees.

John and Abigail Adams Scholarship – Awarded to residents of the Commonwealth who have graduated from or under the auspices of a Massachusetts public high school as of June 2005 or thereafter. To receive the scholarship, students must, by the end of their junior year, score in the highest 25 percent in their district on the 10th grade Massachusetts Comprehensive Assessment System (MCAS) English Language Arts and Mathematics test, and have scored in the Advanced Category on one test and Proficient or Advanced on the other test. To be eligible, students must enroll full-time in the first traditional academic semester following their high school graduation. They must also complete the Free Application for Federal Student Aid (FAFSA) each year and meet all federal eligibility requirements. Students must be continuously enrolled for a minimum of 12 credits each semester and earn a cumulative 3.0 GPA to maintain eligibility for the scholarship. More information is available in the Financial Aid Office.

Massachusetts Foster Child Grant Program – This program provides grants for foster children to help pay for their higher education. To be eligible, students must have been placed in the custody of the Department of Social Services through a Care and Protection Petition, must have signed an agreement with the Department of Social Services for care and services beyond age 18, and not be over the age of 24. Students must also complete the Free Application for Federal Student Aid (FAFSA) each year and meet all federal eligibility requirements. Students must be enrolled full-time during the semester in which the grant is received. More information is available on the Massachusetts Office of Student Financial Assistance website at www.osfa.mass.edu.

Early Childhood Educators Scholarship – This scholarship provides financial assistance for currently employed early childhood educators and providers who enroll in an associate or bachelor degree program in Early Childhood Education or another related program. To be eligible, students must complete a separate application with the Massachusetts Office of Student Financial Assistance and the Free Application for Federal Student Aid (FAFSA) each year. Students must meet all federal eligibility requirements. This program is only available for residents of the Commonwealth. More information is available on the Massachusetts Office of Student Financial Assistance website at www.osfa.mass.edu.

OTHER MASSACHUSETTS TUITION WAIVERS

The following Tuition Waivers are available to Massachusetts residents who meet the eligibility criteria. More information is available in the Business Office, the Financial Aid Office, from the student's employer in the case of employee waivers, and at the Massachusetts Office of Student Financial Assistance web site, www.osfa.mass.edu.

City of Worcester Employees
John and Abigail Adams Scholarship
Higher Education Employees
Human Service Providers
Massachusetts Department of Social Services Adopted Children
Massachusetts Department of Social Services Foster Children
Massachusetts Rehabilitation Commission or Commission for the Blind clients
Members of the Armed Forces
National Guard Members (Tuition and Fee waivers)
Native Americans
Quinsigamond Community College Employees
Senior Citizens
Stanley Z. Koplik Certificate of Mastery
State of Massachusetts Employees
Valedictorians of Massachusetts High Schools
Veterans
Victims of the September 11, 2001 Tragedy

SCHOLARSHIPS (All scholarships subject to available funding.)

Ann R. Carroll Scholarship- Established by QCC to recognize Ann Carroll's 25 years of distinguished service to the College. Ms. Carroll retired as Vice President of Enrollment and Student Services. Awarded to a student leader involved in QCC Athletics or an approved QCC Student Club or Activity

Aram and Mary Tashjian Scholarship - awarded annually in the fall and spring to a deserving QCC student in the Human Services program or pursuing Psychology or Social Sciences

Captain James McDonald Scholarship - awarded to a student in the fire science program

Carmen Tobin Nursing Scholarship - awarded to a nursing student and administered by the Greater Worcester Community Foundation subject to available funding.

Carol Lawson Memorial Scholarship— awarded each spring to a student in the Early Childhood Education Program.

Deceased Public Servant Memorial Scholarship– awarded to students who are eligible for the Commonwealth of Massachusetts Public Service Grant.

Dr. and Mrs. Michael Theerman Scholarship – awarded to a student in the health professions.

Edna Spencer Scholarship – awarded to a student committed to community service.

Fairlawn Foundation Scholarship – awarded to nursing students.

Faith L. Crotty Scholarship – awarded to a nursing student in honor of Faith Crotty.

Family Member of Deceased Former Employee of QCC – awarded to immediate family members of a deceased QCC employee who died while employed by the College.

Firefighter Memorial Scholarship – awarded in conjunction with the Commonwealth of Massachusetts Public Service Grant Program to dependent children and spouses of the six fire-fighters who perished in the December 3, 1999, fire at the Worcester Cold Storage building.

Fuller Foundation - The Fuller Foundation has donated funds to assist non-traditional students with high academic achievement and financial need.

Hermann Foundation Scholarship – awarded to student with financial need and academic achievement.

Intel Scholars Program – awarded to students in QCC Technology programs including Electromechanical Technology (1st priority), Manufacturing Technology and Computer Systems Support Technology.

J. Allan Chupka Memorial Scholarship - awarded to a full-time student at Quinsigamond Community College with financial need.

Jeanne Remillard Curtis Nursing Scholarship – awarded to students enrolled in the nursing program. Selection made by the Nursing Department

Kathleen Griffin Jennings Nursing Scholarship - awarded to a non-traditional nursing student in the Nursing Education program with demonstrated financial need.

Luzviminda Dy Recla Scholarship – awarded to a Basic Engineering Student with financial need.

Maykel Family Scholarships – awarded to a dental hygiene student.

Nancy Ohan Memorial Award – awarded to an Occupational Therapy Assistant student.

National Grid Scholarship – awarded to students in the Energy Utility Certificate program.

Olga Lopez-Hill Scholarship – awarded to a student involved in community service.

Patricia Lamusta Memorial Scholarship - awarded to a Business Administration Career or Business Administrative Professional student.

Rev. Dr. Martin Luther King, Jr. Scholarship - awarded to a student who represents the ideals of the late Reverend Dr. Martin Luther King, Jr. Students are nominated by members of the QCC Community.

Robert Mortell Memorial Scholarship – awarded to a student in either the Fire Science, Criminal Justice or Emergency Medical Services programs who have high academic achievement and financial need.

Roland Lajoie Scholarship - Established in memory of faculty member Roland Lajoie. This scholarship is awarded to a student enrolled in a humanities or social sciences academic program. The student must have completed 12 credits, maintained a 3.0 GPA or better and demonstrate financial need.

Rose Caprioli Award – awarded to an Occupational Therapy Assistant student.

The Ruth C. Pelkey Memorial Nursing Scholarship - awarded to a Nursing IV student.

Theresa Wooldridge Memorial Scholarship - awarded to a Radiologic Technology student who has completed one year of the program.

September 11, 2001 Tragedy Fund – awarded to a spouse or child of a resident of Massachusetts who was the victim of the September 11, 2001 tragedy.

Sharon Richardson Scholarship – awarded to a Dental Hygiene student with financial need.

Smelewicz Scholarship - Awarded to students in the CIS department

TJX Foundation Scholarship – awarded to non-traditional students.

United Parcel Service (UPS) Scholarship - awarded to students with high academic performance and financial need.

Worcester Rotary Club Scholarship – awarded to a non-traditional student

Standards of Satisfactory Academic Progress for Continuing Federal and State Financial Aid

The U.S. Department of Education requires each college to have a policy that ensures all students receiving financial aid maintain satisfactory progress toward completing their program of study. Your academic record will be reviewed at least annually, prior to receiving financial aid, to make sure you have complied with the standards outlined below.

IMPORTANT DEFINITIONS

Attempted Credits: All credits in which you were registered at the end of the add/drop period. This includes courses with grades of F, W, X, I, IR, AU, WA. In addition, all earned credits that appear on the transcript outside of QCC courses are considered attempted (i.e., transfer credits).

Earned Credits: Courses that have been successfully completed.

CRITERIA

Three criteria will be monitored at the end of the Spring Semester each academic year (Exception: certificate students enrolled full-time and students on financial aid probation will be monitored at the end of each semester.)

I. Minimum Cumulative GPA
- 1-15 total attempted credits: 1.50 cumulative GPA
- Over 15 total attempted credits: 2.00 cumulative GPA

II. Minimum Earned Credits
- 1-15 total attempted credits: earn 50% of attempted credits.
- Over 15 total attempted credits: earn 66.67% of attempted credits.

III. Maximum Time Frame
- You must be able to complete your certificate or degree program by attempting no more than 150% of the total credits required for completion of that program. All coursework applicable to the major will be counted toward maximum time frame. Additionally, up to 30 credits of developmental courses (courses numbered below 100) and all English as a Second Language (ESL) coursework is excluded from this calculation.

SATISFACTORY ACADEMIC PROGRESS STATUSES

Good: You have met all standards as described above.

Suspension: If you do not meet the standards described above, you will be placed on Suspension. Any student who reaches their maximum time frame will be placed on Suspension. While on Suspension you are not eligible for any form of financial aid. Furthermore, if you should become dismissed from the College you will be automatically placed on Suspension.

Probation: If you submit an appeal letter and it is approved you will be placed on Probation for one semester during which time you may still be considered for financial aid. Standards will be reviewed again at the end of the Probationary semester. If standards are met, you will return to Good standing. If they are not met, you will be placed on Suspension.

APPEAL PROCESS

If you have been placed on Suspension, you may appeal this decision, in writing, if you have unusual circumstances that prevented you from meeting the Satisfactory Academic Progress Policy. You must also meet with an academic advisor and have an academic plan developed. The appeal letter must describe what prevented you from meeting the Satisfactory Academic Progress criteria and what has changed so that you can meet the standards in the future. The appeal letter with the academic plan should be submitted to the Financial Aid Office as quickly as possible. You will be notified of the results of your appeal in writing. If your appeal is approved, you will be placed on Probation and will be eligible for financial aid as long as you meet the requirements of the academic plan.

REGAINING ELIGIBILITY FOR FINANCIAL AID WITHOUT AN APPEAL

After successfully completing at least one semester, without the benefit of financial aid, you may be reconsidered for funding. You must meet all of the standards described above and notify the Financial Aid Office that you would like to have your eligibility for funds re-evaluated.

EXAMPLES

1) During the fall semester you were registered for 12 credits at the end of the add/drop period. During the spring semester you were registered for 9 credits at the end of the add/drop period. Your total attempted credits for the academic year is 21. After the add/drop period, you withdrew from one course in the fall semester, but successfully completed the remaining 9 credits. In the spring semester, you completed all 9 credits with grades of "D" or better. Your total earned credits is 18. If you have attempted more than 15 credits, you must complete at least 66.67%. You completed 18 of 21 credits, which is 85%, so you are meeting the standards. If you have attempted no more than 15 credits, you must complete 50% of the credits attempted, so in this example if you earn at least 11 credits you will meet the standards. You are considered in Good standing for financial aid.

2) You are in an associate degree program that requires a total of 62 credits. You have a total of 93 credits attempted at the end of the academic year. You have reached your maximum time frame (62 credits X 150% = 93 credits) and are no longer eligible for financial aid funding. You will be placed on Financial Aid Suspension.

Academic Information

Quinsigamond Community College offers over seventy-eight Associate Degree and Certificate study options in the areas of Business, Engineering and Technology, Health Care and Human Services, Liberal Arts, and General Studies. The College can prepare students for transfer to a bachelor's level program at a four-year college or university, or for immediate entry into a career field after graduation. If one enrolls as a full-time student in the day, he or she can expect to complete your Associate Degree in two years. Most Certificate programs can be completed in two semesters or less of full-time study. Opportunities for part-time study exist in both the day and evening, on weekends, and during the summer. If one enrolls as a part-time student, the length of time it takes to complete the degree or certificate will depend upon his or her course load each term.

At Quinsigamond, the academic year consists of a Fall and a Spring Semester, each of which is approximately fifteen weeks long. Fall classes begin in September and continue through mid-December. Spring classes begin in late January and end in early May. Our Summer Sessions begin in late May and continue through August.

To be considered a full-time student, one must be enrolled for a minimum of 12 credits each semester. If one enrolls for fewer than 12 credits, he/she is considered a part-time student. Quinsigamond has a maximum credit registration policy. If a student wishes to register for more than 19 credits in any semester, he or she must obtain the prior approval of the Academic Vice President.

Any student who has completed fewer than 30 credits of course work is considered a Freshman. A student who has completed at least 30 credits is considered a Sophomore.

DEGREE REQUIREMENTS

The Board of Higher Education has statutory authority to confer the Associate Degree through the individual community colleges. Upon the recommendation of the faculty, qualified candidates are awarded the degree of Associate in Arts (A.A.), Associate in Science (A.S.), or Associate in Applied Science (A.A.S.) at Quinsigamond Community College. The College also awards certificates in various fields. To qualify for a degree or certificate, the student must satisfy the following requirements:

- Apply for, and be admitted, to a degree or certificate program offered by the college;
- Complete the required courses and the specified number of credit hours for the program in which he or she is enrolled;
- Earn a minimum of 15 credits in residence at Quinsigamond Community College;
- Maintain a quality point average of at least 2.0; and
- Satisfy all financial obligations to the College. Recipients of Stafford Loans must also complete an exit interview with the Financial Aid Officer prior to graduation.

Students completing all requirements for a Certificate Program while enrolled in a Degree Program may apply for that Certificate and also continue in the Degree Program.
Degrees and Certificates are conferred three times a year—after the Fall and Spring Semesters, and after the Summer Session. Commencement Exercises are held once a year, at the end of the Spring Term. All students who complete Degree or Certificate requirements in the summer, fall, or spring will have their names included in the Commencement Program and will be eligible to participate in the Commencement ceremony.

RESIDENCE REQUIREMENT

A minimum of 15 credit hours is required to fulfill the College residency requirement. The balance of credits may be drawn from regionally accredited postsecondary institutions and/or credit by examination in applicable situations.

EARNING A DEGREE IN TWO PROGRAMS

If the student receives an Associate Degree from Quinsigamond and wishes to qualify for a degree in another program, he or she must complete all major course requirements in the second program, as well as meet the residence requirement of the College.

Criminal Offender Record Information and Sex Offender Registry Information Checks (CORI/SORI)

In order for a student to be eligible to participate in an academic, community or clinical program that involves potential unsupervised contact with children, the disabled, or the elderly, the student may be required to undergo a Criminal Offender Record Information (CORI) check and/or a Sex Offender Registry Information (SORI) check. Students found to have certain criminal convictions or pending criminal actions will be presumed ineligible to participate in such activities. The College is authorized by the Commonwealth's Criminal History Systems Board, pursuant to Massachusetts General Laws, Chapter 6, Sections 167-178B, to access CORI records The College shall refer to regulations issued by the Commonwealth's Executive Office of Health and Human Services, 101 Code of Massachusetts Regulations 15.00-15.16, as guidance when assessing student CORI records. Sex Offender checks shall be performed pursuant to Massachusetts General Laws, Chapter 6, Sections 178C-178P.

GENERAL EDUCATIONAL DEVELOPMENT (GED)

GED Information: The General Educational Development Test (GED Tests) provides the opportunity to earn a high school equivalency diploma. This credential is recognized as a key to employment opportunities, advancement, further education, and financial rewards.

GED tests are administered on campus twice a month and at The Training and Education Center once a month.

To Register and Schedule a Test

To register for a test, students should call 508.854.4407 to schedule a registration appointment. The GED Test Registration Office is located in room 102A in the Administration Building. Office hours are 8:15 a.m. – 4:15 p.m., Monday through Friday, and by appointment.

Requirements at registration are:

1. One picture ID (license, learners permit, state ID, or passport)
2. GED Testing Fee of $65.00 (check or money order only)
3. If the student is under 18 years of age, he or she will need a letter from his/her school stating that he/she has withdrawn, and he/she will need a parent or guardian with him/her at the registration.

The mailing address is:

GED Testing Office
Quinsigamond Community College
Box 134
670 West Boylston St.
Worcester, MA 01606
508.854.4407

PLEASE NOTE:
To schedule a GED test, please refer to the above information.
To schedule a predictor test, please call 508.751.7905. To learn more about our free GED preparation classes, please call 508.751.7911 or 508.751.7910. To learn more about our free online GED preparation, please call 508.751.7930.

What are the GED Tests?

The GED Tests are five tests in the areas of Writing, Reading, Social Studies, Science, and Mathematics. The questions in each of these tests require one to use general knowledge and thinking skills. Few questions ask about facts, details, or definitions.

Special Accommodations for GED Testing

Individuals with disabilities: Individuals with documented physical, emotional, or special learning disabilities may request special accommodations for GED testing. Registration payment for the GED Tests may be made after final determination has been made regarding a request for accommodation on the GED Tests.

Contact the GED Testing Office at Quinsigamond Community College for information on Special Accommodations for GED Testing. 508.854.4407.

EXPERIENCE-BASED EDUCATION (EBE)

Credit for Prior Learning

At Quinsigamond, students may be able to earn academic credit through testing, or by developing a portfolio, which documents your prior learning.

- Challenge Examinations enable students to earn credit for courses listed in the Quinsigamond Catalog by taking a test developed and administered by a Quinsigamond faculty member. Generally, a student may not request a Challenge Examination when other proficiency examinations (CLEP, DANTES, etc.) are available to replace a failed course or to raise a low grade. Students applying for academic credit through Challenge Examination pay current fees. Program restrictions apply. Application for Challenge Examination can be made in Room 272A.
- Credentialing is the process of earning credit for structured learning experiences conducted by qualified instructors in non-collegiate institutions. Accreditation occurs through establishing an equivalency between the non-collegiate course and a Quinsigamond course. Some examples include certain vocational-technical high schools, the Massachusetts Firefighting Academy, and branches of the Military. Students applying for academic credit through credentialing pay current fees. Program restrictions apply. Information about credentialing can be found in Room 272A.
- Portfolio Assessment is available to students who can document their skills and competencies attained through non-collegiate training and/or life experience. This documentation is reviewed and evaluated by a Quinsigamond faculty member who measures demonstrated learning outcomes against established academic standards. Students applying for academic credit through Portfolio Assessment pay current fees. Program restrictions apply. Application for Portfolio Assessment can be made in Room 272A.

QCC SPONSORED LEARNING

At Quinsigamond, students may also earn academic credit through Directed Study, or Tutorial Study. These experiences require approval by the appropriate Academic Dean. Each involves individualized study under the supervision of a member of the faculty.

- Directed Study is an opportunity for individualized learning about topics not offered as established Quinsigamond courses. The nature and scope of the learning experience are determined by the student, in collaboration with an instructor. Directed Study students are required to pay full tuition and fees. Application for Directed Study can be made in the EBE office, Room 272A.
- Tutorial Study enables students nearing graduation to study the subject matter of courses listed in the Quinsigamond Catalog on an individualized basis. This option is not available if the course is scheduled during the requested semester. To be eligible for Tutorial Study, students must be enrolled in the academic program requiring the tutorial course, and they are required to meet strict eligibility guidelines. Those enrolling in Tutorial Study pay full tuition and registration fees. Application for Tutorial Study can be made in 272A.

PROFICIENCY EXAMINATIONS

- Advanced Placement: QCC awards credit to students who score 3 or higher on the AP examinations, administered by the College Board. Students must provide the official AP College Grade Report to the EBE office, Room 272A.
- College Level Examination Program (CLEP): Credit will be awarded to students who achieve scores at or about the fiftieth percentile on the CLEP exam. The general battery includes examinations in English, humanities, mathematics, natural science and social science/history. A maximum of 32 credits may be awarded for all of the general exams, if the appropriate score is achieved. Students must provide the official CLEP transcript to the Registrar's Office, Room 152A. Please note: certain program restriction apply.
- Defense Activities for Nontraditional Education Support program (DANTES) Credit will be awarded to students who achieve scores at or about the fiftieth percentile on the DANTES exam, administered through Educational Testing Service (ETS), which covers a wide range of technical, business and academic subjects. Students must provide the official DANTES transcript to the EBE office, Room 272A. Please note: certain program restrictions apply.

For more information, contact Experience-Based Education, 508.854.4380.

ENROLLING IN COURSES OFFERED BY WORCESTER CONSORTIUM COLLEGES

Full-time day students at Quinsigamond, may register for one day school course offered by any member of the Colleges of the Worcester Consortium. Registration is on a "space available" basis and is subject to course prerequisites and any other course restrictions. If a similar course is being offered at Quinsigamond, the student's request for permission to cross-register may be denied. Cross-registered students are subject to all of the regulations of the institution providing the course. Although students are limited to one cross-registration each semester, exceptions to this requirement may be made by the Academic Vice President, but only in unusual circumstances. Contact the Registrar's Office (Rm. 152A) for more information about enrolling in a course at a Consortium College.

Assessment of Student Learning

Quinsigamond Community College employs the traditional practice for assessment of student learning wherein the quantity of learning is measured by the number of credits (semester hours) earned, and its quality is recognized by an award of a grade for the learning experience. The design of this college practice shall be, so far as practicable, responsive to the needs of students enrolled in a course or program. The status of the student in a program shall be determined by accumulated course grades earned.

GRADING POLICY

1. The grading policy shall be in conformity with the College mission of access and quality.
2. Grades shall be awarded only for demonstrated student learning.
3. Program goals shall be achieved through successful completion of established learning outcomes of educational experiences in the program.
4. Learning outcomes of educational experiences shall constitute the basis for assessing student learning.
5. The criteria for assessing learning outcomes shall be as objective as possible.

GRADING SYSTEM

The individual faculty member may determine what numerical equivalent, if any, to assign to the various grade designations. Faculty may use an absolute numerical value or they may grade on the class average. The following table indicates recommended but non-mandatory numerical/letter equivalents for awarding grades. Note: The quality point for each letter grade is college-wide policy, not merely recommended as a guideline:

Academic	Grades	Quality	Points
A	95-100	Outstanding	4.0
A-	90-94		3.7
B+	87-89	High Quality	3.3
B	83-86		3.0
B-	80-82		2.7
C+	77-79	Average	2.3
C	73-76		2.0
C-	70-72		1.7
D+	67-69		1.3
D	63-66		1.0
D-	60-62		0.7
F	Failed		0.0

The status of the student may also be indicated by the following designations which will not be computed in the QPA.

I - The student has satisfied the major requirements of the learning experience, as judged by the instructor, and can complete the assigned work by the end of the twelfth week of the following full semester.

I/R - The student has agreed to repeat the course within the following year. Not computed in the QPA until converted to an academic grade.

AU - The student is registered in the learning experience as an audit student. Not computed in the QPA.

W - The student has officially withdrawn on his/her own from the learning experience. Not computed in the QPA.

WA The student has been withdrawn administratively for failure to fulfill financial or immunization obligations or for medical or disciplinary circumstances. Not computed in the QPA.

X - The student has not officially withdrawn from the learning experience, and the instructor has judged there is insufficient basis for evaluation. The X grade is considered an indication of unsatisfactory academic progress for financial aid purposes.

P - The student has satisfactorily completed the learning experience with a C grade or better. Not computed in the QPA but computed in credits attempted.

Q - The student has registered for a course with a laboratory or clinical component and the grade is reflected in the overall course grade.

GRADING REGULATIONS

1. The letter grades A,B,C,D,F shall be awarded for learning outcomes for an educational experience achieved through alternate delivery systems only if a QCC faculty member is responsible for the entire experience. The letter grade of P shall be awarded for acceptable learning outcomes for a prior learning experience.
2. The minimal passing grade for developmental courses is a “C” grade.
3. The grade of I will be converted to an academic grade by the end of the twelfth week of the following full semester. Students who have not completed the course requirements by the end of the twelfth week will have the course grade changed to F.
4. When a grade of I is issued, the instructor will indicate on a specified form assignments which will remedy the deficiency, or that the course is to be repeated. This form will be filed in the Registrar’s Office. The Registrar will inform the student of the proper process to be followed in order to implement the grade change.
5. If an instructor wishes to use P instead of A, B, or C, he/she must receive written permission from the Academic Vice President before the beginning of the semester.

6. Instructors' course requirements, expected learning outcomes, methods of evaluation, and attendance policy will be published in writing and will be submitted to students by the end of the first week, or equivalent, of class.
7. Evaluation of the student learning will be made according to the instructor's stated learning outcomes.
8. Auditors do not receive official grades on examinations or other class assignments although they may be asked to fulfill all course requirements. No change to or from audit status will be permitted after the first ten weeks of class (or equivalent class hours).
9. If a course is repeated, only one grade will be used in computation of the QPA. However, both the original and the second grade earned will remain on the student's permanent record.
10. Students may add or drop courses during the Add/Drop Period in accordance with the established procedure. The Add/Drop Period is posted in the term schedule booklet.
11. A student may withdraw without penalty through the tenth week (or equivalent) of class. Thereafter, if a student withdraws from a course, the instructor may award a W if work is passing or an F if work is not of passing quality. Students withdrawing from the College are included under this regulation.
12. A student intending to withdraw from a course after the drop/add period must do so prior to the last day of the term as follows:
    - Obtain a withdrawal form from the Registrar's Office or the Advising Office.
    - Return the withdrawal form to the Registrar's Office.
13. Any student who cannot attend classes, take an examination, study, or fulfill work requirements on a particular day due to his or her religious beliefs, shall be excused from such obligations. The student will be provided with an opportunity to make up such examination(s), study, or work requirements. This regulation should also be a part of the attendance policy.

ACADEMIC DISMISSAL AND PROBATION

1. All students matriculating in a degree or certificate program, other than first semester freshmen (cumulatively enrolled for under 17 credits), must meet the following requirements:

Attempted Credit Hours	Dismissal	Probation
17 to 32	QPA under 1.50	QPA 1.50-1.69
over 32	QPA under 1.70	QPA 1.70-1.89

   First semester freshmen (cumulatively enrolled for under 17 credits) who do not meet a minimum QPA of 1.00 will be put on academic probation.
2. Academic probation and dismissal will occur on the basis of the cumulative grade point average.
3. Only courses in which W grades or audits are received will not count in determining full-time and part-time enrolled status.
4. Students who are on probation for two successive semesters are subject to academic dismissal.
5. Academic probation/dismissal will not apply to intersession and summer sessions.
6. All dismissals are subject to review by the Academic Vice President.
7. Students who are academically dismissed from the college may qualify for reinstatement by the following methods
    - attending courses as a non-matriculating student, improving their QPA to the minimal acceptable level, and earning a minimum of six credit hours;
    - reapplying after one year;
    - petitioning the Vice President of Academic Affairs for reinstatement.

ACADEMIC STANDING

"Satisfactory Academic Standing" and "Satisfactory Academic Progress" are synonymous with meeting the standards outlined in Item 2 of Academic Dismissal and Probation. Students on academic probation for one semester meet minimum requirements for good academic standing and satisfactory progress, but if they are on a dismissal status, they will be deemed as not meeting the minimum requirements.

A quality point average of 2.00 is the minimal level for graduating in any degree or certificate program.

APPEAL OF ACADEMIC DISMISSAL

1. Any student who is academically dismissed may appeal his/her case to the Vice President of Academic Affairs.
2. The student is mailed directions along with the dismissal notice instructing him/her to make an appointment to meet with the High Risk Advisor to discuss strategies to raise his/her cumulative average. The student is required to complete an Appeal Form that states the circumstances involved in the dismissal and the recommendations of the High Risk Advisor. The appeal is then forwarded to the Vice President of Academic Affairs for her decision.
3. The student is then contacted by the High Risk Advisor who informs him/her of the Vice President's decision. If the appeal is approved, he/she is then asked to come in to register for courses in accordance with the appeal form recommendations.
4. Students reinstated through appeal remain on Academic Probation and are subject to the Dismissal/Probation Policy again at the end of the next semester.

FRESH START OPTION

Quinsigamond Community College has a "fresh start" option for students who are seeking readmission. Once in a lifetime, if a student returns to Quinsigamond, after being away for at least two consecutive years, he or she can elect the "fresh start" option. The Quality Point Average (QPA) will be calculated only from the point the student is readmitted for the purposes of the College's academic standing policy. However, the student's previous academic work will remain on his or her transcript as a matter of record. The student's previous course work can be applied toward another degree under this policy, but will not be calculated in the QPA. The student must complete a minimum of fifteen (15) credits in the new program. The student's official transcript will include a statement explaining this "fresh start" option. Contact the Registrar's Office at 508.854.4257 for further information.

PETITION PROCESS

If the student believes there are unusual or extenuating circumstances which justify his or her exemption from an academic regulation (i.e., graduation course requirement), he or she can obtain a Student Petition form from the Registrar's Office (Room 152A). After completing the form, it must be returned directly to the Registrar's Office. It will be forwarded to the Academic Vice President for a final decision on the appeal.

REQUEST TO CHANGE STUDY OPTION

The student can request to change from one degree or certificate program to another by completing a Study Option Change Request. This form is available in the Admissions Office (2nd Floor, Harrington Learning Center) or in the Advising Center (Room 61, Administration Building.) In order to be approved to change from one academic program to another, the student must meet the minimum academic admissions requirements for the program he or she is requesting to enter.

COURSE CHANGES

Students should have their semester course schedule in final form by the end of the registration period. If the student wishes to make a change in his or her schedule, he or she must contact the Registrar's Office (Room 152A) or Advising Office (Room 61A) during the Add/Drop Period. However, it may not be possible to accommodate every request for a course or section change.

REPEATING A COURSE

If the student repeats a course, only one grade will be used in the computation of the QPA. However, both the original and the second grade earned will remain on the student's permanent record. If the student wishes to repeat a course for any reason, he or she must complete a special form, which is available at the registrar's office (Room 152A). It is important to note, however, that the college's standards of satisfactory academic progress for federal financial aid requires that the student complete his/her program within 150% of the credits required for that program. Too many repeat courses will have an impact on this requirement. All courses attempted, including withdrawals are counted toward the 150% calculation.

PROGRESS REPORTS

During the eighth week of classes each semester, the student will receive mid-semester progress grades. Progress grades do not become part of the student's permanent record and are intended only as indicators of your progress in specific courses.

RESTRICTED COURSES

To insure the availability of required courses for students enrolled in specific programs, certain courses may be designated as "restricted."

- Restricted courses will be identified by the Academic Vice President or his/her designee.
- Admission will be prioritized according to criteria set by Academic Vice President/designee as follows:
    a. Students enrolled in the program;
    b. Students on the related QCC program waiting list; and other students (with the approval of the Academic Vice President or designee).

SEQUENTIAL COURSES

In curricula where sequential courses must be arranged in the order of difficulty, the beginning courses will present a basic knowledge of the discipline, including the philosophy, techniques, and terminology as appropriate; and the contents of the succeeding courses will be based upon that knowledge. A course prerequisite will be established when a body of knowledge or skills level is necessary for a sequential course.

- Any student registered for a course for which he/she does not have the listed prerequisite will be withdrawn from that course.
- The Academic Dean or a designee will place the incoming student at the appropriate academic level according to his/her demonstrated performance or achievement.
- In sequential courses, where the first semester course is a prerequisite for the second semester course, a student receiving a 12 week "I" must petition the appropriate Academic Dean for admittance to the sequential course.
- If a student has achieved advanced placement and wishes credit for previously acquired skills in that subject, he/she must apply to the Office for Academic Services (Room 272A) for credit prior to completion of the course.
- A matriculating student who has earned credit in a course with a prerequisite may not subsequently enroll in or receive a grade in the prerequisite course.
- The Academic Dean or designee will annually review course sequencing and prerequisites to assure their continuing validity.

WITHDRAWAL FROM THE COLLEGE

To officially withdraw from the College, the student must meet with an Academic Advisor in the Advising Center, Room 61A at 508.854.4308. The Advisor will assist the student in completing a withdrawal form and discuss possible resources and referrals if appropriate. If the student withdraws after the tenth week and before the final evaluation period, he or she will receive grades from their instructors in accordance with the College's grading policy.

If the student has to withdraw because of medical reasons, he/she should make a request to the Vice President of Enrollment and Student Services (Room 149A), for information. The Vice President will consult with appropriate personnel at the College, as well as the medical services provider of the student. After consultation, he/she will inform the student of the decision. If circumstances warrant, a process for future readmission will also be communicated.

If the student is receiving financial aid, he or she is advised to check with the Financial Aid Office prior to withdrawal. The financial aid may be reduced as a result of withdrawal from the College.

STUDENT HONORS

Quinsigamond Community College recognizes the academic achievement of its students each semester. Students who meet the following criteria are eligible for recognition.

- All grades must be C, or higher. (No grades of I or X are permitted.)
- Semester QPA must be 3.5, or higher, and cumulative QPA must be 2.0, or higher.
- All courses must be college-level.

Dean's List: Students who meet the stated criteria and have earned 12 or more credits in a given semester are named to the Dean's List.

Merit List: Students who meet the stated criteria and have earned 6 or more credits in a given semester, but fewer than 12 credits, are named to the Merit List.
Individual honors are noted on the student's transcript each semester.

Phi Theta Kappa: is the international honorary scholastic society for American Community and Junior Colleges. Its purpose is to recognize and encourage fellowship and scholarship, leadership, and service among two-year college students. Each fall, a limited number of students who have particularly distinguished themselves at Quinsigamond are inducted into membership.

Who's Who Among Students in American Community and Junior Colleges is one of the most highly regarded honors programs in the nation, earning the respect of college faculties and administrators. Recognition as one of the outstanding campus leaders in America is a major achievement. Each year, several Quinsigamond students are named to Who's Who.

Graduation Honors

Each May at graduation, Quinsigamond honors students for their outstanding academic achievement. Students with a Quality Point Average of at least 3.6 prior to graduation qualify for Highest Honors. Students with a Quality Point Average of 3.3 or 3.0 prior to graduation qualify for High Honors, or Honors, respectively.

HONORS PROGRAM

Quinsigamond Community College Honors Program strives to challenge and motivate academically talented students to develop their fullest potential. In addition, the Program seeks to awaken and nurture a sense of humane citizenry and community responsibility with its members.

The Honors Program is the ultimate college experience. Honors courses offer students alternative learning opportunities to enhance critical thinking skills.

Honors Program Curriculum of Study

- ENG 102--English Composition and Literature II, honors section
- ONE course--honors section or honors by contract--from the following list:
    - Social Science Elective
    - Lab Science Elective
    - Business or College Level Math Elective
    - ENG 101 or SPH 101
- ONE course--honors section or honors by contract--from the student's program of study
- IDS 200--Honors Colloquium

Students must obtain a grade of "B" or better in each honors course taken to satisfy the Honors Program requirements.

Students who complete the Honors Program requirements and graduate with an overall QPA of 3.3 or higher will have their participation in the Honors Program noted on their transcript.

Admission to the Honors Program

To be admitted to Quinsigamond Community College's Commonwealth Honors Program, a student must meet at least one of the following criteria:

- Current QCC Students: 3.5 cumulative GPA (progress or final grades) with at least 12 college level credits.
- New QCC Students: CPT Placement Test: a placement of 11 or 12 on the writing exam, placement into ENG 101, and a recommended placement of MAT 099.
- Transfer Students: in good standing from another Commonwealth Honors Program.
- A student who does not meet one of the above automatic admissions criteria may apply to the Honors Coordinator, providing other evidence of academic success including recommendations from high school or college faculty.

To remain in good standing, and for QCC's Honors Program to be recognized as a Commonwealth Honors Program, all students, once accepted into the Honors Program, must maintain a cumulative grade point average of no less than 3.3.

The Honors Program at Quinsigamond Community College is recognized as a Commonwealth Honors Program by the Massachusetts Department of Higher Education.

All potential Honors Program students must meet with the Honors Program Coordinator. For further details, contact Associate professor Susan McPherson at 508.854.2759 or e-mail smcpher@qcc.mass.edu

Programs of Study

Degree and Certificate Programs Offered by Quinsigamond Community College

(Note: QCC offers an expansive array of non-credit courses through our Training and Education Center. Contact the Center at 508.854.4305 for more information.)

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Programs of Study

Degree and Certificate Programs Offered by Quinsigamond Community College

(Note: QCC offers an expansive array of non-credit courses through our Training and Educational Center. Contact the Center at 508.854.4305 for more information.)

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*Mount Wachusett Community College Program
** Northern Essex Community College Program

The following information provides students with an overview of how programs of study are displayed:

"1" Semesters are groupings of courses that generally need to be completed before proceeding to the courses listed in the next Semester. For example, APA 114 in Semester 1 needs to be completed before enrolling in APA 115 in Semester 2.

"2" Course Title refers to the official "Title" or the "Name" of each course.

"3" Course Number refers to the actual course number. The three-letter prefix and the course number reflect how courses are listed in the course schedule booklet as well as in the College's catalog. Course listings are first arranged in alphabetical order using the three-letter prefix; within the same alpha listing, courses are listed in ascending numerical order.

"4" Offered refers to the semester in which the course is typically offered. "F" refers to the Fall Semester, "S" refers to the Spring Semester, and "SU" refers to the Summer Session.

"5" Plan to Take provides students with a space to fill in their estimated personal time frame for course completion.

"6" Grade column provides students with a chance to visualize their overall academic record.

"7" Credits refer to the actual number of credits associated with each course.

"8" Refers to Total Number of Credits required for graduation.

"9" Prerequisite refers to any course or courses that must be completed before enrolling in the course in question. The abbreviation "Co-req" or "Corequisite" indicates that a specific course or courses must be taken at the same time as the course in question. Sometimes it is permissible to take a co-req course in advance of enrolling in the course in question.

"10" This section contains valuable information regarding your area of study.

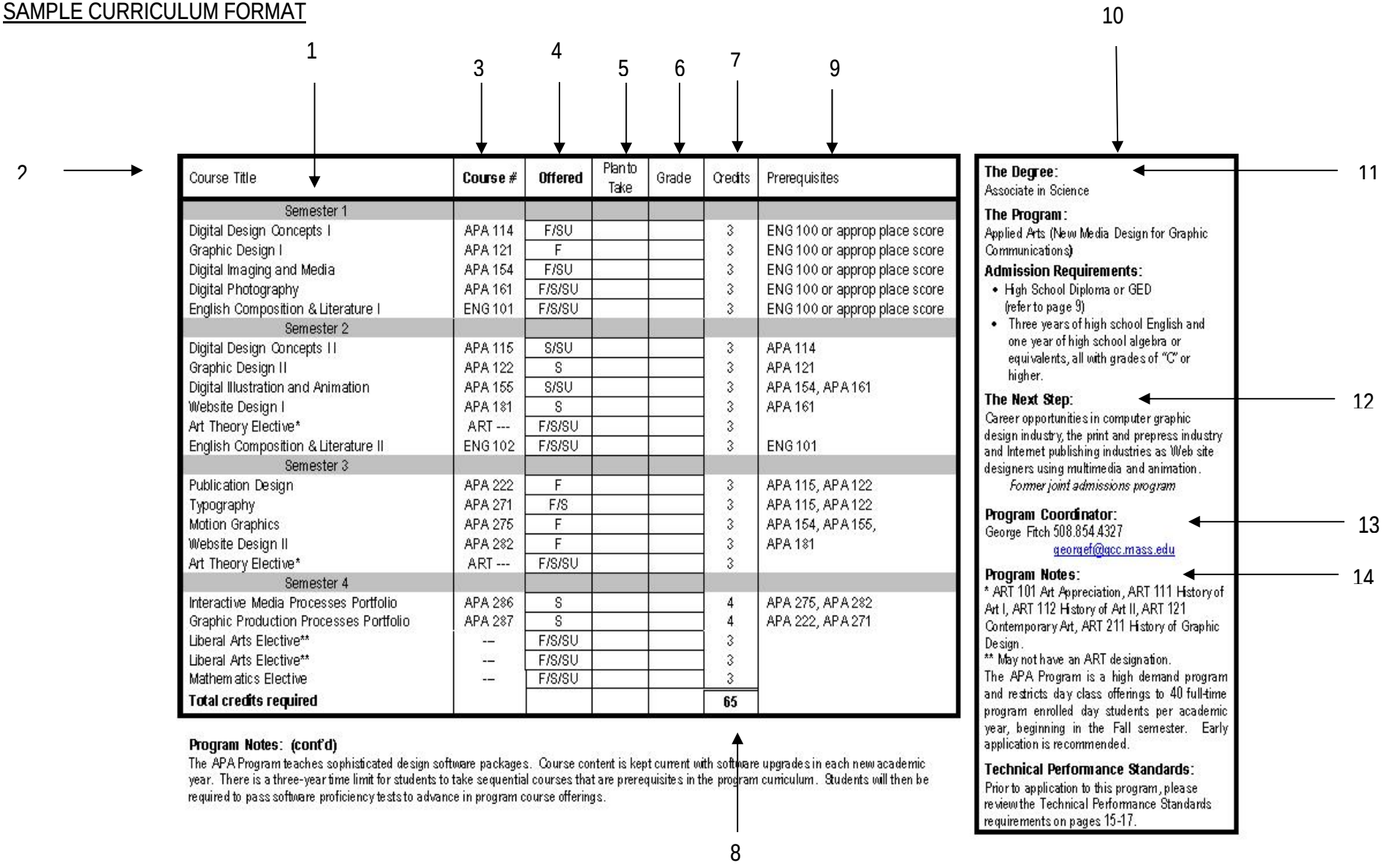
"11" The Degree indicates the actual degree students will receive upon finishing the program.

"12" Your Next Step provides students with the options available to them once they complete the program of study.

"13" Here students will find the name of the Faculty Member who serves as Faculty Coordinator for the program. His or her email address is provided for your convenience.

"14" The section on Program Notes summarizes any unique information needed for the program. Certain programs have longer introductory pages that provide additional program information.

SAMPLE CURRICULUM FORMAT



Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Digital Design Concepts I	APA 114	F/SU			3	ENG 100 or approp place score
Graphic Design I	APA 121	F			3	ENG 100 or approp place score
Digital Imaging and Media	APA 154	F/SU			3	ENG 100 or approp place score
Digital Photography	APA 161	F/S/SU			3	ENG 100 or approp place score
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Semester 2						
Digital Design Concepts II	APA 115	S/SU			3	APA 114
Graphic Design II	APA 122	S			3	APA 121
Digital Illustration and Animation	APA 155	S/SU			3	APA 154, APA 161
Website Design I	APA 181	S			3	APA 161
Art Theory Elective*	ART ---	F/S/SU			3	
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Semester 3						
Publication Design	APA 222	F			3	APA 115, APA 122
Typography	APA 271	F/S			3	APA 115, APA 122
Motion Graphics	APA 275	F			3	APA 154, APA 155,
Website Design II	APA 282	F			3	APA 181
Art Theory Elective*	ART ---	F/S/SU			3	
Semester 4						
Interactive Media Processes Portfolio	APA 286	S			4	APA 275, APA 282
Graphic Production Processes Portfolio	APA 287	S			4	APA 222, APA 271
Liberal Arts Elective**	--	F/S/SU			3	
Liberal Arts Elective**	--	F/S/SU			3	
Mathematics Elective	--	F/S/SU			3	
Total credits required					**65**	

Program Notes: (cont'd)
The APA Program teaches sophisticated design software packages. Course content is kept current with software upgrades in each new academic year. There is a three-year time limit for students to take sequential courses that are prerequisites in the program curriculum. Students will then be required to pass software proficiency tests to advance in program course offerings.

The Degree:
Associate in Science

The Program:
Applied Arts (New Media Design for Graphic Communications)

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Three years of high school English and one year of high school algebra or equivalents, all with grades of "C" or higher.

The Next Step:
Career opportunities in computer graphic design industry, the print and prepress industry and Internet publishing industries as Web site designers using multimedia and animation.
Former joint admissions program

Program Coordinator:
George Fitch 508.854.4327
georgef@qcc.mass.edu

Program Notes:
* ART 101 Art Appreciation, ART 111 History of Art I, ART 112 History of Art II, ART 121 Contemporary Art, ART 211 History of Graphic Design.
** May not have an ART designation.
The APA Program is a high demand program and restricts day class offerings to 40 full-time program enrolled day students per academic year, beginning in the Fall semester. Early application is recommended.

Technical Performance Standards:
Prior to application to this program, please review the Technical Performance Standards requirements on pages 15-17.

In addition to the general admission requirements, some programs have program-specific admission requirements. For detailed information on program-specific requirements, see pages 12-14. For specific admission requirements to the Health Care Programs, see the informational introduction to each program of study.

APPLIED ARTS - Associate in Science

The Applied Arts Program Associate in Science degree with a major in "New Media Design for Graphic Communications" is a multi-faceted computer based program designated for students seeking a design career in digital media in the Global marketplace. Students produce designs, symbols, typography, illustrations, photography, video, multimedia, sound, and animation for use in print, web and interactive media. Students find entry-level employment opportunities primarily in central Massachusetts, Metro-west, and the greater Boston area. The digital media graphic arts industry includes printing and electronic publication, prepress technologies, advertising and corporate identity promotion, marketing, website design production, maintenance, and content production.

Measurable APA Program Goals prepare "New Media Design for Graphic Communications" graduates to:

1) Demonstrate mastery of graphic art computer technology competencies to produce designs, symbols, typography, illustrations, photography, video, multimedia, sound, and animation for use in print, electronic publications, and digital media to help communicate ideas in the global marketplace.
2) Achieve graphic art computer competencies to communicate ideas for promotion and sales of products for newspapers, magazines, web publications, multimedia and video content providers, ad agencies and manufacturers.
3) Achieve graphic art computer competencies in electronic and digital design technologies for career opportunities in the computer graphic design industry.
4) Achieve graphic art computer competencies in electronic and digital design technologies for career opportunities in the print and prepress industry.
5) Achieve graphic art computer competencies in electronic and digital design technologies for career opportunities in Internet publishing industries as website designers, maintainers, and content providers using multimedia and animation.
6) Achieve computer hardware proficiency in Internet and intranet networking and navigation; in Macintosh computer systems; in support devices such as scanners, printers, portable and internal storage; in digital video and digital camera operation; and compact disk formatting.
7) Produce a print, PDF, web presence and interactive DVD portfolio of student work for presentation to future employers or for transfer to institutions of higher learning.
8) Transfer to bachelor degree programs at colleges and universities with related fields of study.
9) Provides a progressive framework of courses that increase student computer hardware and software competencies to meet general education core curriculum goals for measurable proficiencies in Technology Applications and Electronic Resources.
10) Provides a progressive framework of courses that use weekly critiques and peer review of design projects that meet general education core curriculum goals for measurable proficiencies in Oral Communication and Teamwork.
11) Provides 21 liberal arts credits including college level English, art theory and math. The Applied Arts Program curriculum thus integrates academic, career and technology training goals with the College's core curriculum goals of academic integrity, communication skills, and computational, technological and analytical skills competencies.

APPLIED ARTS - Associate in Science (Program Code: GA)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Digital Design Concepts I	APA 114	F/SU			3	ENG 100 or approp place score
Graphic Design I	APA 121	F			3	ENG 100 or approp place score
Digital Imaging and Media	APA 154	F/SU			3	ENG 100 or approp place score
Digital Photography	APA 161	F/S/SU			3	ENG 100 or approp place score
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Semester 2						
Digital Design Concepts I I	APA 115	S/SU			3	APA 114
Graphic Design II	APA 122	S			3	APA 121
Digital Illustration and Animation	APA 155	S/SU			3	APA 154, APA 161
Website Design I	APA 181	S			3	APA 161
Art Theory Elective*	ART ---	F/S/SU			3	
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Semester 3						
Publication Design	APA 222	F			3	APA 115, APA 122
Typography	APA 271	F/S			3	APA 115, APA 122
Motion Graphics	APA 275	F			3	APA 154, APA 155,
Website Design II	APA 282	F			3	APA 181
Art Theory Elective*	ART ---	F/S/SU			3	
Semester 4						
Interactive Media Processes Portfolio	APA 286	S			4	APA 275, APA 282
Graphic Production Processes Portfolio	APA 287	S			4	APA 222, APA 271
Liberal Arts Elective**	---	F/S/SU			3	
Liberal Arts Elective**	---	F/S/SU			3	
Mathematics Elective	---	F/S/SU			3	
Total credits required					65	

Program Notes: (cont'd)

The APA Program teaches sophisticated design software packages. Course content is kept current with software upgrades in each new academic year. There is a three-year time limit for students to take sequential courses that are prerequisites in the program curriculum. Students will then be required to pass software proficiency tests to advance in program course offerings.

The Degree:

Associate in Science.

The Program:

Applied Arts (New Media Design for Graphic Communications)

Admission Requirements:

- High School Diploma or GED (refer to page 9)
- Three years of high school English and one year of high school algebra or equivalents, all with grades of "C" or higher.

The Next Step:

Career opportunities in computer graphic design industry, the print and prepress industry and Internet publishing industries as Web site designers using multimedia and animation.

Former joint admissions program

Program Coordinator:

George Fitch 508.854.4327

georgef@qcc.mass.edu

Program Notes:

* ART 101 Art Appreciation, ART 111 History of Art I, ART 112 History of Art II, ART 121 Contemporary Art, ART 211 History of Graphic Design.

** May not have an ART designation.

The APA Program is a high demand program and restricts day class offerings to 40 full-time program enrolled day students per academic year, beginning in the Fall semester. Early application is recommended.

Technical Performance Standards:

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

AUTOMOTIVE TECHNOLOGY

The Ford Maintenance and Light Repair Program Certificate curriculum was designed by Ford Motor Company to prepare certified light line technicians for Ford/Lincoln Mercury dealerships. The program features hands-on training on late model vehicles as well as classroom instruction. The curriculum is delivered in three semesters. Upon successful completion, the graduate will be awarded a Certificate in Maintenance and Light Repair.

Should the graduate wish to continue his/her education, all of the courses required for the certificate will apply towards the Associate in Applied Science in Automotive Technology degree offered by the College.

The Associate in Applied Science in Automotive Technology prepares the graduate to:

- Become a successful professional automotive technician at the Master Level.
- Become an Automotive Service Excellence (ASE) certified Master technician.
- Become knowledgeable in all aspects of automotive systems and service techniques, allowing the graduate to adapt to new technology and service procedures as they are developed.
- Transfer to a bachelor's degree program at colleges and universities with related fields of study.
- Be capable to grow as a dealership employee, moving up the career ladder.

Upon successful completion of the Automotive Technology Program, the graduate will fill the need of the many dealerships and independent repair shops in the Central Massachusetts area and beyond. The graduates will have studied both technical and general education disciplines. The technical courses are aligned with the eight specialty areas of automotive service and are scheduled in a progressive order. This progressive order allows the student to learn and apply the basic skills needed early in the program. The knowledge and skills are expanded as they progress and are reinforced in late courses. The general education courses are designed to expose the students to the world beyond automobiles.

CORI/SORI:
A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) may be required of all students enrolled in AUT 299. Finger printing and drug testing may be required.

Additional Cost:
Students enrolled in AUT 299 may incur an additional expense for professional liability insurance.

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

Prospective students should note that all technical courses (AUT designation) required in this program are offered off-site in QCC's automotive technology laboratory.

AUTOMOTIVE TECHNOLOGY - Associate in Applied Science (Program Code: AT)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Fundamentals of Automotive Service	AUT 102	F			3	
Automotive Electrical Systems	AUT 111	F			4	
Brake Systems	AUT 131	F			3	
Introduction to English Composition or Humanities Elective*	ENG 100	F/S/SU			3	Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
Semester 2						
Basic Gasoline Engines	AUT 121	S			4	AUT 102
Engine Testing/Performance Analysis	AUT 125	S			4	AUT 102
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Social Science Elective	---	F/S/SU			3	ENG 100 or approp place score
Semester 3						
Suspension, Steering, & Alignment	AUT 133	S			3	AUT 102
Climate Control System	AUT 141	S			3	AUT 121
Field Experience & Cooperative Education in Automotive Technology or Elective	AUT 299 ---	F/S/SU			3	Approval of Program Coordinator
Semester 4						
Automotive Drive Train	AUT 251	F			3	AUT 121
Automotive Transmission & Transaxle	AUT 253	F			4	Coreq-AUT 251
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Business Elective	---				3	
Semester 5						
Basic Automotive Electronics	AUT 113	S			3	AUT 111
Electronic Powertrain Control Systems	AUT 211	S			5	AUT 125
Science or Mathematics Elective**	SCI---	F/S/SU			3/4	
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Total credits required					63-64	

The Degree:
Associate in Applied Science

The Program:
Automotive Technology

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Three years of high school English and one year of high school algebra all with grades of "C" or higher or their equivalents.
- Must have valid driver's license. See admission requirements on page 12.

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

Program Coordinator:
Don Morin 508.529.4883
dmorin@qcc.mass.edu

Program Notes:
Applicants to this program must have a valid driver's license and a driving record that is suitable for prospective employing dealership's insurance requirements. A *Request for Driving Record* will be forwarded to the MA Department of Transportation on behalf of each student accepted to the program each fall.

*Students who place in ENG 101 should take a Humanities elective.
** See Science course descriptions for course pre-requisite information. Most Science electives require a minimum of MAT 095 or higher or the appropriate placement score
**For the purpose of the articulation agreement with Benjamin Franklin Institute of Technology, students must complete one college-level mathematics course. Students may select from among the following choices: MAT 100, 121, 122 or higher

Technical Performance Standards:
Please review the Technical Performance Standards for this program on pages 16-19.

For additional information see program introduction on page 56.

FORD MAINTENANCE AND LIGHT REPAIR PROGRAM – Certificate (Program Code: AMF)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Fundamentals of Automotive Service	AUT 102	F			3	
Automotive Electrical Systems	AUT 111	F			4	
Brake Systems	AUT 131	F			3	
Semester 2						
Basic Gasoline Engines	AUT 121	S			4	AUT 102
Engine Testing/Performance Analysis	AUT 125	S			4	
Semester 3						
Suspension, Steering, and Alignment	AUT 133	SU			3	AUT 102
Climate Control System	AUT 141	SU			3	AUT 121
Total credits required					24	

The Certificate:
Automotive Technology

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Must have valid driver's license. See Admission Requirements on page 12.

The Next Step:
Enter the workforce or the Associate in Applied Science in Automotive Technology program.

Program Coordinator:
Don Morin 508.529.4883
dmorin@qcc.mass.edu

Program Notes:
Applicants to this program must have a valid driver's license and a driving record that is suitable for prospective employing dealership's insurance requirements. A *Request for Driving Record* will be forwarded to the MA Department of Transportation on behalf of each student accepted to the program each fall.

For additional information see program introduction on page 56.

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

BASIC ENGINEERING - Associate in Science

Basic Engineering is a rigorous program which emphasizes mathematics and sciences. It prepares the student for transfer to four-year colleges and universities at which they can continue their education in all fields of engineering (e.g. mechanical, civil, electrical, electronics, environmental, manufacturing, computer sciences), life sciences (e.g. biochemistry, biophysics, bioengineering, genetic engineering, premedical, pharmaceutical), and sciences (e.g. physics, nuclear physics, chemistry).

In a philosophical sense, the Basic Engineering program strives to develop in students the ability and awareness to think critically, solve problems, foster a strong sense of global community, and work wisely and creatively to better themselves and the world in which they live.

The Biomedical Engineering Option prepares graduates specifically for transfer to a baccalaureate program in biomedical engineering. According to the Occupational Outlook Handbook 2010-2011 Edition, biomedical engineers develop devices and procedures that solve medical and health-related problems by combining their knowledge of biology and medicine with engineering principles and practices. Many do research, along with medical scientists, to develop and evaluate systems and products such as artificial organs, prostheses (artificial devices that replace missing body parts), instrumentation, medical information systems, and health management and care delivery systems. Biomedical engineers also may design devices used in various medical procedures, imaging systems such as magnetic resonance imaging (MRI), and devices for automating insulin injections or controlling body functions. Most engineers in this specialty need a sound background in

another engineering specialty, such as mechanical or electronics engineering, in addition to specialized biomedical training. Some specialties within biomedical engineering are biomaterials, biomechanics, medical imaging, rehabilitation engineering, and orthopedic engineering.

Most students complete the A.S. degree requirements in two years, by taking courses in the Fall and Spring semesters plus Summer sessions and Intersession. Courses are also offered in the evening.

For students who are pursuing an associate degree in Basic Engineering, it is strongly recommended they take six of these courses at QCC: Calculus III, Differential Equations, Physics III, Linear Algebra, Probability and Statistics for Scientists and Engineers, Thermodynamics, and C++ for Scientists and Engineers.

It is strongly recommended that interested students contact the program Coordinator as early as possible in order to review degree requirements and make arrangements for any needed prerequisite courses.

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

BASIC ENGINEERING - Associate in Science (Program Code: BE)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Principles of Chemistry I	CHM 103	F/S/SU			4	Coreq-MAT 123
C++ for Scientists & Engineers	CSC 221	F/S/SU			3	MAT 124, Coreq-MAT 233 recommended
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Engineering Graphics	ERG 101	F/S/SU			3	MAT 099
Calculus I	MAT 233	F/S/SU			4	MAT 124
Semester 2						
Principles of Chemistry II	CHM 104	F/S/SU			4	CHM 103
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Calculus II	MAT 234	F/S/SU			4	MAT 233
General Physics I	PHY 105	S/SU			4	MAT 233
Social Science Elective	---				3	
Semester 3						
Introduction to Materials Science	ERG 211	F/SU			3	CHM 103, PHY 105
Statics	ERG 221	F/IN			3	MAT 234, PHY 105, PHY 106, Coreq-MAT 235
Calculus III	MAT 235	F			4	MAT 234
Probability & Statistics for Engineers & Scientists	MAT 237	F/SU			3	MAT 233
General Physics II	PHY 106	F/SU			4	MAT 234, PHY 105
Semester 4						
Thermodynamics	ERG 223	S			3	CHM 104, MAT 235, PHY 106
Strength of Materials	ERG 225	S			3	ERG 221, MAT 235, Coreq-MAT 238
Differential Equations	MAT 238	S/SU			3	MAT 235
Linear Algebra	MAT 243	S/SU			3	Coreq-MAT 238
General Physics III	PHY 205	S/SU			4	MAT 235, PHY 106, Coreq-MAT 238
Total credits required					68	

The Degree:
Associate in Science

The Program:
Basic Engineering

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

The Next Step:
The Basic Engineering program prepares students to transfer to a four-year engineering program.
- This program has transfer articulation agreements
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
  Former joint admissions program

Program Coordinator:
Dadbeh Bigonahy 508.854.4323
dadbehb@qcc.mas.edu

Program Notes:
- Students should note that most required courses carry minimum prerequisites of ENG 100 and MAT124.
- WPI has notified QCC that they will not accept courses for transfer credit if the courses were taken on-line. Students are advised to consult with their transfer institution(s) of choice for information on similar policies.

Technical Performance Standards:
Review the Technical Performance Standards requirements on pages 16-19.

BASIC ENGINEERING - Associate in Science - Biomedical Engineering Option (Program Code: BEBM)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
General Biology: Core Concepts	BIO 101	F/S/SU			4	MAT 095 with a "C" or better on the MAT 095 departmental final exam or approp place score; Coreq- ENG 101
Principles of Chemistry I	CHM 103	F/S/SU			4	Coreq-MAT 123
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Calculus I	MAT 233	F/S/SU			4	MAT 124
Social Science Elective	---				3	
Semester 2						
Cell Biology	BIO 259	F/S			4	BIO 101
Principles of Chemistry II	CHM 104	F/S/SU			4	CHM 103
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Calculus II	MAT 234	F/S/SU			4	MAT 233
General Physics I	PHY 105	S/SU			4	MAT 233
Semester 3 (Summer)						
Probability & Statistics for Engineers & Scientists	MAT 237	F/SU			3	MAT 233
General Physics II	PHY 106	F/SU			4	MAT 234, PHY 105
Semester 4						
Molecular Biology	BIO 260	F/S			4	BIO 259
Introduction to Materials Science	ERG 211	F/SU			3	CHM 103, PHY 105
Statics	ERG 221	F/IN			3	MAT 234, PHY 105, PHY 106, Coreq-MAT 235
Calculus III	MAT 235	F			4	MAT 234
Semester 5						
Thermodynamics	ERG 223	S			3	CHM 104, MAT 235, PHY 106
Strength of Materials	ERG 225	S			3	ERG 221, MAT 235, Coreq-MAT 238
Differential Equations	MAT 238	S/SU			3	MAT 235
Linear Algebra	MAT 243	S/SU			3	Coreq-MAT 238
General Physics III	PHY 205	S/SU			4	MAT 235, PHY 106, Coreq-MAT 238
Total credits required					74	

The Degree:
Associate in Science

The Program:
Basic Engineering-Biomedical Engineering Option

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

The Next Step:
The Basic Engineering program prepares students to transfer to a four-year engineering program.
- This program has transfer articulation agreements
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer Former joint admissions program

Program Coordinator:
Dadbeh Bigonahy 508.854.4323
dadbehb@qcc.mas.edu

Program Notes:
- Students should note that most required courses carry minimum prerequisites of ENG 100 and MAT124.
- WPI has notified QCC that they will not accept courses for transfer credit if the courses were taken on-line. Students are advised to consult with their transfer institution(s) of choice for information on similar policies.

Technical Performance Standards:
Review the Technical Performance Standards requirements on pages 16-19.

BIOTECHNOLOGY - Certificate (Program Code: BI)

Biotechnology simply defined is the use of living organisms to make products beneficial to humans. There is a wide range of opportunities in the biotechnology field from using yeast to make pharmaceuticals to growing artificial skin cells to be used for burn patient grafts. This field is expanding providing many new job opportunities.

The Biotechnology Certificate Program is designed to provide students with an overview of the science of biotechnology as well as the technical skills necessary for employment in the industry. There are a variety of jobs available locally offering good salaries and benefits. Courses from the certificate degree can be applied towards an Associate's Degree.

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Cell Biology	BIO 259	F			4	BIO 101
General Chemistry I	CHM 105	F			4	CHM 090 or one year of high school chemistry and MAT 099 or appropriate Placement score.
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Semester 2						
Molecular Biology	BIO 260	S			4	BIO 259
General Microbiology	BIO 231	S			4	BIO 101 or BIO 259
Semester 3						
Techniques in Biotechnology	BTT 201	SU			6	BIO 259, BIO 260, BIO 231
Total credits required					25	

The Certificate:
Biotechnology Certificate

The Program:
The Biotechnology Certificate program provides a fundamental understanding of the Biotechnology Industry and its techniques.

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- One year of High School algebra with a grade of "C" or higher or equivalent.

The Next Step:
Employment in the Biotechnology Industry. Courses could transfer to an Associates degree or a Bachelors degree in Biotechnology.

Program Coordinator:
Maggie Crowell-Murray 508.854.4311
maggiec@qcc.mass.edu

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

BUSINESS ADMINISTRATION RELATED PROGRAMS

BUSINESS ADMINISTRATION RELATED PROGRAMS

Business Administration at Quinsigamond Community College consists of three Associate Degree Programs:

Business Administration Transfer
- Business Administration Fast Track Option

Business Administration Career
- Business Administration Option
- Administrative Professional Option

Certificate Programs
- Accounting Assistant/Finance Assistant
- Business Administration
- Entrepreneurship
- Insurance
- Medical Office Specialist
- Clerical Office Specialist

The Business Administration Transfer Program prepares students for transfer to four-year colleges and universities upon completion of their associate's degree. Students who graduate from the Business Transfer Program with a GPA of 2.5 or higher are guaranteed admission to all Massachusetts state colleges and to the University of Massachusetts, including the Isenberg School of Management, under the MassTransfer program. For more information about the MassTransfer program please visit the QCC Transfer Office website (http://www.qcc.mass.edu/transfer/).

All students enrolled in the Business Administration Transfer program follow the curriculum found on page 64.

Business Administration Transfer graduates can also take advantage of a special agreement that Quinsigamond Community College has with Nichols College called the "A to B" (associate to bachelor's degree) program. The A to B Program Partnership combines the benefits of a Quinsigamond Community College associate's degree with the advantages of a Nichols College bachelor's degree. There are specific courses required for the A to B program which are 'electives' in the Business Transfer program. Students should meet with their academic advisors to ensure that they are taking the appropriate electives. After being accepted, students begin their third year of study at QCC. Third-year courses are taught by QCC faculty at QCC's per credit cost. The final year of study is charged at the rate of Nichols College's P per credit cost. The A to B program's flexibility is a significant advantage to students as fourth-year coursework, taught by Nichols faculty, can be taken on the QCC campus, on Nichols' campuses in Dudley, Auburn, and Worcester or through Nichols' online program.

The Business Administration Fast Track Option is designed specifically for working adults. Once accepted into the Fast Track program, a student without any prior college credit can complete an Associate of Science degree in Business Administration in approximately two years. At QCC we understand the importance of your education, your time, and your other commitments. The Business Fast Track program blends the flexibility of online learning with the face-to-face support of an on-campus instructor. The curriculum consists of a sequence of five-week courses that meet one night per week. Students must also participate in online coursework or group work as assigned by the instructor.

Graduates of the Business Administration Fast Track program may transfer to the same colleges and universities as graduates of the Business Administration Transfer program.

The Business Administration Career Program prepares students to successfully enter the workforce upon graduation. The program provides a skills-based curriculum that equips students with the knowledge and background needed for a rewarding career in business and industry. The program offers two options: Business Administration Career, Business Administration Option and Business Administration Career, Administrative Professional Option. Students enrolled in the Business Administration Option follow the curriculum shown on page 66.

Students in the Business Transfer Program and in the Business Administration Career Program, Business Administration Option, may select a concentration that develops an area of expertise. Concentrations are shown on page 67. Students are encouraged to select a concentration but not required to do so. Any business course will fulfill the business elective requirement. It is important, however, to work with your academic advisor to select the courses that will be most beneficial to you.

The Business Administration Career, Administrative Professional Option offers an associate's degree with a choice of two concentrations: medical office specialist or clerical office specialist. Graduates of the Administrative Professional Option are highly trained and workforce ready. The required co-op class gives students practical experience in their chosen field. Students should meet with their academic advisors to be sure they are selecting the correct courses for their concentration.

Certificates are shorter programs (nine classes) that give students entry-level skills in various careers. QCC offers certificates in Accounting and Finance, Business Administration, Entrepreneurship, Medical Office Specialist, Clerical Office Specialist, and Insurance. Credits earned in certificate programs can be applied to associate degree programs.

CORI/SORI:
A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) may be required of all students enrolled in BSS 299. Finger printing and drug testing may be required.

Additional Cost:
Students enrolled in BSS 299 may incur an additional expense for professional liability insurance.

BUSINESS ADMINISTRATION/TRANSFER - Associate in Science (Program Code: BT)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
Introduction to Microcomputer Applications or	CIS 111	F/S/SU				
Advanced Microcomputer Applications	CIS 112	F/S			3	CIS 111
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Principles of Macroeconomics	ECO 215	F/S/SU			3	ENG 100 or approp place score
College Mathematics I: Precalculus or	MAT 123	F/S/SU			3	MAT 100 or approp place score
Applied Calculus	MAT 231	F/S			3	MAT 123 or approp place score
Semester 2						
Financial Accounting II	ACC 102	F/S			3	ACC 101, CIS 111 or CIS 112
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Principles of Microeconomics	ECO 216	F/S/SU			3	ENG 100 or approp place score
Statistics	MAT 122	F/S/SU			3	MAT 099 or approp place score
Humanities Elective	---				3	
Semester 3						
Managerial Accounting	ACC 222	F/S			3	ACC 102
Business or Concentration Elective*	---				3	
Business Concentration Elective*	---				3	
Humanities Elective	---				3	
Lab Science Elective	---				4	
Semester 4						
Business or Concentration Elective*	---				3	
Elective	---				3	
Humanities Elective	---				3	
Lab Science Elective	---				4	
Social Science Elective	---				3	
Total credits required					62	

The Degree:
Associate in Science

The Program:
Business Administration-Transfer

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- One year of high school algebra or equivalent with a grade of "C" or higher, or achievement of a score on the QCC math assessment test that qualifies the student for MAT 099 or higher; and three years of high school English or equivalent with grades of "C" or higher, or achievement of a score on the QCC English assessment test that qualifies the student for ENG 100 or higher.

The Next Step:
Enter the workforce or transfer to a four-year program.
- This is a state MassTransfer approved program
  Former joint admissions program
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

Program Notes:
- This program can be completed at the Southbridge location.

*Students may select any Business elective as identified on page 189 or select courses from the various concentrations found on page 67. Students are encouraged, but not required, to identify a Concentration any Business elective will fulfill the degree requirement.

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

BUSINESS ADMINISTRATION/TRANSFER - Associate in Science - *FastTrack* Option (Program Code: BTFT)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Introduction to Microcomputers or Advanced Microcomputer Applications†	CIS 111 CIS 112	F			3	CIS 111
Business Law I or Business Concentration Elective*†	BSL 101	F			3	
Critical Thinking and Problem Solving or Humanities Elective†	HUM 101	F			3	Coreq ENG 100 or approp place score
English Composition & Literature I	ENG 101	S			3	ENG 100 or approp place score
Financial Accounting I	ACC 101	S			3	ENG 100 or approp place score, MAT 090
Financial Accounting II	ACC 102	S			3	ACC 101, CIS 111 or CIS 112
Speech Communications Skills or Humanities Elective†	SPH 101	SU			3	Coreq ENG 101
Introduction to Business or Elective	MGT 101	SU			3	ENG 100 or approp place score
Managerial Accounting	ACC 222	SU			3	ACC 102
Principles of Marketing or Business Concentration Elective*†	MRK 201	SU			3	ENG 100 or approp place score
English Composition & Literature II	ENG 102	F			3	ENG 101 or approp place score
Principles of Macroeconomics	ECO 215	F			3	ENG 100 or approp place score
Principles of Microeconomics	ECO 216	F			3	ENG 100 or approp place score
Statistics	MAT 122	S			3	MAT 099 or approp place score
Integrated Science: The Living World or Lab Science Elective†	SCI 106	S			4	ENG 100 and MAT 095 or approp placement scores
Principles of Management or Business Concentration Elective*†	MGT 211	S			3	ENG 100 or approp place score
College Mathematics I: Precalculus or Applied Calculus†	MAT 123 MAT 231	SU			3	MAT 100 or approp place score MAT 123 or approp place score
United States Government or Social Science Elective†	PSC 201	SU			3	ENG 100 or approp place score
Principles of Ecology or Lab Science Elective†	BIO 105	SU			4	MAT 095 or equivalent; and Eng 100 or equivalent
Man and Morality: an Introduction to Ethics or Humanities Elective†	PHI 131	SU			3	Coreq ENG 100 or approp place score
Total Credits Required					62	

The Degree:
Associate in Science

The Program:
Business Administration –Transfer

Admission Requirements:

- High School Diploma or GED (refer to pg. 9)
- Meet admissions criteria for Business Administration/Transfer program as listed on page 12.
- An interview with the FastTrack enrollment Counselor.
- 2 years of full-time work experience.
- A letter of intent to explain the reasons you want to be in the FastTrack program.
- Letter of recommendation.
- Resume.
- Attend the FastTrack orientation workshop prior to the start of classes.

The Next Step:
Enter or advance in the workforce and/or transfer to a four year program.

- This is a state MassTransfer approved program
  Former joint admissions program
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

FastTrack Enrollment Counselor:
Paula Moseley 508.854.7558
paulajm@qcc.mass.edu

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

Program Notes:
*Business Concentration electives can be found on page 67 of the catalog and include courses with the designations ACC, BSL, FIN, MGT, and MRK.
†Alternate courses are not offered in the Fast Track accelerated format.
All Fasttrack courses are provided in a blended format requiring student participation online over the Internet.

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

BUSINESS ADMINISTRATION/CAREER - Associate in Science - Business Administration Option (Program Code: BB)

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

The Degree:
Associate in Science

The Program:
Business Administration-Career

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

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

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

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

*MAT 100 or higher
**Students may select any Business elective as identified on page 189 of the College catalog or select courses from the various concentrations found on page 67.

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

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

CONCENTRATIONS

DEFINITION: a minimum of 9 credits (3 courses) in a field of business studies offered at QCC.

Concentration Offerings for 2011-2012 Academic Year

- Accounting (Transfer)
- Accounting (Career)
- Business Legal Studies
- Entrepreneurship
- Finance
- Management
- Marketing

NOTE: Students are not formally required to declare a concentration to obtain the A.S. degree. However, Business Administration Students must meet the following requirements to have a DESIGNATED CONCENTRATION in a field of Business. All required courses for each Concentration are listed in bold.

CONCENTRATIONS

ACCOUNTING (TRANSFER):

SELECT ANY 3:	ACC 201	Intermediate Accounting I
	ACC 211	Federal Taxation
	ACC 231	Computerized Accounting
	FIN 111	Personal Financial Planning
	FIN 250	Principles of Finance

ACCOUNTING (CAREER):

REQUIRED:	ACC 222	Managerial Accounting
	ACC 201	Intermediate Accounting I
SELECT ANY 2:	ACC 211	Federal Taxation
	ACC 231	Computerized Accounting
	FIN 111	Personal Financial Planning
	FIN 250	Principles of Finance

BUSINESS LEGAL STUDIES:

SELECT ANY 3:	BSL 101	Business Law I
	BSL 102	Business Law II
	BSL 112	Introduction to Law & Paralegal Practice
	BSL 103	E-Business Law & Ethics
	ALH 106	Medical Law & Ethics
	CRJ 111	Criminal Law
	CRJ 113	Constitutional Law
	HRM 121	Hospitality Law and Ethics

ENTREPRENEURSHIP:

REQUIRED:	MGT 216	Entrepreneurship
SELECT ANY 2:	ACC 231	Computerized Accounting
	BSL 102	Business Law & Ethics II
	FIN 111	Personal Financial Planning
	FIN 250	Principles of Finance
	MGT 211	Principles of Management
	MGT 215	Human Resources Management
	MGT 235	Principles of E-Commerce
	MRK 201	Principles of Marketing
	MRK 221	Sales & Sales Management
	MRK 239	Internet Marketing

FINANCE:

SELECT ANY 3:	ACC 102	Financial Accounting II
	FIN 250	Principles of Finance
	FIN 111	Personal Financial Planning
	FIN 221	Stock Market & Investments
	MRK 111	Principles of Real Estate

MANAGEMENT:

REQUIRED:	BSL 101	Business Law I
	MGT 211	Principles of Management
SELECT ANY 1:	ACC 231	Computerized Accounting
	BSL 102	Business Law II
	FIN 111	Personal Financial Planning
	FIN 250	Principles of Finance
	MGT 215	Human Resources Management
	MGT 235	Principles of E-Commerce
	MRK 221	Sales & Sales Management

MARKETING:

REQUIRED:	MRK 201	Principles of Marketing
SELECT ANY 2:	MRK 111	Principles of Real Estate
	MRK 221	Sales & Sales Management
	MRK 231	Advertising
	MRK 239	Internet Marketing

BUSINESS ADMINISTRATION/CAREER - Associate in Science - Administrative Professional Option (Program Code: BBAP)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Medical Law and Ethics or	ALH 106	S			3	ENG 096
E-Business Law & Ethics or	BSL 103	F/S				Coreq-CIS 111
Introduction to Law & Paralegal Practice	BSL 112	F				
Keyboarding Applications	BSS 101	F/S/SU			3	ENG 091
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Introduction to English Composition**	ENG 100	F/S/SU			3	Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
Math Elective*	MAT ---				3	Mat 099 or approp place score
Semester 2						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
Medical Office Administration I or	ALH 151	F			3	ENG 100 Coreq - ALH 102, BSS 101
Business Office Procedures	BSS 104	F/S/SU				BSS 101, CIS 111, ENG 100
Advanced Microcomputer Applications	CIS 112	F/S			3	CIS 111
Web Page Development I	CIS 134	F/S/SU			3	CIS 111
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Semester 3						
Medical/ Dental Billing and Insurance	BSS 112	F/S			3	ENG 091
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Internet Communications	HUM 142	F/SU			3	ENG 100 and computer literacy
Elective	---				3	
Science Elective	---				3-4	
Semester 4						
Administrative Professional Cooperative Work Experience	BSS 299	F/S/SU			3-6	BSS 104 or ALH 151
Database Management Application Development	CIS 243	F/S			3	CIS 105 or CIS 111
Principles of Macroeconomics	ECO 215	F/S/SU			3	ENG 100 or approp place score
Technical and Workplace Writing	ENG 205	F/S/SU			3	ENG 102
Human Relations in Organizations	PSY 158	F/S			3	ENG 100 or approp place score
Total credits required					60-61	

The Degree:
Associate in Science

The Program:
Business Administration – Career

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

The Next Step:
Transfer to a four-year institution or enter the workforce.

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

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

*MAT 100 or higher
**Students who place into ENG 101 should replace ENG 100 with a Liberal Arts Elective

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

BUSINESS ADMINISTRATION/CAREER - Accounting Assistant/Finance Assistant Certificate (Program Code: AF)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090 or approp place score
Federal Taxation	ACC 211	F			3	ENG 100 or approp place score
Personal Financial Planning	FIN 111	F/S/SU			3	MAT 090 or approp place score
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Introduction to English Composition**	ENG 100	F/S/SU			3	Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
Semester 2						
Financial Accounting II	ACC 102	F/S/SU			3	ACC 101, CIS 111 or CIS 112
Computerized Accounting	ACC 231	S			3	ACC 101
Business Elective*	---	F/S			3	
Business Elective*	---	F/S			3	
Total credits required					27	

The Certificate:
Accounting Assistant/Finance Assistant Certificate

The Program:
Business Administration Career

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

The Next Step:
Enter the workforce or enter the Administrative Professional Option in Business Administration Career.

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

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

*Recommended: Any ACC or FIN course; or MRK 111, BUS 201, BSS 101, BSS 104, BSS 112.
**Students who place into ENG 101 should replace ENG 100 with a Liberal Arts Elective

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

For additional information see program introduction on page 63.

BUSINESS ADMINISTRATION/CAREER – Certificate - Business Administration (Program Code: BAC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Microcomputer Applications or	CIS 111	F/S/SU				
Advanced Microcomputer Applications	CIS 112	F/S			3	CIS 111
English Composition & Literature I	ENG101	F/S/SU			3	ENG 100
Math Elective*	MAT ---				3	MAT 099 or approp place score
Introduction to Business	MGT101	F/S/SU			3	ENG 100
Self-Assessment & Career Planning	PSY 115	F/S			3	ENG 090 and ENG 095 or approp place score
Semester 2						
Financial Accounting I	ACC101	F/S/SU			3	ENG 100 or approp place score, MAT 090
Integrated Communications for Business	BUS 201	F/S/SU			3	CIS 111, ENG 101
Business Law I or	BSL 101	F/S/SU				
E-Business Law & Ethics	BSL 103	F/S			3	Coreq-CIS 111
Business Elective**	---				3	
Total credits required					27	

The Certificate:
Business Administration

The Program:
Business Administration-Career

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

The Next Step:
Enter the workforce or enter the Business Administration Associate Degree program.

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

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

*MAT 100 or higher
**Students may select any Business elective as identified on page189 of the College catalog.

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

BUSINESS ADMINISTRATION/CAREER - Clerical Office Certificate (Program Code: COBB)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Keyboarding Applications	BSS 101	F/ S/SU			3	ENG 091
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Introduction to English Composition	ENG 100	F/S/SU			3	Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
Psychology of Management	PSY 157	F			3	Coreq ENG 100 or approp place score
Semester 2						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090 or approp place score
Business Office Procedures	BSS 104	F/S/SU			3	BSS 101, CIS 111, ENG 100
Integrated Communications for Business	BUS 201	F/S/SU			3	CIS 111, ENG 101
Administrative Professional Cooperative Work Experience	BSS 299	F/S/SU			3	BSS 104 or ALH 151
Web Page Development I or	CIS 134	F/S/SU				CIS 111
Internet Communications	HUM 142	F/S/SU			3	ENG 100 and computer literacy
Total credits required					27	

The Certificate:
Clerical Office

The Program:
Business Administration – Career

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

The Next Step:
Enter the workforce or enter the Administrative Professional Option in Business Administration Career.

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

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

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

BUSINESS ADMINISTRATION/CAREER - Entrepreneurship Certificate (Program Code: EN)

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

The Certificate:
Entrepreneurship

The Program:
Business Administration - Career

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

The Next Step:
Enter the workforce or enter the Business Administration Associates Degree Program.

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

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

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

For additional information see program introduction on page 63.

BUSINESS ADMINISTRATION/CAREER - Insurance Certificate (Program Code: INS)

The Insurance Certificate Program will prepare students for a broad range of career opportunities in the property and casualty insurance industry. The program offers courses that teach the material contained in the AICPCU Property and Casualty Insurance Fundamentals courses and prepares students to sit for several industry-standard certification examinations. Successful graduates who pass these examinations will become certified in both general insurance and in insurance services. Students earn the American Institute for Chartered Property Casualty Underwriters (AICPCU) designation Associate in General Insurance (AINS) *and* Associate in Insurance (AIS).

Classes taught by insurance industry experts cover personal, commercial, property and liability insurance as well as risk management and customer service. Other courses provide students with skills in computers, oral and written communication, and mathematics.

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Principles of Liability and Property Insurance	INS 121	F			3	ENG 100 or approp place score Coreq-INS 122
Principles of Personal Insurance	INS 122	F			3	ENG 100 or approp place score Coreq-INS 121
Semester 2						
Statistics	MAT 122	F/S/SU			3	MAT 099 with a "C" or better on the MAT 099 department final exam or approp placement score
Integrated Communications for Business	BUS 201	F/S/SU			3	CIS 111, ENG 101
Principles of Commercial Insurance*	INS 123	S			3	ENG 100, INS 121, INS 123 Co-req-INS 125
Delivering Insurance Services*	INS 125	S			3	ENG 100, INS 121, INS122 Co-req-INS 123
Business Elective	----	F/S/SU			3	
Total credits required					27	

The Certificate:
Insurance

The Program:
Business Administration – Career

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

Your Next Step:
Enter the workforce or enter the Business Administration Career Program.

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

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

Students must pass six national AICPCU examinations to graduate from this program.

*Restriction: In order to register for this course, students must provide proof of a passing grade on AICPCU national exams INS 21 and INS 22.

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

BUSINESS ADMINISTRATION/CAREER - Medical Office Certificate (Program Code: MSBB)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Medical Terminology	ALH 102	F/S/SU			3	Coreq – ENG 100 or apprp place score
Medical/Dental Billing and Insurance	BSS 112	F/S			3	ENG 091
Medical Office Administration I	ALH 151	F			3	ENG 100 Coreq - ALH 102, BSS 101
Keyboarding Applications	BSS 101	F/S/SU			3	ENG 091
Introduction to English Composition or	ENG 100	F/S/SU				Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
English Composition & Literature I	ENG101	F/S/SU			3	ENG 100
Semester 2						
Medical Law and Ethics	ALH 106	S			3	ENG 096
Medical Coding and Billing	ALH 107	F/S			3	ENG 100 Coreq-ALH 102
Medical Machine Transcription	BSS 212	S			3	ENG 091 Coreq- ALH 102
Administrative Professional Cooperative Work Experience	BSS 299	F/S/SU			3	BSS 104 or ALH 151
Total credits required					27	

The Certificate:
Medical Office

The Program:
Business Administration – Career

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

The Next Step:
Enter the workforce or enter the Administrative Professional Option in Business Administration Career.

Program Coordinator:
Jean McLean 508.854.4410
jmclean@qcc.mass.edu

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

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

COMPLEMENTARY HEALTH - Associate in Science (Program Code: CHM)

The Complementary Health program is designed to educate the student in the principles of Integrative medicine, holistic health, and in the wellness, self-care perspective. The program provides health knowledge consisting of health science, biomedicine, wellness promotion, self-care, and an energetic perspective of health. The program is designed for students who already hold a certificate or license in a holistic or conventional approach to healthcare or a conventional healthcare discipline. The program prepares healthcare providers who are knowledgeable in complementary perspectives of care who are ready for employment in private practices, clinics, hospitals, health and fitness facilities, and wellness centers.

The program is designed to serve as an associate degree completion program. A student must meet the following requirements to receive an Associate in Science degree in Complementary Health:

1) Student must hold certification or licensure with a minimum of 650 hours of training in a recognized area of naturalistic, holistic, or conventional healthcare.

   Note: This certification and/or licensure is required for admission to the Program. Because of the newness of this field, the College reserves the right to determine which licenses or certificates qualify for admission.

2) Student must complete the 32 Core Credits listed.
3) Student must complete a minimum of 15 credits at QCC to meet the residency requirement; 9 of these 15 credits must be earned in CHC courses.
4) Complete a minimum of 60 credits for graduation.
5) Meet the remaining College requirements for graduation.
6) Students are required to pay the current credentialing fee.

Applicants must meet all of the general requirements for admission identified in the current College Catalog. Applicants to this program must have completed MAT 095 and ENG 100, and one year of high school biology or the QCC equivalents all with a grade of "C" or higher. As stated in number 1, applicants must hold a license or certificate in a recognized area of naturalistic, holistic or conventional healthcare. Please refer to the *Admission to Health Science Programs* in the *Admissions* section of the catalog.

Additional costs

Complementary health students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills remediation.

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Certification or Licensure Credentialing (see 1 above)					28	
Semester 1						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or AP Biology. Coreq-ENG 101
Health and Healing	CHC 150	F			3	Coreq-BIO 101, ENG 100
Fundamentals of Complementary Health	CHC 151	F			3	ENG 100
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 2						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
Nutrition	BIO 241	F/S/SU			3	BIO 101 or BIO 111
World Medicines: Harmony and Health	CHC 250	S			3	ENG 101
Applications in Integrative Health	CHC 255	S			3	CHC 150, CHC 151
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Total credits required					60	

The Degree:

Associate in Science

The Program:

The Complementary Health program is a degree completion program for students holding certification or licensure in a recognized area of naturalistic, holistic, or conventional healthcare.

Admission Requirements:

- High School Diploma or GED (refer to page 9)
- Test into MAT 099 and ENG 101, and complete a Biology class within the past 5 years with a minimum grade of C.
- Certification or licensure with a minimum of 650 hours of training in a recognized area of naturalistic, holistic, or conventional healthcare.

The Next Step:

Entry into the workforce, expanded practice, or transfer to a four-year program.

Program Notes:

For more information contact the Office of the Dean for Health Care at extension 4517.

COMPUTER INFORMATION SYSTEMS - Associate in Science - Application Specialist, Database, Programming, or Web Development Options

The Computer Information Systems program prepares students for immediate career opportunities in business and industry or for transfer to a four-year college or university. The rapid changes in our Information Technology world and the utilization of computers in every aspect of business and industry have created an increasing demand for trained personnel in all areas of computer applications. To meet this need, the Computer Information Systems program offers four associate degree concentrations: the Application Specialist Option, the Database Option, Programming Option and the Web Development Option.

The Application Specialist Option provides students with a thorough introduction to today's most widely used computer software applications. The program curriculum provides hands-on computer experience in spreadsheets, advanced database applications, basic programming, web page development, network management, data communication, and systems analysis and design. Additional courses introduce students to the fields of accounting, business law and ethics, and technical writing. The Cooperative Work Experience is a requirement in this program and provides an opportunity for students to apply classroom knowledge to practical work experience. Career opportunities for the Application Specialist Option may include positions in the areas of computer operations, business applications, systems analysis, software support, database development, customer support, technical and microcomputer support.

The Database Option provides students with a basic foundation of database technologies. For many organizations, database systems are the most business-critical component of their information technology infrastructure. Databases drive accounting, human resources, inventory, sales and other key operations. Qualified database professionals are in great demand to utilize, design, maintain and secure these systems for maximum efficiency and competitiveness. This curriculum will focus on database programming and administration concepts and tasks, using RDBMS technology. In addition, students will acquire skills in software development, data communications, as well as foundational knowledge in the field of computer science career opportunities for the database option may include positions as entry level database support specialists.

The Programming Option provides students with a thorough understanding of computer programming through proficiency with both an operating language (C++) and a visual object-oriented language (Java or Visual Basic). The program curriculum also provides students with hands-on computer experience in Web page development, spreadsheets, database concepts, network operations, data communication, and systems analysis and design. The Cooperative Work Experience is a requirement in this program and provides an opportunity for students to apply classroom knowledge to practical work experience. Career opportunities for the Programming Option may include positions as entry level computer and information systems support.

The Web Development Option provides students with a thorough knowledge of Web and Internet server technologies and programming. The curriculum includes state-of-the-art Web applications and programming and focuses on user, business and data services. Students learn the most critical Internet information services such as emails, file transfers, business-to-business, and business-to-customer, and design database-driven Web pages and n-tier Web applications. Students also write programs using some of the most popular programming languages. The Cooperative Work Experience is a requirement in the program and provides an opportunity for students to apply classroom knowledge to practical work experience. Career opportunities for the Web Development Option may include positions as entry level Web developer, Web designer, and Web administrator.

Applicants to the Computer Information Systems program must meet the admissions requirements of three years of high school English and one year of high school algebra, or their equivalents with grades of "C" or higher. A total of 61-62 or 60 credits are required for graduation, depending on the option selected.

CORI/SORI:
A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) may be required of all students enrolled in CIS 299. Finger printing and drug testing may be required.

Additional Cost:
Students enrolled in CIS 299 may incur an additional expense for professional liability insurance.

COMPUTER INFORMATION SYSTEMS – Certificates - Application Specialist, Database, or Web Applications Options

The certificate in Application Specialist certificate is designed for students who want to use today's applications software in the business environment. Credits earned through this curriculum can be transferred to the two Computer Information Systems degrees as part of a career ladder.

The certificate in Database is designed to provide the student with the basic knowledge and skills necessary for career opportunities in entry level Database design, management or administration. This certificate is ideal for adult students re-entering college or for students who are currently in the workforce and want to update their skill sets. The curriculum may be completed in one academic year depending on the student's background in computer applications. Courses in general computer applications and basic programming are combined with basic database development tools and approaches through the use of Relational Database Management Systems (RDBMS) and SQL. At the completion of this certificate, students will be able to manipulate data in a complex RDBMS structures. This certificate is for anyone who wants to understand basic database design and implementation technologies in today's workplace.

The certificate in Web Applications is designed to provide the student with the basic knowledge and skills necessary for career opportunities as an entry level Web Developer or Web Administrator. This certificate is ideal for adult students re-entering college or for students who are currently in the workforce and want to update their skill sets. The curriculum may be completed in one academic year depending on the student's background in computer applications. Courses in general computer applications and basic programming are combined with basic web development tools and approaches through the use of HTML structures, Javascript, CGI and PERL. At the completion of this certificate, students will be able to manage complex web applications in today's rapidly changing internet world. This certificate is for anyone who wants to understand today's web applications, development and technology.

COMPUTER INFORMATION SYSTEMS - Associate in Science - Application Specialist Option (Program Code: CIAS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
E-Business Law & Ethics	BSL 103	F/S			3	Coreq-CIS 111
Introduction to Information Technology	CIS 105	F/S			3	
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Semester 2						
Advanced Microcomputer Applications	CIS 112	F/S/SU			3	CIS 111
Introduction to Programming with C++	CIS 121	F/S			3	Coreq-CIS 111
Introduction to Data Communication & Networks	CIS 141	F/S			3	CIS 111
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT 100 or approp place score
Semester 3						
Web Page Development I	CIS 134	F/S			3	CIS 111
Database Management Application Development	CIS 243	F/S			3	CIS 105 or CIS 111
Career Elective*	---				3	
Technical & Workplace Writing	ENG 205	F/S/SU			3	ENG 102, Computer Literacy
Psychology of Interpersonal Relations or	PSY 118	F/S/SU				ENG 100 or approp place score
Human Relations in Organizations	PSY 158	F/S			3	ENG 100 or approp place score
Semester 4						
Network Management	CIS 237	F/S			3	CIS 141
Systems Analysis & Design	CIS 241	F/S			3	CIS 121 or 3 credits of any programming language
Cooperative Work Experience & Seminar	CIS 299	F/S/SU			3	Approval of Program Coordinator
Statistics	MAT 122	F/S/SU			3	MAT 099 or approp place score
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Total credits required					60	

The Degree:
Associate in Science

The Program:
Computer Information Systems-Web Applications Specialist Option

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Three years of high school English and one year of high school algebra or students equivalents with grades of "C" or higher.

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

Program Coordinator:
NT Izuchi 508.854.2768
nizuchi@qcc.mass.edu

Program Notes:
*Any CIS course with a number of 200 or higher and not already required as part of the Degree program

For additional information see program introduction on page 76- 77.

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

COMPUTER INFORMATION SYSTEMS - Associate in Science - Database Option (Program Code: CIDB)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
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
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT 100 or approp place score
Semester 2						
Introduction to Data Communication & Networks	CIS 141	F/S			3	CIS 111
Visual Basic I	CIS 223	S			3	CIS 111, CIS 121
Database Management Concepts	CIS 244	S			3	CIS 111 or CIS 115 Coreq-CIS 243
Database Management Application Development	CIS 243	F/S			3	CIS 105 or CIS 111
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Semester 3						
Visual Basic II	CIS 224	F			3	CIS 223
SQL Programming	CIS 228	F			3	CIS 121, CIS 243 or CIS 244
Technical and Workplace Writing	ENG 205	F/S/SU			3	ENG 102, Computer Literacy
Statistics	MAT 122	F/S/SU			3	MAT 099 with a "C" or better on the MAT 099 department final exam or approp place score
Speech Communication Skills	SPH 101	F/S/SU			3	Pre/Coreq-ENG 101
Semester 4						
PL/SQL Programming	CIS 229	S, 2009			3	CIS 228, CIS 244
Systems Analysis & Design	CIS 241	F/S			3	CIS 121 or 3 credits of any programming language
Database Administration	CIS 247	S, 2009			3	CIS 228, CIS 244
Cooperative Work Experience & Seminar	CIS 299	F/S/SU			3	Approval of Program Coordinator
Social Science Elective*	---	F/S/SU			3	
Program Specific Elective **	---	F/S/SU			3	
Total credits required					63	

The Degree:
Associate in Science

The Program:
Computer Information Systems-Database Option

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Three years of high school English and one year of high school algebra or student equivalents with grades of "C" or higher.

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

Former joint admissions program

Program Coordinator:
NT Izuchi 508.854.2768
nizuchi@qcc.mass.edu

Program Notes:
* Social Science Elective:
It is recommended, but not required, that students take either PSY 118 Psychology of Interpersonal Relations or PSY 158 Human Relations in Organizations.
** Program Specific Elective:
Students may choose ACC 101 Financial Accounting I, CSC 210 Storage Technologies, or BUS 205 Project Management.

For additional information see program introduction on page 76 – 77.

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

COMPUTER INFORMATION SYSTEMS - Associate in Science - Programming Option (Program Code: CIPR)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
E-Business Law & Ethics	BSL 103	F/S			3	Coreq-CIS 111
Introduction to Information Technology	CIS 105	F/S/SU			3	
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT 100 or approp place score
Semester 2						
Introduction to Programming with C++	CIS 121	F/S			3	Coreq-CIS 111
Web Page Development I	CIS 134	F/S			3	CIS 111
Introduction to Data Communication & Networks	CIS 141	F/S			3	CIS 111
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Mathematics or Science Elective	---				3-4	
Semester 3						
Visual Basic I or	CIS 223	S				CIS 111, CIS 121
Introduction to Java	CIS 226	F			3	CIS 121
Programming with C++ II	CIS 225	S			3	CIS 121
Career Elective*	---				3	
Psychology of Interpersonal Relations or	PSY 118	F/S/SU				ENG 100 or approp place score
Human Relations in Organizations	PSY 158	F/S			3	ENG 100 or approp place score
Lab Science Elective					4	
Semester 4						
Visual Basic II or	CIS 224	F				CIS 223
Java II	CIS 227	S			3	CIS 226
Systems Analysis & Design	CIS 241	F/S			3	CIS 121 or 3 credits of any programming language
Cooperative Work Experience & Seminar	CIS 299	F/S/SU			3	Approval of Program Coordinator
Technical & Workplace Writing	ENG 205	F/S/SU			3	ENG 102, Computer Literacy
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Total credits required					61-62	

The Degree:
Associate in Science

The Program:
Computer Information Systems-Programming Option

Admission Requirements:
- High School Diploma or GED (refer to page 9
- Three years of high school English and one year of high school algebra or students equivalents with grades of "C" or higher.

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

Former joint admissions program

Program Coordinator:
NT Izuchi 508.854.2768
nizuchi@qcc.mass.edu

Program Notes:
*Any CIS course with a number of 200 or higher and not already required as part of the Degree program.

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

COMPUTER INFORMATION SYSTEMS – Associate in Science - Web Development Option (Program Code: CIWB)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Information Technology	CIS 105	F/S/FU			3	
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Introduction to Programming With C++	CIS 121	F/S			3	Coreq-CIS 111
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Math/Science Elective	---	F/S/SU			3-4	
Semester 2						
Web Page Development I	CIS 134	F/S			3	CIS 111
Internet Server Technologies	CIS 135	S			3	CIS 105, CIS 121
Visual Basic I	CIS 223	S			3	CIS 111, CIS 121
SQL Programming	CIS 228	F/S			3	CIS 121, CIS 243 or CIS 244
Database Management Application Development	CIS 243	F/S			3	CIS 111
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Semester 3						
Visual Basic II	CIS 224	F			3	CIS 223
Web Page Development II	CIS 234	S			3	CIS 121, CIS 134
Database Driven Web Pages	CIS 245	F/S			3	CIS 135, CIS 121, CIS 243 Coreq. CIS 234
Technical and Workplace Writing	ENG 205	F/S/SU			3	ENG 102, Computer Literacy
Social Science Elective*	---	F/S/SU			3	
Semester 4						
Systems Analysis & Design	CIS 241	F/S			3	CIS 121 or 3 credits of any programming Language
N-Tier Web Applications	CIS 246	F/S			3	CIS 245, CIS 224, CIS 234
Cooperative Work Experience & Seminar	CIS 299	F/S/SU			3	Approval of Program Coordinator
Humanities Elective	---	F/S/SU			3	
Internet Communications	HUM 142	F/S/SU			3	
Total credits required					63 - 64	

The Degree:
Associate in Science

The Program:
Computer Information Systems-Web Development Option

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Three years of high school English and one year of high school algebra or students equivalents with grades of "C" or higher.

The Next Step:
Enter the workforce or transfer to a four-year program.
- This is a state Joint Admissions approved transfer program.
- More information on transfer is available on pages 22 or at www.qcc.mass.edu/transfer

Program Coordinator:
NT Izuchi 508.854.2768
nizuchi@qcc.mass.edu

Program Notes:
* Social Science Elective:
It is recommended, but not required, that students take either PSY 118 Psychology of Interpersonal Relations or PSY 158 Human Relations in Organization.

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

COMPUTER INFORMATION SYSTEMS – Certificate - Application Specialist Option (Program Code: CAS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
E-Business Law & Ethics	BSL 103	F/S			3	Coreq-CIS 111
Introduction to Information Technology	CIS 105	F/S/SU			3	
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Advanced Microcomputer Applications	CIS 112	F/S/SU			3	CIS 111
Introduction to Programming with C++	CIS 121	F/S			3	Coreq-CIS 111
Introduction to Data Communications & Networks	CIS 141	F/S			3	CIS 111
CIS Career Elective*	---				3	
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Total credits required					27	

The Certificate:
Applications Specialist

The Program:
Computer Information Systems

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

The Next Step:
Enter the workforce or the Associate Degree program.

Program Coordinator:
NT Izuchi 508.854.2768
nizuchi@qcc.mass.edu

Program Notes:
- Students should note that some of the program specific courses require ENG 100 and/or MAT 090 as prerequisites.

*Any CIS course with a number of 200 or higher.

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

COMPUTER INFORMATION SYSTEMS – Certificate – Database Option (Program Code: DB)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Internet Communications	HUM 142	S/SU			3	ENG 100 and computer literacy
Introduction to Programming with C++	CIS 121	F/S/SU			3	Coreq-CIS 111
Introduction to Data Communication & Networks	CIS 141	F/S			3	CIS 111
Semester 2						
Visual Basic I	CIS 223	S			3	CIS 111, CIS 121
SQL Programming	CIS 228	F/S			3	CIS 121, CIS 243 or CIS 244
Database Management Application Development	CIS 243	F/S			3	CIS 105 or CIS 111
Database Management Concepts	CIS 244	F/S			3	CIS 111 or CIS 115 Coreq-CIS 243
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Total credits required					27	

The Certificate:
Database Option

The Program:
Computer Information Systems

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

The Next Step: Enter the workforce or the Associate Degree program

Program Coordinator:
NT Izuchi 508.854.2768
nizuchi@qcc.mass.edu

Program Notes:
- Students should note that some of the program specific courses may require ENG 100 and/or MAT 090 as prerequisites.

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

COMPUTER INFORMATION SYSTEMS – Certificate – Web Applications Option (Program Code: CWA)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Introduction to Information Technology	CIS 105	F/S/SU			3	
Introduction to Programming with C++	CIS 121	F/S			3	Coreq-CIS 111
Web Page Development I	CIS 134	F/S/SU			3	CIS 111
Semester 2						
Internet Server Technologies	CIS 135	S			3	CIS 105, CIS 121
Visual Basic I	CIS 223	S			3	CIS 111, CIS 121
Web Page Development II	CIS 234	S			3	CIS 121, CIS 134
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Internet Communications	HUM 142	F/SU			3	ENG 100 and computer literacy
Total credits required					27	

The Certificate:
Web Applications Option

The Program:
Computer Information Systems

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

The Next Step:
Enter the workforce or the Associate Degree program

Program Coordinator:
NT Izuchi 508.854.2768
nizuchi@qcc.mass.edu

Program Notes:
- Students should note that some of the program specific courses require ENG 100 as a prerequisite.

*Any CIS course with a number of 200 or higher.

For additional information see program introduction on page 76.

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

COMPUTER SCIENCE TRANSFER – Associate in Science

The U.S. Bureau of Labor Statistics projects over the long-term that computer scientists and database administrators should continue to enjoy excellent job prospects. As technology becomes more sophisticated and complex, however, these positions will demand a higher level of skill and expertise from their employees. Individuals with an advanced degree in computer science or computer engineering or with an MBA with a concentration in information systems should enjoy favorable employment prospects. College graduates with a bachelor's degree in computer science, computer engineering, information science, or MIS also should enjoy favorable prospects, particularly if they have supplemented their formal education with practical experience. Because employers continue to seek computer specialists who can combine strong technical skills with good business skills, individuals with a combination of experience inside and outside the IT arena will have the best job prospects." (Source: *Occupational Outlook Handbook 2008-2009*)

The Associate in Science in Computer Science program is designed to prepare students for transfer to four-year institutions, where they can complete the baccalaureate degree, leading to careers in computer science, software engineering, and systems analysis.

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

1. Acquire an intellectual understanding of, and an appreciation for, the central role of algorithms and data structures; recognize and use in practical programs the canonical algorithms and data structures; and evaluate their efficiency and effectiveness;
2. Identify computer hardware from a software perspective - for example, use of the processor, memory, disk drives, display, etc. – and create low-level programs that use the hardware;
3. Understand and use design principles and programming paradigms such as abstraction, decomposition, modularity, encapsulation, generics and inheritance;
4. Design programs decomposed into communicating modules, and analyze and design the interfaces of these modules;
5. Apply object-oriented design and basic software engineering principles to create robust software and test its programs;
6. Understand the possibilities and limitations of what computer technology (software, hardware, and networking) can and cannot do;
7. Understand and apply the concept of the lifecycle, including the significance of its phases (planning, development, deployment, and evolution); and the implications for the development of all aspects of computer-related systems (including software, hardware);
8. Understand and use the basic mathematical concepts and skills underlying the computer science field;
9. Understand the basic principles of the scientific method;
10. Use effective communication skills in documenting programming projects.

Program outcomes are designed in accordance with principles for undergraduate computer science programs developed by the Joint Task Force for Computing Curricula, which is comprised of the Association for Computing Machinery, the Association for Information Systems, and the Computer Society (Source: *Computing Curricula 2005 – The Overview Report, pp. 35-36*).

Please note: Prospective students should note that the following Computer Science courses will be introduced as follows:

Fall 2010: CSC 106
Spring 2011: CSC 107
Fall 2011: CSC 207; CSC 208
Spring 2012: CSC 211

COMPUTER SCIENCE TRANSFER – Associate in Science (Program Code: CS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature	ENG 101	F/S/SU			3	ENG 100
Calculus I	MAT 233	F/SU			4	MAT 124
Analytical Thinking With Programming	CSC 106	F			3	CIS 111, ENG 100
Lab Science	---	F/S/SU			4	
Social Science Elective	---	F/S/SU			3	
Semester 2						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Calculus II	MAT 234	F/S/SU			4	MAT 233
Programming I	CSC 107	S			3	CSC 106
Lab Science	---	F/S/SU			4	
Social Science Elective	---	F/S/SU			3	
Semester 3						
Programming With Objects	CSC 207	F			3	CSC 107
Calculus III	MAT 235	F/S			4	MAT 234
Discrete Mathematics	MAT 125	F			3	MAT 123
Introduction to Architecture and Assembly Language	CSC 208	F			4	CSC 107
Humanities Elective	---	F/S/SU			3	
Semester 4						
Programming with Data Structures	CSC 211	S, 2012			4	CSC 207
Probability & Statistics for Engineers and Scientists	MAT 237	F			3	MAT 233
Speech Communication Skills	SPH 101	F/S/SU			3	
Social Science Elective	---	F/S/SU			3	
Humanities Elective	---	F/S/SU			3	
Total credits required					67	

The Degree:
Associate of Science

The Program:
Computer Science

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

The Next Step:
Enter the workforce or transfer to a four-year program.
- This is a state MassTransfer approved program
  Former joint admissions program
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

Program Coordinator:
Program-related questions may be directed to compsci@qcc.mass.edu

Program Notes:
- Students should note that most required courses carry minimum prerequisites of CIS 111, ENG 100 and MAT124.
- The Computer Science Transfer program utilizes a virtual laboratory. Students enrolled in CSC106, CSC 107, CSC 207, CSC 208 & CSC 211 will be required to bring their own laptop to class. Please contact the Program Coordinator for minimum hardware and software requirements.

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

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY

The mission of the Computer Systems Engineering Technology (CSET) Program is to prepare students for a broad range of career opportunities in the Information Technology (IT) field. Graduates are prepared to work in virtually any business or organization that utilizes computers and computer networks. This is accomplished by adhering to industry standards developed to measure and promote the competency of IT professionals.

The CSET Program offers 2 Associate Degrees and 7 certificate options that allow students to specialize in specific areas of interest.

Computer Systems Engineering Technology program *Student Learning Outcomes* include the following knowledge, skills, and abilities:

1. Knows fundamental business methods including communications, math, and writing.
2. Demonstrates the application of information technology to common business functions, including the implementation and use of basic end user software.
3. Demonstrates the fundamentals of telecommunications in a modern business environment, including management of voice, call centers, and Voice over IP.
4. Performs support and maintenance of computer hardware.
5. Analyzes and applies operating systems concepts to implement and support multiple industry standard operating systems in enterprise networking environments.
6. Applies an understanding of basic programming structures and algorithms.
7. Applies networking concepts to design, implement and maintain LANs and WANs to support modern implementations including internetworking and data convergence.
8. Ability to design and implement basic and advanced routing utilizing the TCP/IP and other common networking protocols and utilities.
9. Analyzes and applies security in computer and networking infrastructures while detecting any legal and ethical breaches.
10. Defines and manages network services for effective network performance.
11. Designs data storage solutions that meet the enterprises' varied needs, including fault tolerance and disaster recovery.
12. Deploys and manages common third party applications to support business needs.
13. Demonstrates the management of IT infrastructures and projects.
14. Develops documentation appropriate to clearly communicate computer network specification, configuration, and/or processes.
15. Troubleshoots computer networking infrastructures to resolve user problems.
16. Demonstrates the implementation of IT in a business environment through cooperative education and seminars or service learning experience.

The CSET program offers extensive coursework, lecturing on theoretical information technology design, principles, and approaches and supplementing the lecture with practical hands-on application in QCC's state-of-the-art CSET lab.

The CSET Program offers the following 2 Associate Degrees:

- CSET Associate of Science provides a broad and complete view of information technology computer and networking infrastructures from personal computer hardware to networking with multiple enterprise operating systems to routing on the Internet.
- CSET with Computer Forensics Option Associate of Science Degree provides an in-depth insight into Criminal Justice and Information Technology for analysis of digital information commonly used in criminal investigations.

The CSET Program offers courses that teach material from several industry standard certifications including:

- Computing Technology Industry Association (CompTIA):
  A+ - CSC 233 *Computer Hardware and Support*
  Network+ - CSC 234 *Networking Technologies*
  Linux+ - CST 245 *Unix Operating Systems*
  Security+ - CST 205 *IT Security*
- Microsoft's Certified Technical Specialist :
  Windows 7- CSC 141 *Windows Client Operating Systems*
  Windows Server 2008 Active Directory- CSC 241 *Windows Server Operating Systems*
  Windows Server 2008 Network Infrastructure- CST 231 *Internetworking Protocols*
  Windows Server 2008 Applications Infrastructure- CST 238 *Enterprise Networking*
  Microsoft SQL Server 2008- CST 251 *SQL Server Administration*
  Microsoft Exchange Server 2010- CST 252- Exchange Server Administration
- Cisco's Certified:
  Network Administrator (CCNA) -CST 240 *Routing Technologies*
  Network Professional (CCNP) -CST 260 *Enterprise Network Convergence* and CST 265 *Wide Area Networks*
- EMC's Proven Professional Storage Technologist - CSC 210 *Storage Technologies*

CORI/SORI:
A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) may be required of all students enrolled in CST 299. Fingerprinting and drug testing may be required.

Additional Cost:
Students enrolled in CST 299 students may incur an additional expense for professional liability insurance.

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY – Certificates – Computer Forensics, CyberSecurity, Network Associate, Network Professional, Personal Computer Specialist, Unix Systems Administrator, and Windows Systems Administrator

Computer Forensics Certificate prepares graduates to work in the Information Technology and Criminal Justice fields as Computer and Digital Forensics Investigators. According to the Occupational Outlook Handbook, 2010-2011 Edition, employment of computer forensics specialists is expected to increase by 22 percent from 2008 to 2018, which is much faster than the average for all occupations. Competition will be high for these positions, requiring advanced technical and investigative skills and knowledge. Demand for these workers will result from the increase use of digital devices by individuals and businesses, as well as the increase in criminal activity on the Internet, such as identity thief, electronic harassment, illegal obtainment of copyrighted materials, and malware activities.

> *"Computer forensics, also called cyberforensics, is the application of computer [and/or digital technology] investigation and analysis techniques to gather evidence suitable for presentation in a court of law. The goal of computer forensics is to perform a structured investigation while maintaining a documented chain of evidence to find out exactly what happened on a computer and who was responsible for it."*[1]

CyberSecurity is designed to prepare graduates to work in the Information Technology field as Computer Support Specialists with an emphasis in cybersecurity. According to the Occupational Outlook Handbook, 2010-2011 Edition, employment of computer support specialists is expected to increase by 14 percent from 2008 to 2018, which is faster than the average for all occupations. Demand for these workers will result as organizations and individuals continue to adopt the newest forms of technology. As technology becomes more complex and widespread, support specialists will be needed in greater numbers to implement technology solutions and resolve the technical problems that arise. Businesses, especially, will demand greater levels of support, as information technology has become essential in the business environment.

> *"Cybersecurity is the protection of all things Internet -- from the networks themselves to the information stored in computer databases and other applications. The concept grew out of necessity as businesses and agencies sent more data and processes on*[1]*line, and it's even more crucial now with the emergence of Web 2.0 technologies, which foster online collaboration and information sharing."* [2]

[1] *http://*searchsecurity.techtarget.com

[2] http://topics.nextgov.com/Cybersecurity/

Network Associate Certificate prepares graduates to work in the Information Technology field as an entry-level Network Specialist, such as a Network Administrator or Network Associate. According to the Occupational Outlook Handbook, 2010-2011 Edition, employment of network systems and data communications analysts is expected to increase by 53 percent from 2008 to 2018, which is much faster than the average for all occupations. Demand for these workers will result from the increased use of IT and digital communications technology at home and in the business environment.

Network Professional Certificate prepares graduates to work in the Information Technology field as an advanced professional specializing in networking, such as a Network Designer, Manager, or Engineer. According to the Occupational Outlook Handbook, 2010-2011 Edition, employment of network systems and data communications analysts is expected to increase by 53 percent from 2008 to 2018, which is much faster than the average for all occupations. Competition will be high for these positions, requiring advanced technical and investigative skills and knowledge. Demand for these workers will result from the increased use of IT and digital communications technology in the business environment.

Personal Computer Specialist Certificate prepares graduates to work in the Information Technology field as Computer Support Specialists with an emphasis on personal computer/desktop management and support. According to the Occupational Outlook Handbook, 2010-2011 Edition, employment of computer support specialists is expected to increase by 14 percent from 2008 to 2018, which is faster than the average for all occupations. Demand for these workers will result from the increased use of IT and digital communications technology by individuals and organizations. As technology becomes more complex and prevalent, a greater level of support will become essential to users and their employers.

Unix Systems Administrator Certificate prepares graduates to work in the Information Technology field as a Systems Administrator with an emphasis on management and support of Unix and Linux operating systems. According to the Occupational Outlook Handbook, 2010-2011 Edition, employment of computer support specialists is expected to increase by 30 percent from 2008 to 2018, which is much faster than the average for all occupations. Demand for these workers will increase as organizations continue to invest in technology as an integral part of their business.

Windows Systems Administrator Certificate prepares graduates to work in the Information Technology field as a Systems Administrator with an emphasis on management and support of Windows operating systems and environments. According to the Occupational Outlook Handbook, 2010-2011 Edition, employment of computer support specialists is expected to increase by 30 percent from 2008 to 2018, which is much faster than the average for all occupations. Demand for these workers will increase as organizations continue to invest in technology as an integral part of their business.

This certificate follows the coursework of the Microsoft Certified Systems Administrator.

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY - Associate in Science (Program Code: SE)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Computer Hardware and Support	CSC 233	F/S/SU			4	Coreq-CSC 141
Telecommunications in Business	CST 207	F			3	ENG 100 or approp place score
Social Science Elective*	---	F/S/SU			3	
Semester 2						
IT Help Desk Concepts	CSC 105	F/S/SU			2	CSC 141
Storage Technologies	CSC 210	S			4	ENG 100 or approp place score
Windows Server Operating Systems	CSC 241	F/S/SU			3	CSC 141
Networking Technologies	CSC 234	F/S			4	Coreq-CSC 141
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Project Management	BUS 205	S			3	ENG 100
Semester 3						
Systems Programming	CSC 201	F/S			3	CSC 141 Coreq-CST 245
Math Elective***	MAT ---	F/S/SU			3	MAT 099 or approp place score
Internetworking Principles and Protocols	CST 231	F/S			3	Coreq-CSC 234
Network Infrastructure Management	CST 235	F/S/SU			3	CSC 234, Coreq-CST 231
Unix Operating Systems	CST 245	F/S/SU			4	Coreq-CSC 141
Technical and Workplace Writing	ENG 205	F/S/SU			3	ENG 102
Semester 4						
IT Security	CST 205	S			3	CSC 141, CSC 234
Enterprise Networking and Application Infrastructure	CST 238	S			4	Coreq- 241
Routing Technologies	CST 240	S			3	Coreq-CST 231
Cooperative Work Experience & Seminar	CST 299	F/S/SU			3	Approval of Program Coordinator
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Liberal Arts Elective**	---				3-4	
Total credits required					74-77	

The Degree:
Associate of Science

The Program:
Computer Systems Engineering Technology

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

The Next Step:
Prepares graduates for a broad range of career opportunities in the information technology field.
Career in the Information Technology field
Transfer to four-year program.
Former joint admissions program

Program Coordinator:
Betty J. Lauer 508.854.2765
blauer@qcc.mass.edu

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

*Social Science Elective in program area
**Liberal Arts Elective in LA program area
***Math Elective 100 level or higher
****Electronics Elective in program area.

Technical Performance Standards:
Prior to application please review the Technical Standards required for the profession on pages 16-19.

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY - Associate in Science - Computer Forensics Option (Program Code: SEF)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Introduction to Microcomputer Applications or	CIS 111	F/S/SU				
Introduction to Computer Applications in Telecommunications	CIS 115	F/S/SU			3	
Introduction to Criminal Justice	CRJ 101	F/S/SU			3	ENG 100 or approp place score
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Math Elective***	MAT---	F/S/SU			3	MAT 099 or approp place score
Semester 2						
E-Business Law & Ethics	BSL 103	F/S			3	Coreq-CIS 111
Criminal Investigations	CRJ 207	F/S			3	ENG 101
Windows Server Operating Systems	CSC 241	F/S/SU			3	CSC 141
Networking Technologies	CSC 234	F/S			4	Coreq-CSC 141
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Social Science Elective*	---	F/S/SU			3	
Semester 3						
Evidence & Court Procedure	CRJ 211	F/S/SU			3	ENG 101
Network Infrastructure Management	CST 235	F/S/SU			3	CSC 234, Coreq-CST 231
Internetworking Principles and Protocols	CST 231	F/S			3	Coreq-CSC 234
Unix Operating Systems	CST 245	F/S/SU			4	Coreq-CSC 141
Technical and Workplace Writing	ENG 205	F/S/SU			3	ENG 102
Liberal Arts Elective**	---				3	
Semester 4						
Computer Hardware and Support	CSC 233	F/S/SU			4	Coreq-CSC 141
IT Security	CST 205	S			3	CSC 141, CSC 234
Computer Forensics	CST 206	S			3	CSC 141
Routing Technologies	CST 240	S			3	Coreq-CSC 231
Cooperative Work Experience & Seminar	CST 299	F/S/SU			3	Approval of Program Coordinator
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Total credits required					69	

The Degree:
Associate of Science

The Program:
Computer Systems Engineering Technology with an Emphasis in Computer Forensics

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

The Next Step:
Prepares graduates for career opportunities in information technology specializing in the criminal justice field or transfer to four-year program.

Former joint admissions program

Program Coordinator:
Betty J. Lauer 508.854.2765
blauer@qcc.mass.edu

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

*Social Science Elective in program area
**Liberal Arts Elective in LA program area
***Math Elective 100 level or higher

Technical Performance Standards:
Prior to application please review the Technical Standards required for the profession on pages 16-19.

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY - Certificate - Computer Forensics Option (Program Code: CF)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Computer Hardware and Support	CSC 233	F/S			4	Coreq-CSC 141
Networking Technologies	CSC 234	F/S			4	Coreq-CSC 141
Introduction to Criminal Justice	CRJ 101	F/S/SU			3	ENG 100 or approp place score
Semester 2						
Evidence & Court Procedure	CRJ 211	F/S/SU			3	ENG 101
Unix Operating Systems I	CST 245	F/S/SU			4	Coreq-CSC 141
Computer Forensics	CST 206	S			3	CSC 141
Criminal Investigations	CRJ 207	F/S			3	ENG 101
Total credits required					28	

The Certificate:
Computer Forensics Certificate

The Program:
Computer Systems Engineering Technology

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

The Next Step:
Prepares graduates for career opportunities in information technology specializing in the criminal justice field.

Program Coordinator:
Betty J. Lauer 508.854.2765
blauer@qcc.mass.edu

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

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY - Certificate – CyberSecurity (Program Code: CBS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
E-Business Law & Ethics	BSL 103	F/S			3	CIS 111
Networking Technologies	CSC 234	F/S			4	Coreq-CSC 141
Unix Operating Systems I	CST 245	F/S/SU			4	Coreq-CSC 141
Semester 2						
Windows Server Operating Systems	CSC 241	F/S/SU			3	CSC 141
IT Security	CST 205	S			3	CSC 141, CSC 234
Computer Forensics	CST 206	S			3	CSC 141
Internetworking Principles and Protocols	CST 231	F/S			3	Coreq-CSC 234
Total Credits Required					27	

The Certificate:
CyberSecurity Certificate

The Program:
Computer Systems Engineering Technology

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

The Next Step:
Prepares graduates for career opportunities in information technology specializing in the security field.

Program Coordinator:
Betty J. Lauer 508.854.2765
blauer@qcc.mass.edu

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

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY – Certificate – Network Associate (Program Code: NSC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Networking Technologies	CSC 234	F/S			4	Coreq-CSC 141
Unix Operating Systems	CST 245	F/S/SU			4	Coreq-CSC 141
Telecommunications in Business	CST 207	F			3	ENG 100 or approp place score
Semester 2						
Storage Technologies	CSC 210	S			4	ENG 100 or approp place score
Internetworking Principles and Protocols	CST 231	F/S			3	Coreq-CSC 234
Network Infrastructure Management	CST 235	F/S/SU			3	CSC 234, Coreq-CST 231
Routing Technologies	CST 240	S			3	Coreq-CST 231
Total Credits Required					28	

The Certificate:
Network Associate Certificate

The Program:
Computer Systems Engineering Technology

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

The Next Step:
The Network Associate Certificate prepares students for a position in the Information Technology field as a network associate. This prepares students to sit for:
-CompTIA's Linux + examination,
-Microsoft's Certified Professional (MCP) certifications in one of several client operating systems,
-CompTIA's Network+ examination, and
-Cisco's CCNA examination.

Program Coordinator:
Betty J. Lauer 508.854.2765
blauer@qcc.mass.edu

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

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

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY - Certificate – Network Professional (Program Code: NPC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
or Introduction to Computer Applications in Telecommunications	CIS 115	F/S/SU				
Technical Writing or	ENG 205	F/S/SU			3	ENG 102
Integrated Communications for Business	BUS 201	F/S/SU				CIS 111, ENG 101
Windows Server Operating Systems	CSC 241	F/S/SU			3	CSC 141
Wide Area Networks	CST 265	F			3	CST 240
Semester 2						
IT Security	CST 205	S/SU			3	CSC 141, CSC 234
Project Management	BUS 205	F/S			3	ENG 100
Enterprise Network Convergence	CST 260	S			3	CST 240, CST 207
E-Business Law & Ethics	BSL 103	F/S			3	CIS 111
Web Server Administration	CST 250	S			1	CST 245 or CSC 141
Exchange Server Administration	CST 252	S			1	CSC 241
Total Credits Required					26	

The Certificate:
Network Professional Certificate

The Program:
Computer Systems Engineering Technology

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

The Next Step:
Prepares graduates for career opportunities in information technology specializing in the network administration.

Program Coordinator:
Betty J. Lauer 508.854.2765
blauer@qcc.mass.edu

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

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY – Certificate - Personal Computer Specialist (Program Code: PCS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Information Technology	CIS 105	F/S/SU			3	
Introduction to Microcomputer Applications or	CIS 111	F/S/SU				
Introduction to Computer Applications in Telecommunications	CIS 115	F/S/SU			3	
Windows Client Operating Systems	CSC 141	F/S/SU			4	
UNIX Operating Systems	CST 245	F/S/SU			4	Coreq-CSC 141
Semester 2						
Advanced Microcomputer Applications	CIS 112	F/S/SU			3	CIS 111
IT Help Desk Concepts	CSC 105	F/S/SU			2	CSC 141
Systems Programming	CSC 201	F/S			3	CSC 141 Coreq-CST 245
Computer Hardware and Support	CSC 233	F/S/SU			4	Coreq-CSC 141
Total credits required					26	

The Certificate:
Personal Computer Specialist Certificate

The Program:
Computer Systems Engineering Technology

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

The Next Step:
The Personal Computer Specialist Certificate prepares students for an entry-level position in the Information Technology field as a PC technician or desktop specialist.
It prepares students to sit for:
-CompTIA's A+ hardware examination,
-CompTIA's Linux + examination, and
-Microsoft's Certified Professional (MCP) certifications in one of several client operating systems.

Program Coordinator:
Betty J. Lauer 508.854.2765
blauer@qcc.mass.edu

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

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

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY – Certificate – UNIX Systems Administrator (Program Code: USAC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
UNIX Operating Systems	CST 245	F/S/SU			4	Coreq-CSC 141
Networking Technologies	CSC 234	F/S			4	Coreq-CSC 141
Semester 2						
UNIX Operating Systems II	CST 246	F/S/SU			3	CST 245
Internetworking Principles and Protocols	CST 231	F/S			3	Coreq-CSC 234
IT Security	CST 205	S/SU			3	CSC 141, CSC 234
Web Server Administration	CST 250	S			1	CST 245 or CSC 141
Systems Programming	CSC 201	F/S			3	CSC 141, Coreq-CST 245
Total credits required					25	

The Certificate:
UNIX Systems Administrator Certificate

The Program:
Computer Systems Engineering Technology

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

The Next Step:
Prepares graduates for career opportunities in Information technology specializing in the Unix Systems Administration field

Program Coordinator:
Betty J. Lauer 508.854.2765
blauer@qcc.mass.edu

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

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY - Certificate – Windows Systems Administrator (Program Code: WSAC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Networking Technologies	CSC 234	F/S			4	Coreq-CSC 141
Internetworking Principles and Protocols	CST 231	F/S			3	Coreq-CSC 234
Computer Hardware and Support	CSC 233	F/S/SU			4	Coreq-CSC 141
Semester 2						
Windows Server Operating Sytems	CSC 241	F/S/SU			3	CSC 141
Network Infrastructure Management	CST 235	F/S/SU			3	CSC 234, Coreq-CST 231
Enterprise Networking & Application Infrastructure	CST 238	S			4	Coreq-CSC 241
Web Server Administration	CST 250	S			1	CST 245 or CSC 141
SQL Server Administration	CST 251	S			1	CSC 141
Exchange Server Administration	CST 252	S			1	Coreq-CSC 241
Total Credits Required					28	

The Certificate:
Windows Systems Administrator

The Program:
Computer Systems Engineering Technology

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

The Next Step:
Prepares graduates for career opportunities in information technology specializing in the Windows Systems Administration field.

Program Coordinator:
Betty J. Lauer 508.854.2765
blauer@qcc.mass.edu

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

CRIMINAL JUSTICE - Associate in Science

Quinsigamond Community College is authorized by the Massachusetts Department of Higher Education (DHE) to offer an Associates of Science degree in Criminal Justice. Coursework for this degree is "Quinn Bill" approved. The Criminal Justice Program is committed to providing students with a quality education. The role of the faculty is to assist the students as they gain an appreciation of their role as criminal justice professionals and as contributing members of society.

The Criminal Justice curriculum will provide students with an understanding of the discipline as it currently exists and as it is envisioned to be in the future. The Criminal Justice student will be able to apply their knowledge, skills and abilities in a marketplace that must respond to the evolving nature of criminal justice and society. The Criminal Justice Program has developed a regional reputation for excellence.

Highlights

- The CJ program boasts one of the largest enrollments in Central Massachusetts with experts in the field of law, law enforcement, police administration, criminology, corrections and terrorism.
- A recent addition includes the "Computer Forensic Associate Degree and Certificate" which addresses topics such as: computer crime, identity theft, and other high technology crimes.
- Recruiters from various agencies around the country contact the program on a regular basis.

Career Opportunities

- Police Officer
- Airline Security
- Security Consultant
- Loss Prevention
- Crime Lab Analysis
- Border Patrol Agent
- Narcotics Investigator
- Private Investigation
- Probation/Parole Officer
- Family/Child Services
- Correctional Officer
- Game Warden
- Military Intelligence
- Victim Services Specialist
- Substance Abuse Counselor

Applicants to the Criminal Justice program must meet specific admission requirements. These include three years of high school English with at least a "C" average or equivalent.

CRIMINAL JUSTICE - Associate in Science (Program Code: CJ)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Criminal Justice	CRJ 101	F/S/SU			3	ENG 100 or approp place score
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Introductory Sociology (Principles) or	SOC 101	F/S				Coreq-ENG 100 or approp place score
Cultural Anthropology	ANT 111	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 2						
Criminal Law	CRJ 111	F/S/SU			3	Coreq-ENG 100
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Valuing Diversity	IDS 101	F/S			3	ENG 100 or approp place score
Speech Communications Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Mathematics* or	---					
Lab Science Elective	---				3-4	
Semester 3						
Criminal Investigation	CRJ 207	F/S/SU			3	ENG 101
Technologies in Criminal Justice	CRJ 208	F/S/SU			3	ENG 100
United States Government	PSC 201	F/S/SU			3	Coreq-ENG 101
The Dynamics of Racial and Ethnic Relations	SOC 211	F/S/SU			3	Coreq-ENG 100 or approp place score
Juvenile Delinquency and the Juvenile Justice System	SOC 212	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 4						
Evidence and Court Procedure	CRJ 211	F/S/SU			3	ENG 101
Theories in Criminology	CRJ 213	F/S/SU			3	ENG 100 or approp place score
Legal Concepts & Ethics in Human Services or	HUS 231	F/S				HUS 101, HUS 121, HUS 141
Man & Morality: An Introduction to Ethics	PHI 131	F/S/SU			3	ENG 100 or approp place score
State and Local Government	PSC 221	F/S/SU			3	Coreq-ENG 101
CRJ Electives and/or	---					
Liberal Arts	---				6	
Total credits required					60-61	

The Degree:
Associate in Science

The Program:
Criminal Justice

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Please see admission requirements on program page and on page 12.

The Next Step:
Enter the workforce or transfer to a four-year program.
- This program has transfer articulation agreements
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
  Former joint admissions program

Program Coordinator:
Bill McCarthy 508.854.2790
bmccarthy@qcc.mass.edu

Program Notes:
- Provides a wide view of the criminal justice system, which leads to a variety of related professions.
- Effective May, 2003 the Massachusetts Board of Higher Education has stipulated stringent guidelines for awarding credits towards Criminal Justice Programs. Please contact QCC's Experience-Based Education office for specific details.
- This program can be completed at the Southbridge location.

* MAT 100 or above

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

CRIMINAL JUSTICE - Certificate - Law Enforcement (Program Code: LEC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Criminal Justice	CRJ 101	F/S/SU			3	ENG 100 or approp place score
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Introductory to Sociology (Principles)	SOC 101	F/S			3	Coreq-ENG 100 or approp place score
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Semester 2						
Criminal Law	CRJ 111	F/S/SU			3	Coreq-ENG 100
Evidence and Court Procedure	CRJ 211	F/S/SU			3	ENG 101
Theories in Criminology	CRJ 213	F/S/SU			3	ENG 100 or approp place score
Introduction to Policing	CRJ 231	F/S/SU			3	ENG 100 or approp place score
Total credits required					27	

The Certificate:
Law Enforcement

The Program:
Criminal Justice

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Please see admission requirements on program page and on page 12.

The Next Step:
Apply to enter the workforce or enter the Criminal Justice Associate Degree program.

Program Coordinator:
Bill McCarthy 508.854.2790
bmccarthy@qcc.mass.edu

Program Notes:
- This certificate combines specialized criminal justice and general education coursework to provide students with the knowledge and skills needed to successfully enter the field. The program was developed with the Massachusetts Police Chiefs Association (MPCA). It is anticipated that successful completion of this Certificate will be a pre-requisite for admission to the Police Academy.
- Effective May, 2003 the Massachusetts Board of Higher Education has stipulated stringent guidelines for awarding credits towards Criminal Justice Programs. Please contact QCC's Experience-Based Education office for specific details.
- This program can be completed at the Southbridge location.

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

DENTAL ASSISTING – Certificate

The Dental Assisting Certificate program prepares graduates to perform a wide range of patient care duties in the dental office. Dental assistants support dentists by obtaining necessary health history information, maintaining patient comfort during examinations, providing necessary instruments and materials to the dentist during surgical procedures, taking radiographs, and casting impressions. The dental assistant manages a variety of office-related duties including scheduling and confirming appointments, updating patient records, generating bills, following third-party payments, and ordering supplies and materials. A significant increase in demand for dental services over the next three to five years suggests strong employment opportunities in this field.

The curriculum provides students with the theoretical content and pre-clinical and laboratory experiences necessary to develop the competence and ability to make judgments regarding intra-oral, chair-side, and laboratory procedures. Courses in business office procedures and basic computer usage are also included. In addition, students will be required to complete a series of clinical rotations arranged by QCC in a variety of general and specialty dental practices. Upon graduation, students will be prepared to take the Dental Assisting National Board examination in order to achieve the Certified Dental Assistant (CDA) designation.

Upon completion of this program, students will be prepared to obtain employment as a dental assistant. In addition, students will be prepared to continue their studies at the Associate degree level in such disciplines as Allied Dental Services or Dental Hygiene. A QPA of 2.0 or above and completion of all clinical hours, competencies, and clinical learning activities/requirements are required for graduation from the program.

Admission Requirements:

Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.4308.

To be eligible for admission into the Program, the applicant must take QCC's Math and English assessment tests to demonstrate competency at the appropriate level. Applicants must test into MAT 099 and ENG 101 or higher. Applicants must also have completed one year of high school biology and chemistry or the QCC equivalent with a grade of "C" or higher within five years prior to admission.

A TEAS composite score of 60% is required. Required TEAS scores must be achieved within two attempts of taking the test.

CORI/SORI:

A "Criminal Offender Records Information' (CORI) and "Sexual Offender Records Information" (SORI) check is required of all students accepted into the program. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

In order to continue in the Program, students must achieve a grade of "C" or higher in all DAS, BIO 140, DHY 131 and DHY 241 courses. Students who have received a grade below a "C" in BIO 140, DHY 131 and DHY 241 are required to repeat the courses and obtain a grade of "C" or higher by the end of the semester in which they are required or required as a prerequisite. Students who do not have completed health files submitted to the Dental Assisting Program and cleared by the Program Coordinator by August 1st of the respective year will be removed from their dental assisting courses and will have to file for readmission to the next available year.

DHY courses with a "C" or higher grade may be transferred to the Dental Hygiene Program within two years after completion of the Dental Assisting Program. Students may need to retake the two "core DHY courses" if more than two years has elapsed.

Dental Assisting Bridge to Dental Hygiene Initiative

Dental Assisting Graduates may be eligible to by-pass the Dental Hygiene wait list if the following criteria are met:

1. Minimum grade point average of 3.3
2. Minimum grades of "B" in all QCC DHY courses
3. Minimum "A-" in the DAS 151, DAS 153, and DAS 155 courses
4. Two recommendations from QCC DHY core course faculty of which one is from a full-time faculty member
5. BIO 111 and BIO 112 must be completed prior to the start of Fall classes with a passing grade of "C" or better
6. Current dental hygiene admissions requirements including a minimum "B" grade in Biology and Chemistry as well as the TEAS test will be waived. These requirements may be used to determine eligibility if more than two students qualify for admission.

Two seats in the Dental Hygiene freshman class will be reserved for currently enrolled dental assistants scheduled to graduate in May 2011. Students must bridge directly from the Dental Assisting program to the Dental Hygiene program. "Bridge" selection applications may be obtained from the dental assisting program coordinator. Decisions will be made by April 15th each year.

Additional Costs:

Dental assisting students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills remediation.

Technical Performance Standards: Prior to application please review the Technical Standards required for the profession on pages 16-19.

A total of 38 credits is required for the Certificate in Dental Assisting.

DENTAL ASSISTING – Certificate (Program Code: DA)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Fall)						
Clinical Science I	DAS 101	F			3	Coreq-BIO 140, DAS 151
Dental Assisting I	DAS 151	F			4	Coreq-DAS 101
Dental Sciences	DAS 102	F			3	DAS students only, Coreq-DAS 101
Dental Radiology	DHY 131	F			3	
Dental Materials	DHY 241	F			2	
Introduction to the Human Body	BIO 140*	F/S/SU			4	ENG 100
Semester 2 (Intersession)						
Dental Assisting Clinical Practicum	DAS 153	I			2	BIO 140, DAS 101, DAS 151, DHY 131
Semester 3 (Spring)						
Clinical Science II	DAS 105	S			4	DAS 101
Practice Management	DAS 111	S			3	
Introduction to Oral Pathology	DAS 124	S			1	DAS students only
Dental Assisting II	DAS 155	S			6	DAS 153
English Composition & Literature I	ENG 101*	F/S/SU			3	ENG 100
Total credits required					38	

*It is suggested that students take BIO 140 and ENG 101 prior to entering the program.

The Certificate:
Dental Assisting

The Program:
A nine-month training program resulting in an entry-level dental assisting position in a dental office. Eligible to apply to the Dental Assisting National Board to challenge the Certified Dental Assistant (CDA) examination.

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Test into MAT 099 and ENG 101
- 1 year High School Biology or QCC equivalence grade "C" or higher
- 1 year High School Chemistry or QCC equivalence, grade "C" or higher
- A TEAS composite scores of 60% is required
- Required TEAS score must be achieved within two attempts of taking the test
- Attend a Health Information Session

The Next Step:
A second option majoring in one of three Allied Dental Services offerings resulting in an Associate in Science Degree.

Program Coordinator:
Jennifer McKeon
jmckeon@qcc.mass.edu

Program Notes:
The program in dental assisting is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission of Dental Accreditation can be contacted at 312.440.4653 or at 211 East Chicago Avenue, Chicago, Il. 60611.

CORI/SORI/DRUG TEST:
See CORI/SORI in program introduction.

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

ALLIED DENTAL SERVICES - Associate in Science - Options in Health Science, Dental Office Management, and Dental Sales/Marketing

The Allied Dental Services program prepares graduates for exciting career opportunities in dental-related professions. Program graduates have the option of working in a variety of general or specialty dental offices or clinics. They might work in sales or marketing with dental products companies, work for insurance companies or placement agencies specializing in the dental field.

The program is designed primarily as an Associate degree completion program for individuals who have successfully completed an accredited dental assisting certificate program. Strong employment growth projections for dental assistants and for health information systems managers suggest strong employment opportunities in this field. Completion of this program will increase opportunities for employment and continued job growth in fields such as: Dental Office Management, and Dental Sales/Marketing.

The Health Science option prepares its graduates with a strong science background and is a good choice if the ultimate goal is transfer into the Dental Hygiene program or into a baccalaureate program. Does not require DANB, CDA status.

The Dental Office Management option prepares graduates to oversee the business operations of a dental practice. A successful dental office manager enjoys working with computers, managing multiple administrative tasks, and/or supervising people.

The Dental Sales/Marketing option prepares graduates to work as sales representatives or product managers for a dental products company. For individuals who are outgoing, enjoy meeting people, and like to travel, this option will provide them with the professional skills they need to be successful in marketing or sales.

Upon completion of this program, graduates will be prepared to obtain employment as noted or to continue their studies at the baccalaureate degree level in such disciplines as business administration, liberal arts, or the sciences. Students interested in transferring should speak with an academic advisor to be sure that the courses selected would satisfy the requirements of the receiving institution.

Admission Requirements:

This program is designed to serve as an associate degree completion program. In order to be considered for the Allied Dental Services program, applicants must FIRST successfully complete a Dental Assisting certificate program at QCC or another institution accredited by the American Dental Association Commission on Dental Accreditation. Current Dental Assisting National Board (DANB) Certified Dental Assistant (CDA), status is required for the Dental Office Management and Dental Sales/Marketing options.

Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.4308.

To be eligible for admission into the Program, the applicant must take QCC's Math and English assessment tests to demonstrate competency at the appropriate level. Applicants must test into MAT 099 and ENG 101 or higher. Applicants must also have completed one year of high school biology and chemistry or the QCC equivalent with a grade of "C" or higher within five years prior to admission.

A "Criminal Offender Records Information' (CORI) and "Sexual Offender Records Information" (SORI) check is required of all students accepted into the Dental Office Management and Dental Sales/Marketing options. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

Depending upon the option selected, a total of 30-34 credits in addition to the Dental Assisting Certificate program are required for the Associate degree.

Additional Costs:

Allied dental services students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills remediation.

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

ALLIED DENTAL - Associate in Science - Health Science Option (Program Code: ADHS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Clinical Science I	DAS 101	F			3	Coreq-BIO 140, DAS 151
Dental Assisting I	DAS 151	F			4	Coreq-DAS 101
Anatomy of the Head & Neck	DHY 121	F			2	
Dental Anatomy	DHY 125	F			1	
Dental Radiology	DHY 131	F			3	
Dental Materials	DHY 241	F			2	
Elective	---	F/S/SU			3/4	
Semester 2						
Dental Assisting Clinical Practicum	DAS 153	I			2	BIO 140, DAS 101, DAS 151, DHY 131
Semester 3						
Clinical Science II	DAS 105	S			4	DAS 101
Practice Management	DAS 111	S			3	
Introduction to Oral Pathology	DAS 124	S			1	DAS students only
Dental Assisting II	DAS 155	S			6	DAS 153
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Semester 4						
Anatomy and Physiology I	BIO 111	F/S/SU			4	BIO 101 or AP Biology. Coreq-ENG 101
Introduction to the Chemistry of Living Systems	CHM 101	F/S/SU			4	CHM 090 or 1 year of H.S. Chemistry, MAT 095
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Introductory Sociology (Principles)	SOC 101	F/S			3	Coreq-ENG 100 or approp place score
Semester 5						
Anatomy and Physiology II	BIO 112	F/S/SU			4	BIO 111
Medical Microbiology	BIO 232	F/S/SU			4	BIO 112 or CHM 103 or CHM 105
Nutrition	BIO 241	F/S/SU			3	BIO 101 or BIO 111
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Total credits required					68/69	

The Degree:
Associate of Science with Options in Health Science, Dental Office Management, and Dental Sales/Marketing

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Please see admission requirements on program pages and on page 13.
- ADA accredited program certificate in Dental Assisting
- Attend a Health Information Session

The Program:
This is an associate degree completion program for those who wish to expand their career opportunities.

The Next Step:
Transfer into a four-year degree program or into a dental hygiene program.

Program Coordinator:
Jennifer McKeon
jmckeon@qcc.mass.edu

Program Notes:
For additional information see program introduction on page 104.

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

ALLIED DENTAL - Associate in Science - Dental Office Management Option (Program Code: ADDO)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Clinical Science I	DAS 101	F			3	Coreq-BIO 140, DAS 151
Dental Assisting I	DAS 151	F			4	Coreq-DAS 101
Anatomy of the Head & Neck	DHY 121	F			2	
Dental Anatomy	DHY 125	F			1	
Dental Radiology	DHY 131	F			3	
Dental Materials	DHY 241	F			2	
Introduction to the Human Body	BIO 140	F/S/SU			4	ENG 100
Semester 2						
Dental Assisting Clinical Practicum	DAS 153	I			2	BIO 140, DAS 101, DAS 151, DHY 131
Semester 3						
Clinical Science II	DAS 105	S			4	DAS 101
Practice Management	DAS 111	S			3	
Introduction to Oral Pathology	DAS 124	S			1	DAS students only
Dental Assisting II	DAS 155	S			6	DAS 153
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Semester 4						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
Business Law I	BSL 101	F/S/SU			3	
Medical Coding and Billing	ALH 107	F			3	ENG 100 Coreq-ALH 102
Medical/Dental Billing and Insurance	BSS 112	F			3	ENG 091
Medical Law and Ethics or	ALH 106	F				ENG 096
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Semester 5						
Dental Externship	DAS 299	S			3	BSS 111, BSS 112
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Human Relations in Organizations	PSY 158	F/S			3	Coreq-ENG 100 or approp place score
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Elective					3	
Total credits required					68	

The Degree:
Associate of Science with Options in Health Science, Dental Office Management, and Dental Sales/Marketing

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Please see admission requirements on program pages and on page 13.
- ADA accredited program certificate in Dental Assisting
- Current CDA status
- Attend a Health Information Session

The Program:
This is an associate degree completion program for currently certified dental assistants (CDA) who wish to expand their career opportunities.

The Next Step:
Prepares graduates for a career as a dental office manager, overseeing the business operations of a dental practice.

Program Coordinator:
Jennifer McKeon
jmckeon@qcc.mass.edu

Program Notes:
For additional information see program introduction on page 104.

CORI/SORI/DRUG TEST:
Required of all accepted students prior to beginning clinical experiences.

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

ALLIED DENTAL - Associate in Science - Dental Sales Marketing Option (Program Code: ADDS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Clinical Science I	DAS 101	F			3	Coreq-BIO 140, DAS 151
Dental Assisting I	DAS 151	F			4	Coreq-DAS 101
Anatomy of the Head & Neck	DHY 121	F			2	
Dental Anatomy	DHY 125	F			1	
Dental Radiology	DHY 131	F			3	
Dental Materials	DHY 241	F			2	
Introduction to the Human Body	BIO 140	F/S/SU			4	ENG 100
Semester 2						
Dental Assisting Clinical Practicum	DAS 153				2	BIO 140, DAS 101, DAS 151, DHY 131
Semester 3						
Clinical Science II	DAS 105	S			4	DAS 101
Practice Management	DAS 111	S			3	
Introduction to Oral Pathology	DAS 124	S			1	DAS students only
Dental Assisting II	DAS 155	S			6	DAS 153
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Semester 4						
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Mathematics Elective	MAT ---				3	College level Math
Principles of Marketing	MRK 201	F/S/SU			3	
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Elective	---				3	
Semester 5						
Dental Externship	DAS 299				3	
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Sales & Sales Management	MRK 221	F/S			3	
Human Relations in Organizations	PSY 158	F/S			3	Coreq-ENG 100 or approp place score
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Total credits required					68	

The Degree:
Associate of Science with Options in Health Science, Dental Office Management, and Dental Sales/Marketing

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Please see admission requirements on program pages and on page 13.
- ADA accredited program certificate in Dental Assisting
- Current CDA status
- Attend a Health Information Session

The Program:
This is an associate degree completion program for currently certified dental assistants (CDA) who wish to expand their career opportunities.

The Next Step:
Prepares graduates to work as a sales representative or product manager for dental products company.

Program Coordinator:
Jennifer McKeon
jmckeon@qcc.mass.edu

Program Notes:
For additional information see program introduction on page 104.

CORI/SORI/DRUG TEST:
Required of all accepted students prior to beginning clinical experiences.

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

DENTAL HYGIENE - Associate in Science

The Dental Hygiene Program prepares students to enter the profession of dental hygiene. At Quinsigamond, students receive a thorough background in the sciences and dental hygiene subjects. They learn and practice their clinical skills in a modern, on-campus dental hygiene clinic.

Dental hygienists are members of the dental healthcare team who provide preventive oral health services, including dental health education, health promotion, oral prophylaxis, dental x-rays, fluoride treatments, pit and fissure sealants, and preliminary patient examinations. As licensed healthcare professionals, dental hygienists promote total health through maintenance of optimum oral health.

Career opportunities for licensed dental hygienists include positions in private dental offices, clinics, hospitals, school districts and federal, state, and local health agencies. For students who continue their education to the bachelor and master degree levels, additional career opportunities exist in public health, research, and dental hygiene education.
This program also prepares students for further study at four-year colleges and universities. To assure that courses are selected that will be applicable to a degree program at a particular four-year college or university, students should make their academic advisor aware of their intent to transfer in order to satisfy the requirements of the receiving institution.

Admissions Process

Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.4308.

Admission Requirements:

- Must have a high school diploma or GED
- GPA of 3.0 or equivalent in high school or 3.0 in college with minimum of 10 credits or 550 Battery Average on GED.
- Must take the college placement test to determine Math and English levels if no college level courses were previously completed.
- Required TEAS scores must be achieved within two attempts of taking the test.
  - English: 70 percent
  - Reading 75 percent
  - Math: 50 percent
  - Science: 55 percent
- Math: minimum grade of B in MAT 098 or MAT 099 or place 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.
- English: minimum grade of B in ENG 100 or place into ENG 101.
- Chemistry: minimum grade of B in high school chemistry or B in CHM 090
- Math and science courses must be taken within five years of application.
- Required grade must be earned within two attempts of taking and completing the course.
- 4-hour dental office observation

Dental Assisting "Bridge" to Dental Hygiene Program

Graduates of the QCC Dental Assisting Program may transfer into the Dental Hygiene Program. See Dental Assisting Certificate page for details.

Additional Costs:

Dental hygiene students should anticipate additional expenses for uniforms/clinical wear, dental instruments, textbooks, professional liability insurance, licensing examinations, and any required skills remediation.

Additional Requirements:

Clinical rotations may be required during summer sessions or intersession. Clinical rotations may be required off campus throughout the duration of the program. Students are responsible for their own transportation. Accepted applicants must have satisfactory physical examinations and provide documentation of immunization currency as required by the Massachusetts Department of Public Health and meet tuberculosis requirements before entering the program. Students are required to maintain health insurance throughout their enrollment.

All students, faculty and staff involved directly in providing patient care must have current certification in Basic Life Support at the American Heart Association's Healthcare Provider Level.

Although every effort will be made to schedule patients for students, ultimately, students are responsible for supplying their own patients to meet their clinical requirements.

All courses in the curriculum are required for graduation. In order to continue in the program a grade of "C" or higher must be achieved in all (DHY) Dental Hygiene courses, BIO 111, BIO 112 and CHM 101. Students who have received a grade below a "C" in BIO 111, BIO 112 and CHM 101 are required to repeat the course and obtain a grade of "C" or higher by the end of the semester in which they are required or required as a prerequisite. In addition, all clinical and program requirements, including regulations for attendance and conduct, must be satisfied in order to continue in the program and to be eligible for program certification for participation in licensure examinations. Students who do not have completed health files submitted to the Dental Hygiene Program and cleared by the Clinical Coordinator by July 1st of the respective year will be removed from their dental hygiene courses and will have to file for readmission to the next available year.

The Program is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at 312.440.4653 or at 211 East Chicago Avenue, Chicago, Illinois 60611.

CORI/SORI:
A Criminal Offender Records Information (CORI) and Sexual Offender Records Information (SORI) check is required of all students accepted into the program. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

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

DENTAL HYGIENE - Associate in Science (Program Code: DH)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Summer I)						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or AP Biology. Coreq: ENG 101
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Semester 2 (Summer II)						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
Introduction to the Chemistry of Living Systems	CHM 101	F/S/SU			4	CHM 090 or one year of HS Chemistry, MAT 095 or MAT 096
Dental Anatomy	DHY 125	SU			1	
Semester 3 (Fall)						
Dental Hygiene Process I	DHY 111	F			4	BIO 112, CHM 101, DHY 125
Anatomy of the Head & Neck	DHY 121	F			2	
Oral Histology & Embryology	DHY 123	F			2	
Dental Radiology	DHY 131	F			3	
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 4 (Intersession)						
Practice Management	DHY 116	I			1	DHY 111
Semester 5 (Spring)						
Nutrition in Oral and Systemic Health	DHY 250	S			2	Prereq: BIO 112, Coreq: DHY 112
Dental Hygiene Process II	DHY 112	S			5	BIO 112, CHM 101, DHY 111, DHY 131 Coreq: DHY 250
Periodontology	DHY 124	S			2	
Oral Pathology	DHY 126	S			2	
Local Anesthesia for the Dental Hygienist	DHY 150	S			2	BIO 111, CHM 101, DHY 111, DHY 131, DHY 125, DHY 121, Coreq: DHY 112, BIO 112
Semester 6 (Summer 1)						
Medical Microbiology	BIO 232	F/S/SU			4	BIO 112 or CHM 103 or CHM 105
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Semester 7 (Summer II)						
Dental Hygiene Process Summer Clinic	DHY 113	SU, 2012			1	DHY 112, DHY 250
Semester 8(Fall)						
Health Promotion	DHY 201	F			2	
Dental Hygiene Process III	DHY 211	F			5	BIO 112, DHY 113
Dental Pharmacology	DHY 231	F			2	
Dental Materials	DHY 241	F			2	
Introductory Sociology (Principles)	SOC 101	F/S			3	Coreq-ENG 100 or approp place score
Continued next page						

The Degree:
Associate of Science

The Program:
Dental Hygiene

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

Please see Admission Process in the program introduction.

The Next Step:
The program prepares students for an entry-level position as a dental hygienist. Dental hygienists must be licensed by the state in which the student practices. Licensure in Massachusetts requires that applicants pass the National Board Dental Hygiene Examination and the Northeast Regional Board Examination.

- This program has transfer articulation agreements
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer *Former joint admissions program*

Program Coordinator:
Jane Gauthier 508.854.4231
jgauthier@qcc.mass.edu

Program Notes:
BIO 111, BIO 112, CHM 101 and all professional courses must be completed with a grade of "C" or higher.

Students are required to maintain health insurance throughout student's enrollment and certification in CPR-Health Care Provider Level.

A CORI/SORI check is required of all students accepted into the program.

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

DENTAL HYGIENE - Associate in Science (Program Code: DH)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 9(Spring)						
Dental Ethics, Jurisprudence, & Professional Issues	DHY 202	S			2	
Dental Hygiene Process IV	DHY 212	S			6	DHY 211
Dental Public Health	DHY 242	S			2	
Liberal Arts Elective	---	F/S/SU			3	
					79	

EARLY CHILDHOOD EDUCATION

Career Option

The Early Childhood Education program prepares students for responsible positions in the field of early care and education or for careers in other child-related areas. As a graduate, the student will be qualified for career opportunities in Early Education and Care as a lead teacher and, depending upon experience, as an assistant director or a director.

During the course of study, you will develop professional competencies and knowledge of the philosophy of early childhood education through exposure to theory and practice. Practical experience will be provided through weekly off-campus field placements and at the Children's School in the Quinsigamond Child Study Center. Students will gain a basic knowledge of the growth and development of young children, and an understanding of their learning processes in carefully planned environments.

Workforce Program

If the student currently works in DEEC licensed infant toddler or preschool program at least 35 hours per week for a minimum of 1 year, he or she may be eligible to complete their student teaching in their worksite.

Please contact Meghan Martin at 508.854.4436 or mxmartin@qcc.mass.edu for more details.

Transfer Option for Early Childhood Education AA Degree

The Transfer option is specifically designed to transfer to state colleges within Massachusetts and is most closely affiliated with Worcester State College. However, this option may be the preferred course of study for anyone wishing to transfer and continue their education.

One should be aware that when selecting this option, the student is not graduating from Quinsigamond Community College as a qualified lead teacher in a Massachusetts preschool, nor is she/he able to be licensed as such by the Department of Early Education and Care. This is due to the fact that transfer options require more liberal arts courses and to accommodate that requirement we must eliminate the second semester of Early Childhood Education core courses, including a 150 hour practicum.

While enrolling in the transfer option does not assure the student acceptance into a four-year college or university, it does provide for a smoother transfer process provided that grades meet the standards held by the transfer institution. Students must remember that to be an Education Major at a four-year college or university, one must pass the Massachusetts Test for Educator Licensure (MTEL). Enrolling in the transfer option does not ensure successful completion of that process.

It is highly recommended that students take the communication and literacy skills test (CLST) portion of the Massachusetts Tests for Educational Licensure (MTEL) after semester 2 in their Early Childhood Education Program to ensure continuation in the appropriate program. For more information consult the MTEL web site www.mtel.nesinc.com.

The plan of study for the transfer option is as follows:

Students should consult the DHE web site www.mass.edu to determine how the Compact benefits transfer to a four-year institution.

To achieve compact status and qualify for these guarantees students must:

- Complete an associate degree with a minimum of 60 college-level credits.
- Complete the specific core curriculum outlined in the applicable Compact.
- Achieve a minimum Grade Point Average of 2.75. (A few colleges may require a different GPA: students should consult with the transfer officer to determine the GPA requirements of the education program at their intended transfer institution).
- Achieve a passing score on the Communication and Literacy Skills Test (CLST) of the Massachusetts Test for Educator Licensure (MTEL). (It is the student's responsibility to ensure that the test score is forwarded to the receiving institution).

Students seeking Compact status should review the applicable Compact carefully with an advisor to make sure that the courses selected meet Compact requirements. [The Compact with the Implementation Guidelines may be found at the Board of Higher Education's web site www.mass.edu under Teacher Quality Initiatives/Teacher Education Compacts].

Admission to competitive majors or programs may be limited by four-year institutions. In these cases, receiving institutions will apply the same criteria to transfer students as they use for students who began their baccalaureate programs at that institution.

Institutions may not require students transferring under these Compacts to complete more than 68 credits beyond the Associate's Degree. For an exception to this rule, see Section III of the Elementary Education Compact or Section IV of the Early Childhood Education Compact.

CORI/SORI
A Criminal Offenders Record Information (CORI), Department of Social Services (DSS) and Sexual Offenders Record Information (SORI) checks may be required of any student taking ECE courses and mandatory for all students enrolled in the program. Students with a felony conviction may not be able to attend community facilities for fieldwork assignments and so would be unable to complete the program.

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

EARLY CHILDHOOD EDUCATION - Associate in Arts - Career Option (Program Code: EC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Early Childhood Education	ECE 101	F/S/SU			3	ENG 100 or approp place score
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Mathematics Elective*	---				3	
Science Elective**	---				3/4	
Semester 2						
Growth and Development of the Young Child	ECE 102	F/S/SU			3	ENG 100 or approp place score
or Human Development I: Conception to Adolescence	PSY 123	F/S				PSY 101
Family Issues & Dynamics	ECE 112				3	ENG 100 or approp place score
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Social Science Elective	---				3	
Science Elective**	---				3/4	
Semester 3						
Curriculum for Young Children I	ECE 231	F			3	ENG 101, ECE 101, ECE 102 or PSY 123 Coreq-ECE 251, ECE 253
Integrating Theory and Practice I: Guidance of Young Children	ECE 251	F			3	ENG 101, ECE 101, ECE 112, ECE 102 or PSY 123 Coreq-ECE 231, ECE 253
Supervised Student Participation I	ECE 253	F			4	ENG 101, ECE 101, ECE 112, ECE 102 or PSY 123 Coreq-ECE 231, ECE 251
History Elective	---				3	
Liberal Arts Elective	---				3	
Semester 4						
Curriculum for Young Children II	ECE 232	S			3	ECE 231, ECE 251,ECE 253, ENG 101 Coreq-ECE 252, ECE 254
Integrating Theory and Practice II: Observing, Recording and Authentic Assessment	ECE 252	S			3	ECE 251 Coreq-ECE 232, ECE 254
Supervised Student Participation II	ECE 254	S			4	ECE 231, ECE 251, ECE 253 Coreq-ECE 232, ECE 252
ECE Elective	---				3	
Liberal Arts Electives	---				6	
Total credits required					65-67	

The Degree:
Associate in Arts

The Program:
Early Childhood Education

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

The Next Step:
Prepares student to enter into responsible positions in the field of Early Education and Care. Employment in the field or transfer to a four-year program.

Program Coordinator:
Charlene Mara 508.854.4447
cmara@qcc.mass.edu

Program Notes:
- Lead Teacher Qualified (DEEC) Department of Early Education and Care.
- All ECE courses must be completed with a grade of "C" or higher to qualify for this degree. Students may not repeat any ECE course more than twice

*MAT 121 or MAT 111 is recommended
**Students transferring to a four-year college should take a Laboratory Science for 4 credits.

Note: A CORI/SORI/DSS report may be required of all students taking ECE classes and is mandatory for all students accepted into the program. Please see CORI/SORI in the program introduction.

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

EARLY CHILDHOOD EDUCATION - Associate in Arts - Transfer Option (Program Code: ECTR)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Early Childhood Education	ECE 101	F/S/SU			3	ENG 100 or approp place score
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Mathematics for Educators	MAT 111	F/S/SU			3	MAT 099 or approp place score
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Integrated Science: Earth and Space	SCI 105	F/S/SU			4	ENG 100, MAT 095
Semester 2						
Growth and Development of the Young Child	ECE 102	F/S/SU			3	ENG 100 or approp place score
or Human Development I: Conception to Adolescence	PSY 123	F/S				PSY 101
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Humanities Elective	---				3	
Integrated Science: The Living World	SCI 106	F/S/SU			4	ENG 100, MAT 095
Social Science Elective	---				3	
Semester 3						
Curriculum for Young Children I	ECE 231	F			3	ENG 101, ECE 101, ECE 102 or PSY 123 Coreq-ECE 251, ECE 253
Integrating Theory and Practice I: Guidance of Young Children	ECE 251	F			3	ENG 101, ECE 101, ECE 112, ECE 102 or PSY 123 Coreq- ECE 231, ECE 253
Supervised Student Participation I	ECE 253	F			4	ENG 101, ECE 101, ECE 112, ECE 102 or PSY 123 Coreq- ECE 231, ECE 251
Liberal Arts Elective****	---				3	
Social Science Elective	---				3	
Semester 4						
Humanities Elective	---				3	
Social Science Elective	---				3	
Liberal Arts Electives****	---				3	
Children's Literature	ENG 200	F/S/SU			3	ENG 102
Total credits required					60	

The Degree:
Associate in Arts

The Program:
Early Childhood Education

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

The Next Step:
- This is a statewide Education Compact approved program
  Former joint admissions program
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

Program Coordinator:
Charlene Mara 508.854.4447
cmara@qcc.mass.edu

Program Notes:
****Students are advised to consult the requirements of the college to which they plan to transfer and to use student's credits to fulfill the academic major requirements of that institution.

Students wishing to receive DEEC Lead Teacher certification will need to complete ECE232, ECE 252 and ECE 254

Note: A CORI/SORI/DSS report may be required of all students taking ECE classes and is mandatory for all students accepted into the program. Please see CORI/SORI in the program introduction.

It is highly recommended that students take the CLST portion of the Teacher Test (MTEL after completing semester 2 to ensure continuation in the appropriate program.

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

Early Childhood Education - Certificates

Early Childhood Education Certificate for Assistant Teachers

Ideal candidates for this certificate include individuals interested in some formal education about young children but who are not currently interested in earning an associate degree. This certificate program will gradually introduce the participants to the development of young children along with the teaching practices that are most effective when working with these children. All early childhood education courses must be completed with a grade of "C" or better. Students may not repeat any early childhood education course more than twice.

Infant/Toddler Certificate

The Infant/Toddler Certificate program in Early Childhood Education provides students with both the theoretical knowledge and practical skills training necessary for the care of infants and toddlers in family day care homes or child care centers. Courses required for the Certificate meet the day-care staff requirements of the Massachusetts Department of Early Education Care. Field observation at an approved off site early education and care Infant and Toddler program are intended to provide you with practical experience in the care of infants and toddlers.

Leadership in Early Education and Care

The Leadership in Early Education and Care Certificate is designed for those working in early childhood centers who are directors, supervisors, or those aspiring to a leadership role. Focus is placed on interpersonal communication and dynamics, understanding one's self and others. Successful participants create and sustain healthy working relationships leading to quality programs for young children and their families.

School Age Certificate

This certificate program is designed to support and increase the competencies of those working directly with school-age children in after school group settings. The series of courses and fieldwork experience will acquaint the practitioner with the Standards for Quality School-Age distribution by the National School-Age Care Alliance. Developmental understandings of the school-age child leading to appropriate curriculum planning will combine with on-site fieldwork supervision (all fieldwork will be completed at the student's work site pending approval of their supervisor). All early childhood education courses must be completed with a grade of "C" or better. Students may not repeat any early childhood education course more than twice.

To qualify for admission to this program the student must be a high school graduate (or equivalent) and have completed three years of high school or college level English with a grade of "C" or better. Students can apply many of the credits earned in the Certificate program to the Associate Degree program in Early Childhood Education at Quinsigamond.

CORI/SORI:
Applicants for all Certificate programs need to understand that a court record could prevent them from performing direct childcare work. A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) may be required of students taking ECE courses and is required by all certificate candidates.

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

EARLY CHILDHOOD EDUCATION - Certificate - Early Childhood Education Certificate for Assistant Teachers (Program Code: CEAT)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Introduction to Early Childhood Education	ECE 101	F/S/SU			3	ENG 100
Growth & Development of the Young Child	ECE 102	F/S/SU			3	ENG 100
Family Issues and Dynamics	ECE 112	F/S/SU			3	ENG 100
Fieldwork with Young Children I	ECE 202	S			3	
Creative Experiences for Young Children	ECE 234				3	ENG 100
Discipline: Guiding Children's Behavior	ECE 255	F/S			3	ENG 100
Early Childhood Elective	---				3	
Introduction to English Composition or Higher	ENG 100	F/S/SU			3	Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
Total credits required					24	

The Certificate:
Early Childhood Education Certificate for Assistant Teachers

The Program:
Early Childhood Education

Admission Requirements:
- High School Diploma or GED(refer to pg. 9)

The Next Step:
Associate in Arts in Early Childhood Education

Program Coordinator:
Charlene Mara 508.854.4447
cmara@qcc.mass.edu

Program Notes:
- All ECE courses must be completed with a grade of "C" or higher to qualify for this certificate. Students may not repeat any ECE course more than twice

Note: A CORI/SORI/DSS report may be required of all students taking ECE classes. Please see CORI/SORI in the program introduction.

EARLY CHILDHOOD EDUCATION - Certificates - Infant/Toddler Certificate (Program Code: IC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Introduction to Early Childhood Education	ECE 101	F/S/SU			3	ENG 100
Growth & Development of the Young Child	ECE 102	F/S/SU			3	ENG 100
Health, Safety, & Nutrition in Programs for Young Children	ECE 103	F			3	ENG 100
Family Issues & Dynamics	ECE 112				3	ENG 100
Fieldwork with Infants & Toddlers (Observation and Experience)	ECE 123	S			3	ENG 100
Infant & Toddler Curriculum and Development	ECE 221	F			3	ENG 100
Introduction to English Composition or Higher	ENG 100	F/S/SU			3	Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
Elective	---				3	
Total credits required					24	

The Certificate:
Infant/Toddler

The Program:
Early Childhood Education

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

The Next Step:
Associate in Arts in Early Childhood Education

Program Coordinator:
Charlene Mara 508.854.4447
cmara@qcc.mass.edu

Program Notes:
- All ECE courses must be completed with a grade of "C" or higher to qualify for this certificate.
- Students may not repeat any ECE course more than twice

Note: A CORI/SORI/DSS report may be required of all students taking ECE classes. Please see CORI/SORI in the program introduction.

EARLY CHILDHOOD EDUCATION - Certificates – Leadership in Early Education and Care (Program Code: EEC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Administration in Early Education and Care	ECE 243	F/SU			3	ENG 102 or PSY 123
Supervision in Early Childhood Settings	ECE 238	F			3	ENG 100
Semester 2						
Communication for Collaboration	ECE 244	F/S			3	ECE 102 or PSY 123
Advocacy and Ethics for Social Justice in Early Education and Care	ECE 245	F/S			3	ECE 102 or PSY 123
Seminar and Field Experience: Leadership in Early Education and Care	ECE 246	S			3	ECE 102 or PSY 123
Total credits required					15	

The Certificate:
Leadership in Early Education and Care

The Program:
Early Childhood Education

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

The Next Step:
Leadership Position in the field of Early Childhood Education

Program Coordinator:
Charlene Mara 508.854.4447
cmara@qcc.mass.edu

Program Notes:
- All ECE courses must be completed with a grade of "C" or higher to qualify for this certificate.
- Students may not repeat any ECE course more than twice

Note: A CORI/SORI/DSS report may be required of all students taking ECE classes. Please see CORI/SORI in the program introduction.

EARLY CHILDHOOD EDUCATION - Certificate - School Age Certificate (Program Code: CSA)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Development of the School Age Child	ECE 110	F			3	
Family Issues and Dynamics	ECE 112	F/S/SU			3	ENG 100
Curriculum for School-Age Child	ECE 113	S			3	ENG 100
Fieldwork with School-Age Children	ECE 204	S			3	ECE 110, ENG 100
Discipline: Guiding Children's Behavior	ECE 255	F/S			3	ENG 100
Introduction to English Composition or Higher	ENG 100	F/S/SU			3	Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
Elective	---				3	
Elective	---				3	
Total credits required					24	

The Certificate:
School Age Certificate

The Program:
Early Childhood Education

Admission Requirements:
- High School Diploma or GED (refer to pg. 9)

The Next Step:
Associate in Arts in Early Childhood Education

Program Coordinator:
Charlene Mara 508.854.4447
cmara@qcc.mass.edu

Program Notes:
- All ECE courses must be completed with a grade of "C" or higher to qualify for this certificate. Students may not repeat any ECE course more than twice

Note: A CORI/SORI/DSS report may be required of all students taking ECE classes. Please see CORI/SORI in the program introduction.

ELECTRONICS TECHNOLOGY AND RELATED AREAS

Electromechanical Technology (Robotics and Automation) – Associate in Science
- Transfer Option
- Career Option

Electronics Technology - Certificate

Electronics Technology – Associate in Science
- Biomedical Instrumentation Option
- Electronics Technician Option

Telecommunications Technology – Associate in Applied Science (see page 187)

Technology is central to the economy of the 21st century, and the demand for skilled technicians continues to increase steadily. Knowledge and skills in electronics are essential for those seeking careers in manufacturing, service, and technical sales and support.

Quinsigamond Community College offers three associate degree programs in the field of electronics that share a common first year curriculum: Electronics Technology, Electromechanical Technology, and Telecommunications Technology. The first year courses are listed as semesters 1 and 2 in each program, and contain the basic core courses in Electronics. Second year courses, semesters 3 and 4, build on the foundation of semesters 1 and 2, applying the core of electronics skills to more specific technology areas.

The electronics core curriculum provides students with a background in analog and digital electronics as well as a broad general education which can be the foundation for further study at four-year colleges and universities. Students in one of these programs will receive hands-on training in QCC's modern laboratories and study under the direction of instructors who have extensive experience in the field of electronics.

CORI/SORI: A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) may be required of all students enrolled in ELM 299 or ELT 299. Finger printing and drug testing may be required.

Additional Cost: Students enrolled in ELM 299 or ELT 299 may incur an additional expense for professional liability insurance.

ELECTROMECHANICAL TECHNOLOGY- Associate in Science – Transfer Option (Robotics and Automation Technology) (Program Code: EPTR)

Electromechanical technicians install, maintain, troubleshoot, and repair a wide range of computer-driven manufacturing equipment, automated control equipment, and/or robotic systems. They must understand basic electronics and computers order to work with a variety of equipment, systems, and manufacturing processes. The employment outlook for electronic equipment technicians and robotics technicians suggests strong employment opportunities in this field.
The Transfer Option requires courses in pre-Calculus, Trigonometry, and Physics, and is recommended for those students planning to continue on toward a bachelor's degree.

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

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

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

The Degree:
A study of electronics, sciences, and foundational skills necessary for success in the high-tech manufacturing workplace.

The Program:
Trains students to compete in a high performance, technologically driven market by demonstrating the student's ability to perform at a competent level. This is accomplished by adhering to national standards developed to measure and promote the competency of work-ready, entry-level electronic/electromechanical technicians.

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

The Next Step:
Graduates of this program are qualified for entry-level positions as electronic or manufacturing equipment technicians. Students may also continue their education at the bachelor's level.

Program Coordinator:
James Heffernan 508.854.2739
jheffernan@qcc.mass.edu

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

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

ELECTROMECHANICAL TECHNOLOGY - Associate in Science - Career Option (Robotics and Automation Technology) (Program Code: EPCA)

Electromechanical technicians install, maintain, troubleshoot, and repair a wide range of computer-driven manufacturing equipment, automated control equipment, and/or robotic systems. They must understand basic electronics and computers order to work with a variety of equipment, systems, and manufacturing processes. The employment outlook for electronic equipment technicians and robotics technicians suggests strong employment opportunities in this field.
Students completing the Career Option have elective options when choosing Math and Science courses, and must complete a cooperative work experience.

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

* Recommended Mathematics electives: MAT 100 College Algebra, MAT 122 Statistics
** Recommended Lab Science electives: SCI 107 Science of Technology: Vision and Light, SCI 108 Science of Technology: Hearing and Sound, PHY 101 Physics I (requires MAT 124 as a co-requisite), PHY 102 Physics II
*** Recommended Social Science Elective: PSY 118 Psychology of Interpersonal Relations

The Degree:
A study of electronics, sciences, and foundational skills necessary for success in the high-tech manufacturing workplace.

The Program:
Trains students to compete in a high performance, technologically driven market by demonstrating student's ability to perform at a competent level. This is accomplished by adhering to national standards developed to measure and promote the competency of work-ready, entry-level electronic/electromechanical technicians.

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

The Next Step:
Graduates of this program are qualified for entry-level positions as electronic or manufacturing equipment technicians. Students may also continue student's education at the bachelor's level.

Program Coordinator:
James Heffernan 508.854.2739
jheffernan@qcc.mass.edu

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

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

ELECTRONICS TECHNOLOGY - Associate in Science - Electronics Technician Option (Program Code: ELET)

The Electronics Technician Option prepares students for careers as electronics technicians. Electronics technicians are employed in such fields as research and development, automated manufacturing, telecommunications, photonics, and instrumentation. Other career opportunities exist in microelectronics manufacturing, field service, and integrated circuit layout design. This program is recommended for students intending to transfer into a bachelor's degree program in Electronics or Electrical Engineering Technology.

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
CAD for Technicians or	ELT 105	F				ENG 100 or approp place score
Introduction to Microcomputer Applications or	CIS 111	F/S/SU				
Introduction to Computer Applications in Telecommunications	CIS 115	F/S/SU			3	
Electronics I	ELT 103	F/S			4	ENG 100, MAT 099
Digital Computer Circuits	ELT 121	F/S			4	ENG 100, MAT 099
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT 100 or approp place score
Semester 2						
Windows Client Operating Systems	CSC 141	F/S/SU			4	
Electronics II	ELT 104	F/S			4	ELT 103
Microprocessors or	ELT 122	F/S				ELT 121
Computer Hardware & Support	CSC 233	F/S			4	Coreq-CSC 141
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
College Mathematics II: Trigonometry	MAT 124	F/S/SU			3	MAT 123
Semester 3						
Program Elective*	---				4	
Calculus I	MAT 233	F/S/SU			4	MAT 124
Physics I	PHY 101	F			4	Coreq-MAT 124
Humanities Elective	---				3	
Social Science Elective	---				3	
Semester 4						
Program Elective*	---				4	
Calculus II	MAT 234	F/S/SU			4	MAT 233
Physics II	PHY 102	S			4	PHY 101
Technical Elective**	---				3	
Total credits required					68	

The Degree:
Associate in Science

The Program:
Electronics Technology-Electronics Technician option

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

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

Former joint admissions program

Program Coordinator:
James Heffernan 508.854.2739
jheffernan@qcc.mass.edu

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

*Program Elective may be any 200-Level ELT or ELM course.
**Courses that satisfy Technical Electives are: any CSC course, any CST course, any ELM course, any 200 level ELT course, any 200 level CIS course, CIS 134, MAT 122, any 200 level MAT courses or any 200 level MNT course.

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

ELECTRONICS TECHNOLOGY - Associate in Science - Biomedical Instrumentation Option (Program Code: ELBI)

The Biomedical Instrumentation Option, in addition to providing a sound background in analog and digital electronics, requires students to take courses in anatomy and physiology and a cooperative work experience. This prepares the student to enter the workforce as an essential member of a medical organization, working with the electronic instrumentation equipment that is critical to today's high-tech health-care industry. Students may also continue their education by pursuing a bachelor's degree at a 4-year institution.

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

The Degree:
Associate in Science

The Program:
Electronics Technology-Biomedical Instrumentation option.

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

The Next Step:
Enter the workforce or transfer to a four-year college
Former joint admissions program

Program Coordinator:
James Heffernan 508.854.2739
jheffernan@qcc.mass.edu

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

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

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

ELECTRONICS TECHNOLOGY - Electronics Certificate (Program Code: CE)

The Electronics Technology Certificate provides students with a foundation of core Electronics skills and knowledge that has a broad application in the field of electronics. These skills are essential to anyone pursuing a career in high-tech manufacturing, equipment installation and support, telecommunications, photonics, or technical sales and support.

The requirements for the Electronics Technology Certificate are included in semesters 1 and 2, which is the first year core curriculum, of the associate Degree programs in Electronics, Electromechanical, and Telecommunications Technology. The Certificate requires 29 credits, which can be completed in two semesters of full-time study. This is useful for those who are looking for a short-term educational program that can be completed in one year. Students who earn the certificate may then continue on toward one of the associate degree paths in the future.

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

The Certificate:
Electronics Technology – Covers an essential core of skills and knowledge in the field of Electronics.

The Program:
Electronics Technology

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

The Next Step:
Continue your education towards an Associates degree in Electronics, Electromechanical, or Telecommunications and/or enter the workforce as an entry level Electronics Technician.

Program Coordinator:
James Heffernan 508.854.2739
jheffernan@qcc.mass.edu

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

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

EMERGENCY MEDICAL SERVICES

Emergency Medical Services are among the newest, most dynamic, and most progressive disciplines within the field of medicine. Forty years ago, there were no Emergency Medical Technicians or Paramedics, and pre-hospital treatment and transportation was provided by funeral home, police, and fire personnel with little or no training or specialized equipment. With the dramatic advances in knowledge, education and equipment development since that time, Americans now expect highly trained and skilled experts in pre-hospital emergency medicine to respond swiftly in their time of need. It is the goal of the Emergency Medical Services program to provide our community with a corps of highly educated, trained, motivated and professional EMS personnel to help fulfill that expectation. To this end, the Paramedic Technology Associate in Science, Paramedic Certificate, EMT-Intermediate Certificate, and EMT-Basic course are held at the QCC Campus.

PARAMEDIC TECHNOLOGY-Associate in Science

The Associate Degree program prepares Emergency Medical Technicians (EMT-Basic or EMT-Intermediate) upon successful completion of the Massachusetts EMT-Paramedic Exam to practice at the Paramedic (EMT-P) level. In addition to classwork, the program provides supervised laboratory training, clinical experiences in affiliated hospitals, and supervised field placements within advanced life support EMS services.

Students accepted to this program may elect to pursue their studies on a full-time basis and earn an Associate Degree or take the core paramedic courses and receive the Paramedic Certificate. Successful completion of either option prepares the student to sit for the Massachusetts Certification examination. Certified Paramedics may complete the General Education component of the program on a full or part-time basis and earn the Associate Degree.

The Paramedic core of the Associate Degree program (courses designated EMT) has been accredited by the Massachusetts Office of Emergency Medical Services (OEMS). Upon successful completion of the clinical/field placement components of this program, the student will be prepared to take the certification examination for Paramedics of the Massachusetts Department of Public Health.

CORI/SORI:

A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) check is required of all students accepted into the program. Students should be aware that a court record might prevent them from clinical/field rotation or certification examination for Paramedics of the Massachusetts Department of Public Health. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

In addition to receiving a grade of "C" or higher in all Paramedic courses, the student must demonstrate satisfactory progress in all clinical, laboratory, and field placement experiences to qualify for the Associate Degree. The classroom component must be completed prior to clinical and fieldwork assignments. Furthermore, prior to entering field placement, the student must have obtained Advanced Cardiac Life Support Certification.

Admission Requirements:

To be eligible for consideration for admission into the Associated Degree Program, an applicant must have one year of high school biology or the equivalent, or currently holding EMT-I certification, and test into ENG 101 or complete ENG 100 with a "C" grade or higher. All courses must be completed with a grade of "C" or higher. In addition, he/she must hold a current Massachusetts EMT-Basic Certificate and have at least one year of experience (or equivalent) as an EMT-Basic*, as verified by a letter from the employer.

To be eligible for consideration for admission to the Paramedic Certificate Program the student must hold a current Massachusetts EMT-Basic Certificate and have at least 1 year of experience (or equivalent) as an EMT-Basic; as verified by a letter from the employer, a Health Care provider CPR card, documentation of immunization currency and satisfactory health status prior to beginning clinical experience.

Additional Costs:

Emergency Medical Services students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing, certificatation examinations, and any required skills for remediation.

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

*This equivalency can include equivalent experience in the military. Applicants who do not have an EMT-Basic Certificate can complete requirements for that certification through evening or summer course work at QCC.

PARAMEDIC TECHNOLOGY - Associate in Science (Program Code: EM)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Fall)						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or AP High School Biology Coreq ENG 101
Introduction to Advanced Pre-Hospital Care	EMT 108	F/S			4	Coreq BIO 140 or BIO 111, EMT 109, 110, 112, 114
Pharmacology for Advanced Pre-Hospital Care	EMT 109	F/S			2	Coreq BIO 140 or BIO 111, EMT 108, 110, 112, 114
Patient Assessment & Human Systems	EMT 110	F/S			2	Coreq BIO 140 or BIO 111, EMT 108, 109, 112, 114
Patient Assessment/Pharmacology: Laboratory	EMT 112	F/S			1	Coreq BIO 140 or BIO 111, EMT 108, 109, 110, 114
Life Span and Healthcare Issues for Pre-Hospital Care	EMT 114	F/S			4	Coreq BIO 140 or BIO 111, EMT 108, 109, 110, 112
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Semester 2 (Spring)						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
Advanced Pre-Hospital Care	EMT 115	F/S			4	EMT 108, 109, 110, 112, 114 Coreq BIO 112 or BIO 140, EMT 116, 117, 118, 119
Cardiology and Advanced Cardiac Life Support	EMT 116	F/S			4	EMT 108, 109, 110, 112, 114 Coreq BIO 112 or BIO 140, EMT 115, 117, 118, 119
Trauma	EMT 117	F/S			3	EMT 108, 109, 110, 112, 114 Coreq BIO 112or BIO 140, EMT 115, 116, 118, 119
Neonatal and Pediatric Emergencies	EMT 118	F/S			2	EMT108, 109, 110, 112, 114 Coreq BIO 112 or BIO 140, EMT 115, 116, 117, 119
Topics In Advanced Life Support	EMT 119	F/S			3	EMT 108, 109, 110, 112, 114 Coreq BIO 112 or BIO 140, EMT 115, 116, 117, 118, 119
Continued next page						

The Degree:
Associate in Science

The Program:
Paramedic Technology

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

The Next Step:
Sit for appropriate Massachusetts Certification Exam. Enter the workforce and/or upgrade career position.

Program Coordinator:
Cheryl Finn 508.854.4303
cfinn@qcc.mass.edu

Program Notes:
For additional information see program introduction on page 126.

CORI/SORI/DRUG TEST:
Is required of all students accepted into the program.

Technical Performance Standards:
Please review the Technical Performance Standards requirements on pages 16-19.

PARAMEDIC TECHNOLOGY - Associate in Science (Program Code: EM)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 3 (Summer 1 and 2)						
Clinical Placement for the Paramedic	EMT 202	S/SU			7	EMT 115, 116, 117, 118, 119
Semester 4 (Fall)						
Field Placement for the Paramedic	EMT 203	F/SU			5	EMT 202
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Introduction to Psychology or	PSY 101	F/S/SU				Coreq-ENG 100 or approp place score
Psychology of Interpersonal Relations	PSY 118	F/S/SU			3	ENG 100 or approp place score
Semester 5 (Spring)						
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Elective	---				3	
Liberal Arts Elective	---				3	
Total credits required					70	

EMERGENCY MEDICAL SERVICES Certificate - Paramedic Technician (Program Code: PC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Fall)						
Introduction to the Human Body	BIO 140	F/S/SU			4	ENG 100
Introduction to Advanced Pre-Hospital Care	EMT 108	F/S			4	Coreq BIO 140 or BIO 111, EMT 109, 110, 112, 114
Pharmacology for Advanced Pre-Hospital Care	EMT 109	F/S			2	Coreq BIO 140 or BIO 111, EMT 108, 110, 112, 114
Patient Assessment & Human Systems	EMT 110	F/S			2	Coreq BIO 140 or BIO 111, EMT 108, 109, 112, 114
Patient Assessment/Pharmacology: Laboratory	EMT 112	F/S			1	Coreq BIO 140 or BIO 111, EMT 108, 109, 110, 114
Life Span and Healthcare Issues for Pre-Hospital Care	EMT 114	F/S			4	Coreq BIO 140 or BIO 111, EMT 108, 109, 110, 112
Semester 2 (Spring)						
Advanced Pre-Hospital Care	EMT 115	F/S			4	EMT 108, 109, 110, 112, 114 Coreq BIO 140 or BIO 112, EMT 116, 117, 118, 119,
Cardiology and Advanced Cardiac Life Support	EMT 116	F/S			4	EMT 108, 109, 110, 112, 114 CoreqBIO 140 orBIO 112, EMT 115, 117, 118, 119
Trauma	EMT 117	F/S			3	EMT 108, 109, 110, 112, 114 Coreq BIO 140 or BIO 112, EMT 115, 116, 118, 119,
Neonatal and Pediatric Emergencies	EMT 118	F/S			2	EMT 108, 109, 110, 112, 114 Coreq BIO 140 or BIO 112, EMT 115, 116, 117, 119,
Topics In Advanced Life Support	EMT 119	F/S			3	EMT 108, 109, 110, 112, 114 Coreq BIO 140 or BIO 112, EMT 115, 116, 117, 118
Semester 3 (Summer 1 and 2)						
Clinical Placement for the Paramedic	EMT 202	S/SU			7	EMT 115, 116, 117, 118, 119
Semester 4 (Fall)						
Field Placement for the Paramedic	EMT 203	F/SU			5	EMT 202
Total credits required					45	

The Certificate:
Paramedic Technology

The Program:
A 45 credit program including approximately 700 hours of intensive field and clinical experience.

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

The Next Step:
Upon successful completion of the program the graduate will be eligible to sit for the Massachusetts Certification examination.

Program Coordinator:
Cheryl Finn 508.854.4303
cfinn@qcc.mass.edu

Program Notes:
For additional information see program introduction on page 126.

CORI/SORI/DRUG TEST:
Is required of all students accepted into the program.

Technical Performance Standards:
Please review the Technical Performance Standards requirements on pages 16-19.

EMERGENCY MEDICAL SERVICES - Emergency Medical Technician Intermediate – Certificate (Program Code: EI)

This certificate prepares Emergency Medical Technicians upon completion of the Massachusetts EMT-Intermediate Exam to practice at the Intermediate (EMT-I) level. It provides supervised classroom, laboratory training, clinical experiences in emergency departments, and other areas in affiliating hospitals, and supervised field placement at emergency medical services.

Students in this program, will be required to complete four on-campus lecture and laboratory courses and approximately 200-250 hours of intensive clinical/field placement assignments. This program is accredited by the Massachusetts Office of Emergency Medical Services (OEMS).

Upon successful completion of the didactic and clinical components of this program, the student will be eligible to take the certification examination for EMT-Intermediate of the Massachusetts Office of Emergency Medical Services.

CORI/SORI: A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) check is required of all students accepted into the program. Students should be aware that a court record might prevent them from clinical/field rotation or certification examination for Paramedics of the Massachusetts Department of Public Health. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

In addition to receiving a grade of "C" or higher in all (Intermediate) courses, the student must demonstrate satisfactory progress in all clinical, laboratory, and field placement experiences to be eligible to continue in this program.

To qualify for admission to this program the candidate must hold a current Massachusetts EMT-Basic Certificate, and have at least one year of experience (or equivalent) as an EMT-Basic*; a letter of recommendation from his or her employer, a Health Care Provider CPR card, and a completed health form are also required.

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

*This equivalency can include equivalent experience in the military.

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Intermediate Module I	EMT 102	F			1	EMT 101 or equivalent
Intermediate Module II	EMT 103	F			2	EMT 102
Intermediate Module III	EMT 104	F			3	EMT 103
Intermediate Module IV	EMT 105	F			2	EMT 104
Intermediate Module V	EMT 106	F			4	EMT 105
Intermediate Module VI	EMT 107	F			3	EMT 106
Total credits required					15	

The Certificate:
Emergency Medical Technician Intermediate Certificate

The Program:
A 15 credit program including approximately 250 hours of clinical/field placement

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

The Next Step:
Upon successful completion of the program the graduate will be eligible to sit for the EMT-Intermediate certification examination.

Program Coordinator:
Cheryl Finn 508.854.4303
cfinn@qcc.mass.edu

CORI/SORI/DRUG TEST:
Is required of all students accepted into the program.

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

EMERGENCY MEDICAL SERVICES – Emergency Medical Technician Basic Course Offerings

This course prepares the student upon successful completion of the Massachusetts EMT-Basic exam to practice at the EMT-Basic level. It provides supervised classroom, laboratory training, and field experience with a local Emergency Services provider.

Students in this program will be required to complete approximately 160 hours of intensive lecture and laboratory materials. This program is accredited by the Massachusetts Office of Emergency Medical Services (OEMS)

Upon successful completion of the didactic and clinical components of this program, the student will be eligible to take the certification examination for EMT-Basic of the Massachusetts Office of Emergency Medical Services.

CORI/SORI:
A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) check is required of all students accepted into the program. Students should be aware that a court record may prevent them from certification for EMT-Basic or the Massachusetts Department of Public Health. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

To qualify for this course the candidate must hold a current Massachusetts drivers license, and possess a Health Care Provider CPR card. A completed health form is also required.

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

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
EMT-Basic	EMT 101	F/S/SU			7	Massachusetts Drivers License Health Care Provider CPR card
Total					7	

The Program:
Emergency Medical Technician-Basic
7 credits including approximately 160 hours of instruction

The Next Step:
Upon successful completion of the program the student will be eligible to sit for the EMT-Basic certification examination.

Program Coordinator:
Cheryl Finn 508-854-4303
cfinn@qcc.mass.edu

CORI/SORI/DRUG TEST:
Is required of all students accepted into the program.

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

ENERGY UTILITY TECHNOLOGY – Certificate (Program Code: EUTC)

The Energy Utility Technology certificate program is designed to prepare students for entry-level positions in the electrical utility industry. The industry has forecasted a strong need for new employees in the next several years for positions such as line workers, meter workers and substation maintenance personnel. The program includes courses that provide students with an introduction to the energy utility industry; knowledge of direct and alternating current circuits; generation, transmission and distribution of electricity; industrial safety; and computer applications. In addition, students will gain hands-on experience through a practicum in the second semester.

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Fundamentals of the Energy Industry	EUT 101	F			4	Coreq - ENG 100 or appropriate placement score
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
Applied Technical Mathematics*	MAT 108	F/S			4	MAT 095 or appropriate placement score
Electrical Principles I	EUT 110	F			4	MAT 095 or approp place score Coreq - ENG 100 or approp place score, EUT 101
Semester 2						
Electrical Principles II	EUT 111	S			4	EUT 110
Generation, Transmission & Distribution	EUT 115	S			4	EUT 110
Industrial Safety	EUT 120	S			3	EUT 101
Energy Utility Technology Practicum	EUT 190	S			3	Coreqs - EUT 111, 115,120
Total credits required					29	

* Note: MAT 108 is designed to teach students how to apply mathematics to specific technical disciplines and is offered for credit toward the certificate or degree to be earned in Energy Utility Technology. It may not be considered equivalent to college-level mathematics for the purpose of transfer of credit to some baccalaureate institutions.

The Certificate:
Energy Utility Technology

The Program:
Energy Utility Technology

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Applicants must assess into MAT 099 or higher and ENG 100 or higher.

The Next Step:
Enter the utility industry workforce as an entry-level technician or enroll in the Associate in Arts General Studies - Energy Utility Technology option.

Program Coordinator:
Sharron Gillies 508.854.2711
sharrong@qcc.mass.edu

Program Notes:
The Energy Utility Technology program is supported by a Community-Based Job Training Grant received from the U.S. Department of Labor. In order to be eligible to participate in this program, students who are required by law must be registered with the U.S. Selective Service System and all students must be eligible to work in the United States. Individuals seeking employment with utility companies must also meet employer-specific hiring requirements. Individuals with driving and/or legal infractions should be aware that their actions may impact their employability.

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

ENGLISH AS A SECOND LANGUAGE – Course Offerings

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						All courses in Semester 1
English as a Second Language: Writing I*	ESL 103	F/S			3	Must be a non-native speaker of English; have a High School diploma or GED and appropriate placement score.
English as a Second Language: Reading I*	ESL 113	F/S			3	
English as a Second Language: Note-taking I*	ESL 143	F/S			3	
English as a Second Language: Listening/Speaking I*	ESL 133	F/S			3	
Semester 2						
English as a Second Language: Writing II	ESL 104	F/S			3	ESL 103 passed with a "C" or higher or appropriate placement scores*
English as a Second Language: Reading II	ESL 114	F/S			3	ESL 113 passed with a "C" or higher or appropriate placement scores*
English as a Second Language: Note-taking II	ESL 144	F/S			3	ESL 143 passed with a "C" or higher or appropriate placement scores*
English as a Second Language: Listening/Speaking II	ESL 134	F/S			3	ESL 133 passed with a "C" or higher or appropriate placement scores*
Semester 3						
English as a Second Language: Writing III	ESL 105	F/S			3	ESL 104 passed with a "C" or higher or appropriate placement scores*
English as a Second Language: Reading III	ESL 115	F/S			3	ESL 114 passed with a "C" or higher or appropriate placement scores*
English as a Second Language: Note-taking III	ESL 145	F/S			3	ESL 144 passed with a "C" or higher or appropriate placement scores*
English as a Second Language: Listening/Speaking III	ESL 135	F/S				ESL 134 passed with a "C" or higher or appropriate placement scores*
Total credits required					36	

English as a Second Language:
This is a three-level academic English as a Second Language that will prepare students for other courses in the students degree. There are three levels of ESL Reading, ESL Writing, ESL Speaking, and ESL Note-taking courses. In addition, ESL students may choose to take the "Introduction to Microcomputer Applications" course at the second level of study. At the third level, all ESL students who are in a degree program should take the "Strategies for College and Career" course.

The Next Step:
Enter the workforce or continue your education.

Program Coordinator:
Anne Shull 508.854.7452
ashull@qcc.mass.edu

Program Notes:
*Must be a non-native speaker of English; have a high school diploma or GED and appropriate placement score.

FIRE SCIENCE - Associate in Science (Program Code: FS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Math Elective* (MAT 122 recommended)	MAT ---				3	MAT 099
Principles of Emergency Services	FSC 101	F			3	
Basic Emergency Medical Technology** (or take two Fire Science Electives	EMT 101	F/S/SU			6-7	
Semester 2						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Introduction to Microcomputer Applications or Advanced Microcomputer Applications	CIS 111 or CIS 112	F/S/SU			3	
Fire Behavior and Combustion	FSC 104	F/S			3	FSC 101, ENG 100 or approp place score
Building Construction for Fire Protection	FSC 121	F/S			3	FSC 101, ENG 100 or approp place score
Speech Communication Skills	SPH 101	F/S/SU			3	Pre/Coreq – ENG 101
Semester 3						
Lab Science Elective***	----				4	
Introduction to Psychology	PSY 101	F/S/SU			3	ENG 100 or approp place score
Principles of Fire and Emergency Services Safety and Survival	FSC 201	F/S/SU			3	FSC 104, FSC 121
Fire Prevention	FSC 203	F/S/SU			3	FSC 104, FSC 121, ENG 101
Fire Science Elective	----				3	
Semester 4						
Lab Science Elective***	----				4	
Introduction to Sociology (or Social Problems & Social Changes)	SOC 101 (SOC 111)	F/S/SU			3	ENG 100 or approp place score
Fire Systems Protection	FSC 223	F/S/SU			3	FSC 203
Introduction to Fire and Emergency Services Administration	FSC 263	F/S			3	FSC 203, SPH 101
Fire Science Elective	----				3	
Total credits required					62-63	

The Degree:
Associate in Science

The Program:
Fire Science

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

Your Next Step:
Continue to advance in the Firefighting Profession, enter the workforce, or transfer to a four-year program.
- This program has transfer articulation agreements

More information on transfer is available on pages 22 - 23 or at www.qcc.mass.edu/transfer

Program Coordinator:
Pat Schmohl 508.854.2741
pschmohl@qcc.mass.edu

Program Notes:
* MAT 100, MAT 121, MAT 122, or higher. MAT 122 recommended

** Credit for EMT 101 – Basic EMT may be earned through credentialing for students with current EMT Basic, EMT I or EMT Paramedic certification. Please contact Experience-Based Education at 508.854.4380 for more information. Current credentialing fees apply

*** Recommend taking BIO 101 and BIO 111 as lab science electives if you are considering becoming a paramedic. See Paramedic Technology Program for Admission requirements and program details.

- This Program is designed to align seamlessly with the Fire and Emergency Services Higher Education (FESHE) Model for Associate degree Programs in Fire Science.
- Contact Experience Based Education for credentialing courses taken at the Massachusetts Firefighting Academy, or at Worcester Fire Academy.

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

GENERAL STUDIES – Associate in Arts - Options in General Studies, Biotechnology, Community Health, Deaf Studies, Elementary Education Transfer, Energy Utility Technology, Health Care and Occupational Education

The General Studies Program is unique in that it attempts to meet the academic needs of QCC career programs, four-year transfer institutions, and area employers. It has been designed to develop broad-based academic and employability skills. It provides a comprehensive, responsive, directed academic experience in which students identify educational and career choices, develop individualized career plans (CAPS), and implement career pathways leading to further education or careers.
In addition, the QCC General Studies Program has articulation and transfer agreements with numerous colleges and universities. The General Studies Program allows students to tailor the selection or courses to meet the requirements of a transfer institution. It also provides students with the opportunity to tailor a program of study to meet specific professional/ career competencies.

The Biotechnology Option is a program specifically designed to help students gain a strong academic foundation in biotechnology and laboratory sciences, preparing them to transfer to a four-year college or enter the workforce. The program allows students holding a Biotechnology Certificate to continue their education and complete an Associate degree while employed.
Areas of study include biology, cell biology, chemistry and biotechnology. In addition, courses in English, mathematics and humanities provide a student with a well rounded general education core. Together, these courses provide students with a solid understanding of the biotechnology industry and prepare them for employment or transfer to a baccalaureate degree program in biotechnology or other areas of the Biological Sciences.

The Community Health Option is a program specifically designed to help students gain a strong academic foundation in health promotion and education, preparing them to transfer to a four-year college or enter the workforce.
The Community Health Option offers students the opportunity to study the areas of social sciences such as psychology, sociology, counseling and environmental health, that allow students to understand both the scientific and the environmental influences on health and wellness. Areas of study also include biology, chemistry, human reproduction and sexuality as well as the basic principles and practices associated with sound nutrition. In addition, courses in English, mathematics and the humanities strengthen the development of one's general education skills. Together, these courses give students a broad background in the public health field and an opportunity for further study in this expanding and exciting area.

The Deaf Studies Option prepares students to have the necessary communication skills and cultural knowledge to work with deaf and hard of hearing individuals. Through practicum participation and other course related research, students explore career opportunities in the deaf community. Students will explore the role and function of an interpreter. Graduates will be provided with a basis for continuing on to a four year college in the area of Deaf Studies or in interpreter Training. Note: A CORI/SORI check is required of all students enrolled in the Deaf Studies option. Students with a felony conviction may not be able to attend community facilities for fieldwork assignments and so world be unable to complete the program.

The Elementary Education Transfer Option meets the standards of MassTransfer and prepares students for transfer to undergraduate elementary education programs at Massachusetts public higher education institutions. With a few exceptions noted below, it guarantees admission to these programs with full transfer of credit. To qualify for the admission and transfer guarantees, students must complete the course curriculum outlined in the Massachusetts Elementary Education Compact with a GPA of 2.75 and achieve a passing score on the Communication and Literacy Skills Test (CLST) of the Massachusetts Test for Educator Licensure (MTEL). The CLST is not a requirement for the Associate's degree, and may be taken and passed after the degree has been completed. It is the student's responsibility to ensure that the CLST Score is sent to the receiving four-year institution.

Students should review the Massachusetts Elementary Education Compact and its Implementation Guidelines with an advisor to be sure that the courses taken meet the requirements of the Compact and the teacher licensure standards of the Department of Education. The Compact with its Implementation Guidelines may be found at the Board of Higher Education's website www.mass.edu under Teacher Quality Initiatives/Teacher Education Compacts. Note: A CORI/SORI check is required of all students enrolled in Elementary Education option. Students with a felony conviction may not be able to attend community facilities for fieldwork assignments and so would be unable to complete the program.

Admission to Competitive Majors or Programs: In some cases, because of space or fiscal limitations, baccalaureate institutions may not admit all qualified applicants to a given major or program. The Compact provides that in those cases, the institution will use the same criteria for applicants who are transfer students as it does for its "native" students, i.e., those who began their baccalaureate programs at the four-year institution.
Also, individual institutions may have GPA requirements other than the 2.75 cited in the Compact. Students should consult with their intended institution to be sure that they know the GPA requirements of their intended transfer institutions.

The Energy Utility Technology Option in General Studies is limited to graduates of the Energy Utility Technology Certificate program. The Program provides holders of the EUT Certificate with an opportunity to complete an Associate Degree while employed by National Grid or a similar power utility. Courses fulfill degree requirements, are available at diverse times and locations, and relate to those intangible skills desired by many employers. This degree will enhance graduates' eligibility for career advancement and facilitate transfer to four year institutions offering related Bachelor Programs.

The Health Care Option offers students the opportunity to prepare for QCC's (or any other college's) Health Care Programs. In addition, students will be well-prepared to transfer to a baccalaureate institution in science based programs. The Program's emphasis on science offers students a strong academic foundation which will transfer to a four year school or to enter the workforce. Areas of study include biology, chemistry, pharmacology and pathophysiology. In addition, courses in English, mathematics and the humanities strengthen the development of students' general education skills. Together, these courses give students a broad background in science and prepare them for further study.

The Occupational Education Option is offered in cooperation with the Center for Occupation Education at the University of Massachusetts-Boston. Students seeking Massachusetts Department of Education approval as a vocational instructor complete a 36-credit sequence of competency based courses at UMass-Boston or at one of its satellite locations. Quinsigamond Community College will accept 21 of these credits as transfer credits towards the Associate of Arts degree in General Studies.

This option will also prepare students to continue their education beyond the Associate degree. Students may choose to complete a Bachelor degree through the College of Arts & Sciences at UMass-Boston or at another four-year institution.

Under current Massachusetts Department of Education regulations, persons who complete this program, have six years of recent full-time employment, and receive satisfactory scores on written and performance tests in their trade area are eligible to teach in vocational and comprehensive Massachusetts High Schools. For full details contact the Admissions Office or Transfer Office.

GENERAL STUDIES - Associate in Arts (Program Code: GS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Behavioral Science Elective	---	F/S/SU			3	
College Algebra† or	MAT 100	F/S/SU			3	MAT 099 or approp place score
Topics in Mathematics† or	MAT 121	F/S				MAT 099 or approp place score
Statistics†	MAT 122	F/S/SU				MAT 099 or approp place score
Strategies for College & Career‡ or	ORT 110	F/S/SU			3	
Self Assessment & Career Planning‡	PSY 115	F/S/SU				ENG 090, ENG 095 or approp place score
Critical Thinking & Problem Solving	HUM 101	F/S/SU			3	ENG 100 or approp place score
Semester 2						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
History Elective	HST ---	F/S/SU			3	
Career Elective$^{\Omega}$	---	F/S/SU			3	
Career Elective$^{\partial}$	---	F/S/SU			3	
Elective	---	F/S/SU			3	
Semester 3						
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Career Elective$^{\Omega}$	---	F/S/SU			3	
Humanities Elective	---	F/S/SU			3	
Laboratory Science Elective	---	F/S/SU			4	
Social Science Elective	---	F/S/SU			3	
Semester 4						
Humanities Elective*	---	F/S/SU			3	
Laboratory Science Elective	---	F/S/SU			4	
Social Science Elective	---	F/S/SU			3	
Career Elective$^{\Omega}$	---	F/S/SU			3	
Elective*	---	F/S/SU			3	
Total credits required					62	

Program Notes Continued:

$^{\Omega}$Career Electives are:

a. Courses with the objective of preparing students for a specific occupation or semester of occupations.

b. Courses that have been recommended based upon the student's CAPS Plan.

NOTE: Student must complete a CAPS Plan prior to the completion of twenty credits in order to register for additional courses in the General Studies Program. Courses that meet developmental, core, or general education requirements are not career electives.

$^{\partial}$Suggested course designations include: CIS, CSC and APA

*200 level course

The Degree:
Associate in Arts

The Program:
General Studies

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

The Next Step:
Enter the workforce based on career emphasis or transfer to a four-year program.
- This is a statewide MassTransfer approved program
  Former joint admissions program
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

Program Coordinator:
Marilyn Martin 508.854.4374
marilynm@qcc.mass.edu

Program Notes:
- This program can be completed at the Southbridge location.

†In order to meet QCC graduation requirements, learner must complete MAT 100, MAT 121, MAT 122 or any college level MAT course. In order to meet the requirements of MassTransfer, learner must complete MAT 121 or higher.

‡PSY 115 is recommended for students placing into ENG 100 or ENG 101. ORT 110 is recommended for students placing into ENG 090, ENG 091, ENG 095, ENG 096 or ESL courses. NOTE: Students with a CAPS Plan in place have met this requirement and can take an elective. Students must complete a CAPS Plan prior to the completion of twenty credits in order to register for additional courses in the General Studies Program.

Continued

GENERAL STUDIES - Associate in Arts – Biotechnology Option (Program Code: GSBT)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester I						
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or appropriate placement score
General Biology: Core Concepts	BIO 101	F/S/SU			4	Mat 095 with a "C" or better on the MAT 095 departmental final exam or appropriate placement score Corequisite ENG 101
Statistics	MAT 122	F/S/SU			3	MAT 099 with a "C" or better on the MAT 099 departmental final exam or placement by the Computerized Placement test
General Chemistry I	CHM 105	F			4	CHM 090 or one year of high school chemistry and MAT 099 or appropriate placement score
Critical Thinking & Problem Solving	HUM 101	F/S/SU			3	ENG 100 or appropriate place score
Semester 2						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Cell Biology	BIO 259	F/S			4	BIO 101 Restricted to GS Biotechnology Conc. and Biotechnology Certificate students
Behavioral Science Elective	---	F/S/SU			3	
General Chemistry II	CHM 106	S			4	CHM 105
Precalculus	MAT 123	F/S/SU			3	
Semester 3						
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
General Microbiology	BIO 231	F/S			4	BIO 101 or BIO 259
Elective*	---	F/S/SU			3/4	
History Elective	HST---	F/S/SU			3	
Social Science Elective	---	F/S/SU			3	
Semester 4						
Humanities Elective	---	F/S/SU			3	
Science Elective**		F/S/SU			4	
Social Science Elective	---	F/S/SU			3	
Math or Science Elective	---	F/S/SU			3/4	
Math or Science Elective***	---	F/S/SU			3/4/6	
Total credits required					66-71	

The Degree:
Associate in Arts

The Program:
General Studies –Biotechnology Concentration

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

Your Next Step:
Employment in the Biotechnology Industry or transfer to a 4 year institution and major in Biotechnology or other area of the Biological Sciences.

Program Coordinator:
Maggie Crowell-Murray 508.854.4311
maggiec@qcc.mass.edu

Program Notes:
* CIS 111 recommended for students who are also completing the Biotechnology Technician Certificate

** BIO 260 recommended for students seeking employment after graduation

***BTT 201 (summer only) recommended for students seeking employment after graduation

GENERAL STUDIES - Associate in Arts - Community Health Option (Program Code: GSCH)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
General Biology: Core Concepts	BIO 101	F/S/SU			4	Coreq-ENG 101
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Statistics	MAT 122	F/S/SU			3	MAT 099 or approp place score
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
History Elective	HST---	F/S/SU			3	
Semester 2						
Introduction to Organ Systems	BIO 102	F/S/SU			4	BIO 101
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Critical Thinking & Problem Solving	HUM 101	F/S/SU			3	ENG 100 or approp place score
Introductory Sociology (Principles)	SOC 101	F/S			3	Coreq-ENG 100 or approp place score
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Semester 3						
Introduction to the Chemistry of Living Systems	CHM 101	F/S/SU			4	CHM 090 or one year of high school chemistry, MAT 095
Introduction to Counseling	PSY 231	F/S/SU			3	PSY 101
Social Problems and Social Change	SOC 111	F/SU			3	Coreq-ENG 100 or approp place score
Elective	---	F/S/SU			3	
Humanities Elective	---	F/S/SU			3	
Semester 4						
Biology of Sex	BIO 141	F/S/SU			3	
General Microbiology	BIO 231	F/S/SU			4	BIO 101 or BIO 259
Nutrition	BIO 241	F/S/SU			3	BIO 111 or BIO 112
Elective	---	F/S/SU			3	
Humanities Elective*	---	F/S/SU			3	
Total credits required					64	

The Degree:
Associate in Arts

The Program:
General Studies-Community Health Option
This option is designed to help you gain a strong academic foundation.

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

The Next Step:
Transfer to a four-year college, participate in the Next Step Initiative, or enter the workforce.
- This is a statewide MassTransfer approved program
  Former joint admissions program
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

Program Coordinator:
Marilyn Martin 508.854.4374
marilynm@qcc.mass.edu

Program Notes:
*200 level course

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

GENERAL STUDIES - Associate in Arts - Deaf Studies Transfer Option (Program Code: GSDS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Beginning American Sign Language I	ASL 111	F/S/SU			3	
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp. place score
Critical Thinking and Problem Solving	HUM 101	F/S/SU			3	ENG 100 or approp. place score
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq ENG 100 or approp place score
Introduction to Sociology	SOC 101	F/S			3	Coreq ENG 100 or approp. place score
Semester 2						
Beginning American Sign Language II	ASL 112	F/S/SU			3	ASL 111
Introduction to Deaf Studies	ASL 113	S			3	ASL 111
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Topics in Mathematics * or	MAT 121	F/S/SU			3	MAT 099 or approp place score
Statistics*	MAT 122	F/S/SU				MAT 099 or approp place score
American Deaf Culture	SOC 220	F/S			3	SOC 101
Semester 3						
Deaf Community Practicum	ASL 200	F/S/SU			3	ASL 112, ASL 113, CORI/SORI Check
Intermediate American Sign Language I	ASL 211	F			3	ASL 112
Introduction to the Field of Interpreting	ASL 215	F			3	ASL 112, ASL 113
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Lab Science Elective Ω	---	F/S/SU			4	
Semester 4						
American Sign Language II	ASL 212	F/S/SU			3	ASL 211
Social Problems and Social Change	SOC 111	F/S/SU			3	Coreq-ENG 100 or approp. place score
History Elective	---				3	
Social Science Elective	---				3	
Science Elective	---				4	
Total credits required					62	

The Degree:
Associate in Arts

The Program:
General Studies: Deaf Studies Transfer Option

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

Your Next Step:
Enter the workforce based on career emphasis or transfer to 4 year institutions.
- This is a statewide MassTransfer approved program
  Former joint admissions program
- More information on transfer is available on pages 22-23 or at www.QCC.mass.edu/transfer
- This program has transfer articulation agreements

Program Coordinator:
John Dunn 508. 853.2300 ext. 4825
jdunn@qcc.mass.edu

Program Notes:
*Regarding Math requirements, students are advised to consult the requirements of the college to which they plan to transfer.

Ω Note: SCI 108 recommended

Note: A CORI / SORI report is required of all students taking a practicum.

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

GENERAL STUDIES - Associate in Arts - Elementary Education Transfer Option (Program Code: GSEE)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Mathematics for Educators	MAT 111	F/S/SU			3	MAT 099 or approp place score
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Career Elective$^{\Omega}$	----				3	
Humanities Elective**$^{\Omega}$	----	F/S/SU			3	ENG 100 or approp place score
Semester 2						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Mathematics for Educators II	MAT 112	S			3	MAT 111
Human Development I: Conception to Adolescence	PSY 123	F/S/SU			3	PSY 101
Career Elective$^{\Omega}$	----				3	
History Elective*	----	F/S/SU			3	
Semester 3						
Integrated Science: Earth and Space	SCI 105	F/S/SU			4	ENG 100, MAT 095
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Children's Literature	ENG 200	F/S/SU			3	ENG 102
Career Elective$^{\Omega}$	----				3	
Humanities Elective**$^{\Omega}$	----	F/S/SU			3	
Semester 4						
Elementary Education: Teaching and Learning	EDU 101				3	ENG 101 or appropriate placement score, CORI Check
Integrated Science: The Living World	SCI 106	F/S/SU			4	ENG 100, MAT 095
Humanities Elective***	----				3	
Social Science Elective****	----				3	
Career Elective$^{\Omega}$	----				3	
Total credits required					62	

NOTE: This program is designed to meet the Elementary Education Transfer Compact. Students are required to have a recent CORI/SORI on file to participate in the fieldwork which is required for successful completion of the course.

The Degree:
Associate in Arts

The Program:
General Studies: Elementary Education Transfer Option

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

The Next Step:
Transfer to 4 year institution
- This is a statewide Education Compact approved program
- *Former joint admissions program*
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

Program Coordinator:
Jennifer Arner Welsh 508.854.7554
jarner@qcc.mass.edu

Program Notes:
$^{\Omega}$Students are advised to consult the requirements of the college to which student plan to transfer. Graduates of the Elementary Education Option are required to have an academic major in the Liberal Arts. Since the requirements of each major at each institution will vary, students need to intentionally select the student's electives to maximize student transfer of credits.
*History Elective must be selected from the following: HST104, HST105, HST106, HST115, HST116.
**Humanities course designations include: ART, ENG, FRC, GER, HUM, MUS, PHI, SPH, SPN
***Humanities Elective must be selected from the following: ENG231, ENG232, ENG241, ENG242, ENG251, ENG252
****Social Science Elective must be selected from the following: ECO215, ECO216, GEO210, PSC201, PSC212, PSC221

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

GENERAL STUDIES-Associate in Arts - Energy Utility Option (Program Code: GSET)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or appropriate placement score
Electrical Principles I*	EUT 110	F			4	MAT 095 or approp place score Coreq-ENG 100 or approp place score, EUT 101
Fundamentals of the Energy Industry*	EUT 101	F			4	Coreq- ENG 100 or approp place score
Applied Technical Mathematics*[1]	MAT 108	F/S			4	MAT 095 or approp place score
Introduction to Microcomputer Applications*	CIS 111	F/S/SU			3	
Semester 2						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Electrical Principles II*	EUT 111	S			4	EUT110
Generation, Transmission & Distribution*	EUT 115	S			4	EUT 110
Industrial Safety*	EUT 120	S			3	EUT 101
Energy Utilities Technology Practicum*	EUT 190	F/S/SU			3	Coreqs EUT 111, 115, 120
Semester 3						
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Critical Thinking & Problem Solving	HUM 101	F/S/SU			3	
Liberal Arts Elective**	---	F/S/SU			3	
Laboratory Science Elective	---	F/S/SU			4	
Social Science Elective	---	F/S/SU			3	
Semester 4						
Humanities Elective***	---	F/S/SU			3	
Laboratory Science Elective	---	F/S/SU			4	
Social Science Elective****	---	F/S/SU			3	
History Elective	HST ---	F/S/SU			3	
Total credits required					64	

Program Notes: (cont'd)

The Energy Utility Technology program is supported by a Community-Based Job Training Grant received from the U.S. Department of Labor. In order to be eligible to participate in this program, you must be registered with the U.S. Selective Service System (if required) and eligible to work in the United States.

The Degree:

Associate in Arts

The Program:

General Studies - Energy Utility Option. This program is an Associate degree completion program for graduates of the Energy Utility Technology certificate.

Admission Requirements:

- High School Diploma or GED (refer to page 9)
- Completion of Energy Utility Technology Certificate.

The Next Step:

Enter the workforce based on career emphasis or transfer to a four-year program.

- This is a statewide MassTransfer approved program
  Former joint admissions program
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

EUT Program Coordinator

Sharon Gillies 508.854.4240
sharrong@qcc.mass.edu

Program Notes:

[1]Does not meet the requirements of MassTransfer.
*These courses are included in the Energy Utilities Technology Certificate.
**MAT 121 or higher is recommended for students intending to meet the requirements of MassTransfer to transfer to a 4-year institution.
***Must be a 200 level course
****SOC 111 - Social Problems & Social Change is recommended.

Technical Standards:

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

GENERAL STUDIES-Associate in Arts - Health Care Option (Program Code: GSHC)

Course Title	Course #	Offered	Plan to take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature I	ENG 101				3	ENG 100 or approp place score
Introduction to Psychology	PSY 101				3	Coreq-ENG 100 or approp place score
General Biology **	BIO 101				4	"C" or better in MAT 095 on the Depart. Exam or approp place score Coreq ENG 101
Self Assessment & Career Planning‡ or Strategies for College and Career	PSY 115 ORT 110				3	ENG 090, ENG 095 or approp place score
Critical Thinking & Problem Solving	HUM 101				3	ENG 100 or approp place score
Semester 2						
English Composition & Literature II	ENG 102				3	ENG 101
Statistics	MAT 122				3	MAT 099 or approp place score
Introduction to Medical Terminology	ALH 102				3	Coreq – ENG 100 or approp place score
Intro to Phamacology for Allied Health Prof	ALH 103				3	ENG 100 or approp place score
Anatomy & Physiology I	BIO 111				4	BIO 101
Semester 3						
Speech Communication Skills	SPH 101				3	Coreq-ENG 101
Technical & Workplace Writing	ENG 205				3	ENG 102 Computer Literacy
Valuing Diversity	IDS 101				3	ENG 100 or approp place score
Anatomy & Physiology II	BIO 112				4	BIO 111
Intro. to Sociology or	SOC 101	F/S				Coreq-ENG 100 or approp place score
Social Problems & Social Change	SOC 111				3	Coreq-ENG 100 or approp place score
Semester 4						
Humanities Elective*	---				3	
History Elective	HST ---				3	
Elective ***	---				3	
Bioethics	IDS 215				3	ENG 100 or approp place score
Pathophysiology	BIO 221				3	BIO 112
Total credits required					63	

The Degree:
Associate in Arts

The Program:
General Studies - Health Care Option

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

The Next Step:
Enter a healthcare program at QCC or another college. Obtain a Bachelor's Degree through a four-year institution.
- This is a statewide MassTransfer approved program
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer

Program Coordinator:
Barbara Dawidjan 508.854.4486
bdawidjan@qcc.mass.edu

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

Program Notes:

‡PSY 115 is recommended for students placing into ENG 100 or ENG 101. ORT 110 is recommended for students placing into ENG 090, ENG 091,ENG 095,ENG 096 or ESL courses.

NOTE: Students with a CAPS Plan in place have met this requirement and can take an elective instead. Students must complete a CAPS Plan prior to the completion of twenty credits in order to register for additional courses in the General Studies Program.

*Humanities elective must be *200 level course.

** If BIO 101 is not needed (if prerequisite for BIO 111 is met some other way) then student should either select CHM 101 if Dental Hygiene is the goal or BIO 232 if nursing, or Respiratory Care.

*** Suggest:
CHC 150 and/or
CHC 151 Fundamentals of Complementary Health and/or
CHC 250 World Medicine and/or
CIS 111 Introduction to Microcomputer Applications
BIO 241 Nutrition

GENERAL STUDIES - Associate in Arts - Occupational Education Option (Program Code: GSOE)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Behavioral Science Elective	---				3	
Mathematics Elective*	MAT---				3	
Occupational Education course**	---				3	
Occupational Education course**	---				3	
Semester 2						
English Composition & Literature II	ENG102	F/S/SU			3	ENG 101
Critical Thinking & Problem Solving	HUM101	F/S/SU			3	ENG 100 or approp place score
History Elective	---				3	
Occupational Education course**	---				3	
Occupational Education course**	---				3	
Semester 3						
Speech Communication Skills	SPH101	F/S/SU			3	Coreq-Eng 101
Humanities Elective	---				3	
Occupational Education course**	---				3	
Lab Science Elective	---				4	
Social Science Elective	---				3	
Semester 4						
Humanities Elective***	---				3	
Occupational Education course**	---				3	
Occupational Education course**	---				3	
Lab Science Elective	---				4	
Social Science Elective	---				3	
Total credits required					62	

The Degree:
Associate in Arts

The Program:
General Studies-Occupational Education Option. This option is offered in cooperation with the Center for Occupational Education at the University of Massachusetts-Boston.

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

The Next Step:
Obtain a Bachelor's Degree through the College of Arts & Science at UMass-Boston or another four-year institution.
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

Program Coordinator:
Marilyn Martin 508.854.4374
marilynm@qcc.mass.edu

Program Notes:
*MAT 100 or higher
**University of Massachusetts-Boston course
***200 Level Humanities Elective

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

HEATING, VENTILATION AND AIR CONDITIONING – Certificate

"Heating and air-conditioning systems control the temperature, humidity, and the total air quality in residential, commercial, industrial, and other buildings. By providing a climate controlled environment, refrigeration systems make it possible to store and transport food, medicine, and other perishable items. Heating, air-conditioning, and refrigeration mechanics and installers—also called technicians—install, maintain, and repair such systems. Because heating, ventilation, air-conditioning, and refrigeration systems often are referred to as HVACR systems, these workers also may be called HVACR technicians.

Heating, air-conditioning, and refrigeration systems consist of many mechanical, electrical, and electronic components, such as motors, compressors, pumps, fans, ducts, pipes, thermostats, and switches. In central forced air heating systems, for example, a furnace heats air, which is then distributed through a system of metal or fiberglass ducts. Technicians maintain, diagnose, and correct problems throughout the entire system. To do this, they adjust system controls to recommended settings and test the performance of the system using special tools and test equipment.

Employment of heating, air-conditioning, and refrigeration mechanics and installers is projected to increase 28 percent during the 2008-18 decade, much faster than the average for all occupations. ... As the population and stock of buildings grows, so does the demand for residential, commercial, and industrial climate-control systems....Concern for the environment and the need to reduce energy consumption overall has prompted the development of new energy-saving heating and air-conditioning systems. This emphasis on better energy management is expected to lead to the replacement of older systems and the installation of newer, more efficient systems in existing homes and buildings."

Excerpt from 2010-2011 Occupational Outlook Handbook; See:
http://www.bls.gov/oco/ocos192.htm

HEATING, VENTILATION AND AIR CONDITIONING – Certificate (Program Code: HVC)

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

The Certificate:
Heating, Ventilation and Air Conditioning Certificate

The Next Step:
Enter the workforce as an HVAC technician

Admission Requirements:

- High School Diploma or GED (refer to page 9)
- Three years of high school English, or completion of ENG 091 with a grade of "C" or better
- One year of high school mathematics, or placement into MAT 095 or higher on the QCC Math Assessment test

Program Coordinator:
Program-related questions may be directed to hvac@qcc.mass.edu

Program Notes:

- Students enrolled in this program must register for HVC 101 and HVC 102 simultaneously in Semester 1 in order to move on to the advanced HVC courses in Semester 2. Students enrolled in the Heating, Ventilation & Air Conditioning certificate program will be required to bring their own laptop to all HVC classes. Please email the Program Coordinator for minimum hardware and software requirements.

*Recommended Elective: PHE 103 Standard First Aid & Personal Safety. Note: If a student has already taken another college-level course, s/he may use that course to fulfill this Elective requirement

HOTEL AND RESTAURANT MANAGEMENT

The Hotel and Restaurant Management Program prepares students for management careers in the hospitality and leisure industry. Graduates work in a variety of settings from restaurants and hotels to convention centers and entertainment venues, often managing the hospitality function within another employment sector (such as meeting and event planning for large high tech firm). About 40% of our graduates continue pursuing bachelor's degrees. The HRM department offers two emphasis areas: hospitality and foodservice. Students in the foodservice track can select courses that make them eligible for ACF* chef certification. The program provides several HRM electives, which allows students to customize their degree coursework.

The HRM faculty and staff are committed to providing students with the practical knowledge and experience needed to succeed in their chosen field and to providing the central Massachusetts hospitality industry with the leaders of the future. The HRM program is partnered with the Central Massachusetts Visitor and Convention Bureau (CVB) and the Worcester Senior Center Campus to provide concurrent hands-on experience in addition to the classroom training. Every HRM course has an experiential component required for successful completion. The result is that students graduate with a documented portfolio of meaningful managerial experience. This balance of practical and classroom experience creates results-oriented managers.

The HRM program offers block-scheduled courses that meet weekly. This format better accommodates the off-campus location and the experiential component of the classes. All HRM students are required to complete four core classes and an industry co-op. Many of the students complete their co-op with the college program at Walt Disney World.

Student organizations include: Meeting Planner International, National Restaurant Association, American Culinary Federation*, and American Hotel and Lodging Association.

The HRM program is a member of Council on Hotel, Restaurant and Institutional Education and the Chefs Collaborative.

*ACF Accreditation Application in Progress

Disney THEME PARKS & RESORTS college program

The Certificate in Foodservice Management is a proud participant in the National Restaurant Association's Management First® program. Students can earn simultaneous credentialing with the National Restaurant Association.

The Certificate in Hospitality Management is designed for individuals with industry experience who desire to advance into management positions. The curriculum is designed to build upon an individual's industry experience and knowledge of operations and job responsibilities.

Criminal Offender Record Information and Sex Offender Registry Information Checks
Bobby M's Diner at the Worcester Senior Center serves as the laboratory for the Hotel & Restaurant Management (HRM) program. All students enrolled in HRM courses must undergo a Criminal Offender Record Information (CORI) check and a Sex Offender Registry Information (SORI) check. These checks are required due to potential unsupervised contact with children, the disabled, or the elderly during the laboratory experience. Students found to have certain criminal convictions or pending criminal actions will be presumed ineligible for laboratory placement. The College is authorized by the Commonwealth's Criminal History Systems Board, pursuant to Massachusetts General Laws, Chapter 6, Sections 167-178B, to access CORI records The College shall refer to regulations issued by the Commonwealth's Executive Office of Health and Human Services, 101 Code of Massachusetts Regulations 15.00-15.16, as guidance when assessing student CORI records. Sex Offender checks shall be performed pursuant to Massachusetts General Laws, Chapter 6, Sections 178C-178P. For more information regarding the College's CORI/SORI check process, please contact Patricia Hutchinson, the HRM program coordinator.

Additional Cost: Students enrolled in HRM 299 may incur an additional expense for professional liability insurance.

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

Prospective students should note that many of the program specific classes (HRM designation) required in this program are scheduled at the Worcester Senior Center.

HOTEL AND RESTAURANT MANAGEMENT - Associate in Science - Foodservice Management Option (Program Code: HMFO)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition and Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Introduction to Hotel/Restaurant Management[1]	HRM 101	F/S			3	
Basic Foods: Basic Boucher & Patissier	HRM 111	F			4	Coreq – HRM 115
Sanitation Certification Course	HRM 115	F			1	
Hospitality Law and Ethics	HRM 121	F			3	
Introduction to Microcomputer Applications or	CIS 111	F/S/SU			3	
Business Elective	---					
Semester 2						
English Composition and Literature II	ENG 102	F/S/SU			3	ENG 101
Basic Foods: Garde-Manager & Saucier	HRM 112	S			4	Coreq - HRM 115
Food & Beverage Cost Control	HRM 131	S			3	
Dining Room and Banquet Management	HRM 218	S			3	
Hotel /Restaurant Management Elective	---				3	
Semester 3						
Nutrition for Food Service Management	HRM 216	F			3	Co-req- HRM 111 or HRM 112
Psychology of Interpersonal Relations or	PSY 118	F/S/SU				ENG 100 or approp place score
Human Relations in Organizations	PSY 158	F/S			3	ENG 100 or approp place score
Liberal Arts Elective	---				3	
Mathematics or Science Elective*	---				3-4	
Multiple Perspectives Elective	---				3	
Semester 4						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
Hotel/Restaurant Management Cooperative Education Experience	HRM 299	F/S/SU			3	
Business Elective	---				3	
Hotel/Restaurant Management Elective	---				3	
Liberal Arts Elective	---				3	
Total credits required					63-64	

The Degree:
Associate in Science

The Program:
Hotel and Restaurant Management-Foodservice Management Option

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- One year of high school algebra or equivalent with a grade of "C" or higher and three years of high school English or equivalents with grades of "C" or higher.

The Next Step:
Enter the workforce or transfer to a four-year program.
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
  Former joint admissions program

Program Coordinator:
Pat Hutchinson 508.854.4329
path@qcc.mass.edu

Program Notes:
Students not meeting admission requirements are encouraged to enroll in the Foodservice Management Certificate program. All courses in the certificate program apply to the Associate Degree. CIS 111 may be used as a Business Elective.

* 100 Level or Higher

Note: A CORI / SORI report is required of all students accepted into the program.

Technical Performance Standards:
Please review the Technical Performance Standards requirements on pages 16-19.

HOTEL AND RESTAURANT MANAGEMENT – Certificate - Foodservice Management Option (Program Code: FM)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Microcomputer Applications or	CIS 111	F/S/SU				
Business Elective	---				3	
Introduction to Hotel/Restaurant Management[1]	HRM 101	F/S			3	
Basic Foods: Basic Boucher & Patissier	HRM 111	F			4	Coreq – HRM 115
Sanitation Certification Course	HRM 115	F			1	
Hospitality Law and Ethics	HRM 121	F			3	
Semester 2						
English Elective*	ENG ---				3	
Basic Foods: Garde-Manager & Saucier	HRM 112	S			4	Coreq – HRM 115
Food & Beverage Cost Control	HRM 131	S			3	
Business Elective	---				3	
Total credits required					27	

The Certificate:
Foodservice Management

The Program:
Hotel and Restaurant Management

The Certificate in Foodservice Management is a proud participant in the National Restaurant Association's Management First® program. Students can earn simultaneous credentialing with the National Restaurant Association.

Admission Requirements:

- High School Diploma or GED (refer to page 9)
- Students can be accepted into Hotel and Restaurant Management-Foodservice Management Option Certificate; however, students should note that some of the program specific courses require ENG 100 and/or MAT 090 as prerequisites.

The Next Step:
The Foodservice Management Associate Degree option or enter the workforce.

Program Coordinator:
Pat Hutchinson 508.854.4329
path@qcc.mass.edu

Program Notes:
* ENG 100 or higher

Note: A CORI / SORI report is required of all students accepted into the program.

Technical Performance Standards:
Please review the Technical Performance Standards requirements on pages 16-19.

HOTEL AND RESTAURANT MANAGEMENT - Associate in Science - Hospitality Management Option (Program Code: HMHO)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition and Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Introduction to Hotel/Restaurant Management[1]	HRM 101	F/S			3	
Hospitality Law and Ethics	HRM 121	F			3	
Front Office Operations	HRM 135	F			3	
Introduction to Microcomputer Applications or	CIS 111	F/S/SU			3	
Business Elective	---					
Semester 2						
English Composition and Literature II	ENG 102	F/S/SU			3	ENG 101
Front Office Management	HRM 136	S			3	
Bar and Beverage Management	HRM 139	S			3	
Management in the Hospitality Industry	HRM 235	S			3	
Hotel/Restaurant Management Elective	---	F/S/SU			3	
Semester 3						
Hotel Meetings Sales and Operations	HRM 232	F			3	
Destination Marketing & Management	HRM 236	F			3	
Psychology of Interpersonal Relations or	PSY 118	F/S/SU				ENG 100 or approp place score
Human Relations in Organizations	PSY 158	F/S			3	ENG 100 or approp place score
Mathematics or Science Elective*	---				3-4	
Multiple Perspective Elective	---				3	
Semester 4						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
Hotel and Restaurant Management Cooperative Education Experience	HRM 299	F/S/SU			3	
Business Elective	---				3	
Hotel/Restaurant Management Elective	---				3	
Liberal Arts Elective	---				3	
Liberal Arts Elective	---				3	
Total credits required					63-64	

The Degree:
Associate in Science

The Program:
Hotel and Restaurant Management-Hospitality Management Option

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- One year of high school algebra or equivalent with a grade of "C" or higher and three years of high school English or equivalents with grades of "C" or higher.

The Next Step:
Enter the workforce or transfer to a four-year program.
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
  Former joint admissions program

Program Coordinator:
Pat Hutchinson 508.854.4329
path@qcc.mass.edu

Program Notes:
Students not meeting admission requirements are encouraged to enroll in the Hospitality Management Certificate program. Most of the courses in the certificate program apply to the Associate Degree. CIS 111 may be used as a Business Elective

- 100 Level or Higher

Note: A CORI / SORI report is required of all students accepted into the program.

Technical Performance Standards:
Please review the Technical Performance Standards requirements on pages 16-19.

HOTEL AND RESTAURANT MANAGEMENT – Certificate — Hospitality Management Option (Program Code: HO)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
Introduction to Microcomputer Applications or	CIS 111	F/S/SU				
Business Elective	---				3	
Hospitality Law and Ethics	HRM 121	F			3	
English Elective*	---				3	
Semester 2						
Front Office Management	HRM 136	S			3	
Management in the Hospitality Industry	HRM 235	S			3	
Hotel/Restaurant Management Cooperative Education Experience	HRM 299	F/S/SU			3	
Business Elective	---				3	
Psychology of Interpersonal Relations or	PSY 118	F/S/SU				ENG 100 or approp place score
Human Relations in Organizations	PSY 158	F/S			3	ENG 100 or approp place score
Total credits required					27	

The Certificate:
Hospitality Management

The Program:
Hotel and Restaurant Management

The Certificate in Hospitality Management is designed for individuals with industry experience who desire to advance into management positions. The curriculum is designed to build upon an individual's industry experience and knowledge of operations and job responsibilities.

Admission Requirements:

- High School Diploma or GED (refer to page 9)
- Students can be accepted into Hotel and Restaurant Management-Hospitality Management Option Certificate; however, students should note that many of the program specific courses require ENG 100 and/or MAT 090 as prerequisites.

The Next Step:
The Hotel and Restaurant Management Associate Degree option or enter the workforce.

Program Coordinator:
Pat Hutchinson 508.854.4329
path@qcc.mass.edu

Program Notes:
* ENG 100 or higher

Note: A CORI / SORI report is required of all students accepted into the program.

Technical Performance Standards:
Please review the Technical Performance Standards requirements on pages 16-19.

HUMAN SERVICES PROGRAM

Human Services Program

Human Services is a broadly defined field with many occupational titles. The core objective of all human service workers is to meet human needs by focusing on prevention as well as remediation of problems and maintaining a commitment to improving the overall quality of life of populations, communities, families and individuals.

Focus on Competencies

Human service generalists are trained in a wide variety of helping interventions in order to provide direct services to individuals or groups with a diversity of needs. Human Services courses are designed to address core knowledge and competencies. The National Skills Standards Board has identified a set of core skills for entry-level, direct support human service workers.

Graduating students will demonstrate knowledge and/or skills in these 12 identified competency areas:

Participant empowerment	Community and service networking	Education, training and self-development	Crisis intervention
Communication	Facilitation of services	Advocacy	Organizational participation
Assessment	Community living skills and supports	Vocational, education and career supports	Documentation.

Associate in Science

The Human Services Associate Degree Program has a dual mission. It prepares students for entry-level career positions in a wide variety of human service occupations and it provides the first two years of a course of study that will prepare the student for transfer to a four-year program in human services. Students may select from suggested electives that will facilitate transfer to a baccalaureate program or focus on five career interest areas: generalist, mental health, addictions, gerontology or developmental disabilities. To assure that courses selected will be applicable to educational goals, students are encouraged to meet with human service program faculty early in their studies.

Applicants for admission to the Human Service Associates Degree Program must achieve a score on the QCC English assessment test that qualifies student for ENG 100 or higher. Students who do not meet the admission requirements are encouraged to apply to the Human Services Certificate Program. Assessment Tests in English are required for appropriate placement into English courses.

A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) check is required of all students enrolled in the Associate Degree program. Students with convictions may have difficulty completing courses requiring fieldwork in local agencies. Certain offenses will prelude employment in the human service field.

Certificate

The Certificate in Human Services prepares students for entry-level career positions in a wide variety of human service occupations. The coursework is also designed to meet the educational needs of entry-level, non-degreed workers in human service programs seeking career advancement. This Certificate program will also meet the needs of individuals who are choosing to change careers and have general education college credit, but no coursework in the art of helping or skills in navigating the human services delivery network.

The DDS (Department of Developmental Disabilities) Developmental Disabilities Program is designed for community support workers who work in programs funded by the Massachusetts Department of Developmental Disabilities (DDS). The program is a cooperative initiative of DDS and the Massachusetts Community Colleges. Each course in the program interweaves academic course content with learning activities that build the skills and competencies identified in the National Community Support Skill Standard**s.**

Assessment Tests in English are required for appropriate placement into English courses.

NOTE: Student with CORI/SORI checks showing past criminal offenses should meet with the Program Coordinator to discuss options for a career in human services. Some offenses preclude any employment in the human service field, others have a time limitation.

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

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Introduction to Human Services	HUS 101	F/S			3	ENG 100
The Helping Relationship: Human Services Delivery	HUS 121	F/S/SU			3	ENG 100
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Introductory Sociology (Principles)	SOC 101	F/S			3	Coreq-ENG 100 or approp place score
Semester 2						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Introduction to Aging	GRT 101	F/S/SU			3	ENG 100
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 100, HUS 101, HUS 121
Chemical Dependency	PSY 273	F/S/SU			3	PSY 101
Semester 3						
Cultural Competence for Human Service Workers	HUS 221	F/S/SU			3	ENG 100, HUS 101, SOC 101
Legal Concepts & Ethics in Human Services	HUS 231	F/S			3	HUS 101, HUS 121, HUS 141
Introduction to Counseling	PSY 231	F/S			3	PSY 101
Speech Communication Skills	SPH 101	F/S/SU			3	
Elective	---				3	
Semester 4						
Human Services Practicum	HUS 243	F/S			4	HUS 101, HUS 141, PSY 231
Elective	---				3	
Elective	---				3	
Liberal Arts Elective	---				3	
Mathematics or Science Elective	---				3-4	
Total credits required					61-62	

The Degree:
Associate of Science

The Program:
Coursework is designed to prepare students to attain core knowledge and competencies for an entry-level human service worker.

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- QCC English assessment test and Must place into ENG 100 or higher.

The Next Step:
- This program has transfer articulation agreements
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer *Former joint admissions program*

Program Coordinator:
Jean Kennedy 508.854.2744
jkennedy@qcc.mass.edu

Program Notes:
If a student has prior or current experience in human services, academic credit may be obtained from several Experience-Based Education alternatives. These credits can be applied to the Associate Degree or the Certificate.

Note: A CORI (Criminal Offender Record Information) SORI (Sexual Offenders Record Information) check is required for student Practicum.

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

HUMAN SERVICES — Certificate (Program Code: HS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Introduction to English Composition*	ENG 100	F/S/SU			3	Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
English Composition & Literature I**	ENG 101	F/S/SU			3	ENG 100
Introduction to Human Services	HUS 101	F/S			3	ENG 100
The Helping Relationship: Human Services Delivery	HUS 121	F/S/SU			3	ENG 100
Group Process for Human Services	HUS 125	F/S/SU			3	HUS 101 and HUS 121
Community Service: Delivering HumanServices	HUS 141	F/S/SU			3	ENG 100, HUS 101, HUS 121
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Introductory Sociology (Principles)	SOC 101	F/S			3	Coreq-ENG 100 or approp place score
Elective	---				3	
Elective	---				3	
Total credits required					30	

The Certificate:
Human Services Certificate

The Program:
Human Services.

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

The Next Step:
Enter the workforce or enroll in the Human Services Associate Degree program.

Program Coordinator:
Jean Kennedy 508.854.2744
jkennedy@qcc.mass.edu

Program Notes:
*ENG 100 or higher
**ENG 101 or higher
Students not meeting admission requirements for the degree program are encouraged to enroll in the Human Services Certificate program. Most of the courses in the certificate apply to the Associate Degree.

Note: A CORI (Criminal Offender Record Information) SORI (Sexual Offenders Record Information) check is required for student Practicum.

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

HUMAN SERVICES — DDS Direct Support Certificate (Program Code: DSC)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Introduction to English Composition or	ENG 100	F/S/SU				Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
English Composition & Literature I	ENG 101				3	ENG 100 or approp place score
Introduction to Human Services	HUS 101	F/S			3	ENG 100 or approp place score
The Helping Relationship: Human Services Delivery	HUS 121	F/S/SU			3	ENG 100 or approp place score
Introduction to Developmental Disabilities	HUS 131	F/S			3	ENG 100 or approp place score, HUS 101
Direct Support Practicum	HUS 143	F/S			3	HUS 101
Special Topics in DD	HUS 145	F/S			3	HUS 101
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Total credits required					21	

The Certificate:
Direct Support Certificate

The Program:
Human Services.

The Next Step:
Enroll in the Human Services Associate Degree program.

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Must complete DS Certificate enrollment form
- Must be employed by a DDS funded program

Program Coordinator:
Celia Brown 508.854.3433
cbrown@qcc.mass.edu

Program Notes:
-Must obtain First Aid and CPR by completion of Certificate

Note: Most health and human service agencies require a CORI (Criminal Offender Record Information) SORI (Sexual Offenders Record Information) check for student interns and employees.

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

LIBERAL ARTS — Associate in Arts

The LIBERAL ARTS PROGRAM is Quinsigamond's principal transfer program to a four-year college or university.

It opens the door to a broad spectrum of career possibilities such as communications, counseling, education, health care, journalism, law, management, public service, science, and social work.

> "*Most parents (75%) and college-age kids (85%) believe the point of college is to get a practical education and land a decent job right out of school. But…only 37% of CEO's said the purpose of a sheepskin is to acquire work skills. While the parents and kids took a dim view of liberal arts, business leaders called the humanities essential to developing critical thinking (90%) and problem-solving skills (77%).*"
>
> *-"Wanted: Liberal Arts Grads," Fortune, May 12, 1997*

> *"A liberal education is what teaches people how to write and how to think and makes them more valuable in the job market over a 40-year career than graduates of a pre-professional program. All the employers will tell you that they're seeking the flexibility of mind that a liberal education imbues.."*
>
> *- "Justifying a Liberal Arts Education in Difficult Times," New York Times, Feb. 19, 2003.*

It prepares students for life beyond college, developing the ability to learn and think, and a sense of self and community.

> *"The ability to think, to learn, and to express oneself both rigorously and creatively, the capacity to understand ideas and issues in context, the commitment to live in society, and the yearning for truth are fundamental features of our humanity. In centering education upon these qualities, liberal learning is society's best investment in our shared future."*
>
> *—"Statement on Liberal Learning," American Association of Colleges and Universities, October 1998*

Getting a Solid Academic Background

The Liberal Arts Program is the equivalent of the first two years (four semesters) of study at a four-year college or university. Required courses and guided electives provide a solid background in social sciences, mathematics, natural sciences, and humanities. There is also opportunity to take courses of particular interest to the student. The Associate of Arts degree in Liberal Arts transfers into a variety of majors and programs—business, economics, computer science, natural resources, pre-law, pre-med, psychology, and social work, to name a few.

Transferring to a Four-Year College or University

The Liberal Arts Program guarantees admission to all the public state colleges and University of Massachusetts schools under the MassTransfer program, if the student graduates with a 2.5 G.PA. For more information about MassTransfer, please visit the QCC Transfer Office's website at http://www.QCC.mass.edu/transfer/ and look under "MassTransfer Information."

Students in the Liberal Arts Program have also transferred to private schools such as Anna Maria, Assumption, Becker, Clark, Nichols, WPI, Boston University, Suffolk, Emerson, Springfield College, Johnson & Wales, Lesley, Wellesley, Mt. Holyoke, Hofstra, and Amherst.

Liberal Arts graduates can take advantage of agreements (called "articulations") to transfer to Assumption College, Nichols College, Suffolk University, or American International College. For more information, please visit the QCC Transfer Office's website at http://www.QCC.mass.edu/transfer/ and look under "Articulations."

Admission Requirements

1. Three years of high school English, or ENG 091 and ENG 096 with grades of "C" or higher, or equivalent placement scores.
2. One year of high school algebra or MAT 095 with a grade of "C" or higher, or equivalent placement scores.

For further information about the Liberal Arts Program, please contact the program coordinator, Professor Kenneth Wong, at 508.854.4481 or kenw@qcc.mass.edu.

LIBERAL ARTS — Associate in Arts (Program Code: LA)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Introduction to the Liberal Arts	LIB 101	F/S/SU			3	ENG 100 or approp place score
Introduction To Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Mathematics Elective	MAT---				3	See catalog
Semester 2						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Mathematics Elective	MAT---				3	See catalog
Sociology Elective	SOC ---				3	ENG 100 or approp place score
History Elective	HST ---				3	ENG 100 or approp place score
Multiple Perspective Elective[a]	---				3	
Semester 3						
Foreign Language Elective[b]	---				3	
Laboratory Science	---				4	
Humanities Elective[c]	---				3	
Liberal Arts Elective	---				3	
Elective	---				3	
Semester 4						
Foreign Language Elective[b]	---				3	
Laboratory Science	---				4	
Liberal Arts 200 Level Elective	---				3	
Liberal Arts 200 Level Elective	---				3	
Elective	---				3	
Total credits required					62	

The Degree:
Associate in Arts

The Program:
Liberal Arts

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- Please see admission requirements on program page and on page 12.

The Next Step:
Transfer to a 4-year college or university
- This is a statewide MassTransfer approved program
  Former joint admissions program
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer
- This program has transfer articulation agreements

Program Coordinator:
Ken Wong 508.854.4481
kenw@qcc.mass.edu

Program Notes:
a. Suggested courses include: ANT 111 or 221; ART 260; ASL 113; BIO 141; CHC 151 or 250; ECE 133; ENG 231 or 232; GEO 210; GRT 101; HST 104, 105, 106, 133, 152, 157, 203, 204, 215, 216, or 241; HUM 211; HUS 221; IDS 101 or 141; MUS 121; PHI 121, 123, 201; PSY 142, 241, or 242; SOC 111, 115, or 211.

b. Foreign Language credits may be earned in one of the following.
- ➢ completion of six college level credits in one foreign language.

Continued below...

Program Notes (Continued from above sidebar):

(Foreign Language Footnotes continued)
- ➢ successful completion of Advanced Placement Exam, CLEP, or Challenge Exam;
- ➢ two years of sequential high school instruction in one foreign language with a grade of "C" or higher; or
- ➢ course work on high school transcript from a non-English speaking country where the primary language of instruction is not English.

Please note: If the student satisfies the Foreign Language credits through high school instruction, then the student must earn six other credits to fulfill Program requirements by taking six credits in liberal arts, OR three credits in liberal arts and three credits in humanities in order to meet MassTransfer requirements.

c. Humanities course designations include ART, ASL, ENG, FRC, GER, HUM, MUS, PHI, SPH and SPN.

MANUFACTURING TECHNOLOGY — Associate in Science

Manufacturing employees work in a broad range of professional and technical positions. They may work as engineering technicians using computer programs to design parts, equipment, or machinery. They may work as process technicians and use electronically controlled equipment and software in the manufacture of specific products. As quality assurance technicians, they hold responsibility for product quality to monitor and control the manufacturing processes. Alternatively, they may participate in or supervise a manufacturing team, and be responsible for all aspects of production from design to quality control.

The curriculum supports updated skill standards defined by the Framework of Competencies for the Advanced Manufacturing (published by the National Council for Advanced Manufacturing) and is supplemented by the National CADD Standards (also published by the National Council for Advanced Manufacturing). The curriculum will provide the student with the classroom and hands-on experiences necessary to master competencies in:

- Communication and teamwork
- Math and measurement
- Workplace safety and health
- Problem solving
- Quality assurance
- Blueprint reading
- Manufacturing fundamentals
- Business planning and operation
- Computer use
- Related workplace and learning skills

Upon completion of this degree program, the graduate will be prepared to obtain employment within manufacturing profession. In addition, the student will be positioned to continue academic studies at the Bachelor's degree level in such disciplines as Industrial Technology or Manufacturing Engineering. Students should speak with an academic advisor to be sure that the courses selected satisfy the requirements of the receiving institution.

A total of 66 credits are required for the Associate degree.

Manufacturing Certificates

The Certificate in Manufacturing Technology is designed to prepare graduates for entry-level positions in the manufacturing industry. The successful completion of the requirements provides the theoretical background, practical skills and training necessary for success in this growing career field.

The Manufacturing Technology certificate can be completed in one year, depending on the student's background. This certificate utilizes the latest manufacturing software and equipment available in today's rapidly changing world. All of the courses required for this Certificate can be applied to the Associate in Science degree in Manufacturing Technology.

The Certificate in Computer-Aided Design prepares graduates for entry-level technician/design positions in the CAD/CAM industry. The successful completion of the requirements provides theoretical training, background and practical skills in the design of components, tools, and machinery.

The Certificate in Computer – Aided Design can be completed in one year, depending on the student's background. This certificate utilizes the latest CAD software and equipment available in today's rapidly changing world. The curriculum supports the skill standards defined by the National CADD Standards (published by the National Council for Advanced Manufacturing). All of the courses required for this Certificate can be applied to the Associate in Science degree in Manufacturing Technology.

CORI/SORI: A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) may be required of all students enrolled in MNT 299. Finger printing and drug testing may be required.

Additional Cost: Students enrolled in MNT 299 may incur an additional expense for professional liability insurance.

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

MANUFACTURING TECHNOLOGY — Certificate in Computer Aided Design (Program Code: CAD)

Prepares graduates for entry-level technician/design positions in the CAD/CAM industry. The successful completion of the requirements provides theoretical training, background and practical skills in the design of components, tools, and machinery.

The Certificate in Computer – Aided Design can be completed in one year, depending on the student's background. This certificate utilizes the latest CAD software and equipment available in today's rapidly changing world. The curriculum supports the skill standards defined by the National CADD Standards (published by the National Council for Advanced Manufacturing). All of the courses required for this Certificate can be applied to the Associate in Science degree in Manufacturing Technology.

A total of 25 credits are required for the Certificate.

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Microcomputer Applications or	CIS 111	F/S/SU				
Introduction to Computer Applications in Telecom	CIS 115	F/S/SU			3	
Introduction to English Composition	ENG 100	F/S/SU			3	Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or approp place score
Mechanical CAD I	MNT 101	F/S			3	CIS 111 or CIS 115 or approval of Program Coordinator
Manufacturing Processes I	MNT 110	F			3	
Semester 2						
Mechanical CAD II	MNT 102	SU			3	MNT 101
Solid Modeling	MNT 103	F			3	MNT 101
Geometric Tolerancing and Blueprint Reading	MNT 105	S			4	
Program Elective*	---	F/S/SU			3	
Total credits required					25	

The Certificate:
Certificate in Computer Aided Design

The Program:
Manufacturing Technology

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

The Next Step:
Entry into the workforce or enroll in Associate degree in Manufacturing.

Program Coordinator:
Lee Duerden TBA
lduerden@qcc.mass.edu

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

*Suggested Program Electives: With prefixes BIO, CHM, MAT, MNT, PHY, PSY, or SPH; or the following suggested courses: MGT 211, MGT 221, MGT 225, MRK 201, MRK 221, or a course approved by the Program Coordinator.

Check the College Web site for course descriptions.

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

MANUFACTURING TECHNOLOGY — Certificate (Program Code: MPC)

Prepares graduates for entry-level positions in the manufacturing industry. The successful completion of the requirements provides the theoretical background, practical skills and training necessary for the success in this growing career field.

The Manufacturing Technology certificate can be completed in one year, depending on the student's background. This certificate utilizes the latest manufacturing software and equipment available in today's rapidly changing world. All of the courses that are offered can be applied to the Associate in Science degree in Manufacturing Technology.

A total of 25 credits are required for the certificate.

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT 100 or approp place score
Manufacturing Processes I	MNT 110	F			3	
Semester 2						
Statistics or	MAT 122	F/S/SU				MAT 099 or approp place score
College Mathematics II: Trigonometry	MAT 124	F/S/SU			3	MAT 123
Mechanical CAD I	MNT 101	F/S			3	CIS 111 or CIS 115 or approval of Program Coordinator
Geometric Tolerancing and Blueprint Reading	MNT 105	S			4	
Instrumentation in Manufacturing	MNT 115	S			3	MNT 110
Total credits required					25	

The Certificate:
Manufacturing Technology Certificate

The Program:
Manufacturing Technology

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

The Next Step:
Entry into the workforce or enroll in Associate degree in Manufacturing.

Program Coordinator:
Lee Duerden TBA
lduerden@qcc.mass.edu

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

*Any Manufacturing Elective or a course approved by the Program Coordinator

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

MANUFACTURING TECHNOLOGY — Associate in Science (Program Code: MP)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Computer Applications	CIS 111	F/S/SU			3	
English Composition and Literature I	ENG 101	F/S/SU			3	ENG 100
College Mathematics I: Precalculus	MAT 123	F/S/SU			3	MAT 100 or approp place score
Manufacturing Processes I	MNT 110	F			3	
Liberal Arts Elective	---	F/S/SU			3	
Semester 2						
Electronics I	ELT 103	F/S			4	ENG 100, MAT 099
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Statistics or	MAT 122	F/S/SU				MAT 099 or approp place score
College Mathematics II: Trigonometry	MAT 124	F/S/SU			3	MAT 123
Mechanical CAD I	MNT 101	F/S			3	CIS 111 or CIS 115 or Approval of the Program Coordinator
Geometric Tolerancing and Blueprint Reading	MNT105	S			4	
Semester 3						
Solid Modeling	MNT 103	F			3	MNT 101
Instrumentation in Manufacturing	MNT 115	F			3	MNT 110
Process Automation & Robotics	MNT 217	F, 2012			3	
Physics I	PHY 101	F/S/SU			4	Coreq- MAT 124
Program Elective*	---	F/S/SU			3	
Semester 4						
Fundamentals of Computer-Aided Manufacturing	MNT 215	S			4	MNT 102 or MNT 103, MNT 210
Manufacturing Processes II	MNT 216	S			4	MNT 102 or MNT 103, MNT 210; Coreq-MNT 215
Lean Manufacturing & Six Sigma	MNT 218	S, 2012			3	
Cooperative Work Experience and Seminar	MNT 299	F/S/SU			3	Approval of Program Coordinator
or Program Elective*	---	F/S/SU				
Physics II	PHY 102	S			4	PHY 101
Total credits required					66	

The Degree:
Associate in Science

The Program:
Manufacturing Technology

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

The Next Step:
- Entry into workforce in a diverse Manufacturing environment.
- Transfer to a four-year college
  Former joint admissions program

Program Coordinator:
Lee Duerden TBA
ldurden@qcc.mass.edu

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

*Suggested Program Electives: With prefixes BIO, CHM, MAT, MNT, PHY, PSY, or SPH; or the following suggested courses: MGT 211, MGT 221, MGT 225, MRK 201, MRK 221 or a course approved by the Program Coordinator.

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

MEDICAL SUPPORT SPECIALIST — Certificate-Medical Assisting (Program Code: ME)

The Medical Assisting Certificate program prepares graduates to perform a variety of clinical and administrative duties in the physician's office, health clinic, or comprehensive medical center. Medical assistants work directly with patients to obtain health history information, height and weight measurements, draw blood samples, perform basic laboratory services and assist doctors in routine office procedures. In addition, medical assistants manage a series of administrative duties such as scheduling and confirming appointments, generating patient billing and third party payment requests, and ordering of supplies and equipment.

Employment of Medical Assistants is projected to increase significantly over the next three to five years.

The Quinsigamond Community College Medical Assisting Certificate Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, FL 33756 on recommendation of the Medical Assisting Education Review Board.

The curriculum provides students with the clinical and administrative skills needed to obtain an entry-level position as a medical assistant and with the competencies necessary to successfully complete the Medical Assistant Certification Examination (CMA) administered through the American Association of Medical Assistants.

Admission Process:
Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.2718.

In order to be considered for the Medical Assisting Certificate program, students must have a high school diploma or general equivalency diploma (GED). In addition, the applicant must take QCC's Math and English assessment tests to demonstrate competency at the appropriate level. Applicants must test out of MAT 095 and ENG 100, math must be taken within 5 years.

To be eligible to continue in the program, the student must achieve a grade of "C" or higher in all Medical Assisting (MSS prefix) courses and in BIO 140 Introduction to the Human Body. Students who have received a grade below a "C" in BIO 140 are required to repeat the course and obtain a grade of "C" or higher by the end of the semester in which it is required or required as a prerequisite. In addition, the student must demonstrate satisfactory performance in the laboratory and clinical components of all MSS courses. Students who do not have completed health files submitted to the Medical Support Specialist Program and cleared by the Program Coordinator by January 20th of the respective year will be removed from their medical assisting courses and will have to file for readmission to the next available year.

CORI/SORI:
A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) check is required of all students accepted into the program. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

Technical Performance Standards: Prior to application to this program, please review the Technical Standards requirements on pages 16-19. A total of 39 credits is required for the Certificate in Medical Assisting.

MEDICAL SUPPORT SPECIALIST — Certificate-Medical Assisting (Program Code: ME)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Medical Terminology	ALH 102	F/S/SU			3	Coreq – ENG 100 or approp place score
Medical Office Administration I	ALH 151	F			3	ENG 100 or approp place score Coreq – ALH 102, BSS 101
Introduction to the Human Body*	BIO 140	F/S/SU			4	ENG 100
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Clinical Procedures I	MSS 151	F			4	Coreq ALH 151
Semester 2						
Medical Office Administration II	ALH 152	S			3	ALH 151
Medical Coding and Billing	ALH 107	F/S			3	ENG 100 Coreq-ALH 102
Clinical Procedures II	MSS 251	S			4	MSS 151
Principles of Pharmacology	MSS 252	S			2	MAT 090, MSS 151 Coreq MSS 251
Fieldwork Experience	MSS 299	F/S			4	BIO 140, ENG 101, MSS 151. Coreq MSS 251, PSY 101
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Total credits required					39	

The Certificate:
Medical Assisting Certificate

The Program:
Medical Support Specialist

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

The Next Step:
Enter the workforce as a Medical Assistant or enroll in the Medical Support Specialist Associate Degree program.

Program Coordinator:
Pamela Fleming 508.854.2738
pfleming@qcc.mass.edu

Program Notes:
For additional information see program introduction on page 160.
*BIO 111 and BIO 112 acceptable for BIO 140
All MSS courses must be completed with a grade of "C" or higher

CORI/SOR/DRUG TEST:
See CORI/SORI information above.

Technical Performance Standards:
See Technical Performance Standards above.

MEDICAL SUPPORT SPECIALIST — Associate in Science — Medical Assisting

The Medical Support Specialist is an innovative associate degree program designed for students interested in a career in a medical-related field. The two-year program is built on a one-plus-one model in which students complete one year of study in Medical Assisting. Upon completion of the first year of study, students are prepared with strong professional skills to enter the workforce as a Medical Assistant. The second year of the program offers a combination of general education courses including courses in business, computer applications, and communication skills pertinent to the medical environment. Employment of medical support team members is expected to grow dramatically over the next three to five years. The significant Worcester area employment base in healthcare, Quinsigamond graduates should anticipate strong job prospects.

Admission Requirements

In order to be considered for the Medical Support Specialist program, students must have a high school diploma or general equivalency diploma (GED). The applicant must take the QCC's Math and English assessment tests to demonstrate competency at the appropriate level. Applicants must test out of MAT 095 and ENG 100, math must be taken within 5 years.

Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.2718.

The curriculum provides students with the clinical and administrative skills needed to obtain an entry-level position as a medical assistant and the option of completing an associate in science degree.

To be eligible to continue in the program, the student must achieve a grade of "C" or higher in all Medical Assisting (MSS prefix) courses and in BIO 140 Introduction to the Human Body. Students who have received a grade below a "C" in BIO 140, are required to repeat the course and obtain a grade of "C" or higher by the end of the semester in which they are required or required as a prerequisite. In addition, the student must demonstrate satisfactory performance in the laboratory and clinical components of all MSS courses. Students who do not have completed health files submitted to the Medical Support Specialist Program and cleared by the Program Coordinator by January 20th of the respective year will be removed from their medical assisting courses and will have to file for readmission to the next available year.

CORI/SORI:

A Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) check is required of all students accepted into the program. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

Additional Costs:

Medical Support Specialist students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing, certification examinations, and any required skills for remediation.

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

A total of 66 credits is required for the Associate in Science Degree.

MEDICAL SUPPORT SPECIALIST — Associate in Science — Option in Medical Assisting (Program Code: MSMA)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Medical Terminology	ALH 102	F/S/SU			3	Coreq – ENG 100 or approp place score
Medical Office Administration I	ALH 151	F			3	ENG 100 or approp place score Coreq–ALH 102, BSS 101
Introduction to the Human Body*	BIO 140	F/S/SU			4	ENG 100
Introduction to Microcomputer Applications	CIS 111	F/S/SU			3	
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Clinical Procedures I	MSS 151	F			4	Coreq-ALH 151
Semester 2						
Medical Office Administration II	ALH 152	S			3	ALH 151
Medical Coding and Billing	ALH 107	F/S			3	ENG 100 Coreq-ALH 102
Clinical Procedures II	MSS 251	S			4	MSS 151
Principles of Pharmacology	MSS 252	S			2	MAT 090, MSS 151 Coreq- MSS 251
Fieldwork Experience	MSS 299	F/S			4	BIO 140, ENG 101, MSS 151 Coreq- MSS 252, PSY 101
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100, or approp place score
Semester 3						
Financial Accounting I	ACC 101	F/S/SU			3	ENG 100 or approp place score, MAT 090
English Composition and Literature II	ENG 102	F/S/SU			3	ENG 101
Technical Writing for the Medical Environment or Technical and Workplace Writing	MSS 211 ENG 205	S F/S/SU			3	ENG 101 ENG 202, Computer Literacy
Liberal Arts Elective	---				3	
Statistics	MAT122	F/S/SU			3	MAT 099 with a "C" or better on the MAT 099 departmental final exam, or approp place score
Semester 4						
Health and Healing or Fundamentals of Complementary Health	CHC 150 CHC 151	F/S			3	BIO 101, ENG 100 ENG 100
Advanced Microcomputer Applications	CIS 112	F/S/SU			3	CIS 111
Death and Dying	SOS 211	F/S			3	ENG 100 or approp place score
Program Elective	---				3	
Total credits required					66	

The Degree:
Associate in Science

The Program:
Medical Support Specialist-Medical Assisting

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

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

Program Coordinator:
Pamela Fleming 508.854.2738
pfleming@gcc.mass.edu

Program Notes:
*BIO 111 and BIO 112 acceptable for BIO 140

All MSS courses must be completed with a grade of "C" or higher.

CORI/SORI/DRUG TEST:
See CORI/SORI Information in the program introduction.

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

Program Electives:
SOC 101, SOC111, SOC 211, BSS101, ACC 102, ACC 201, BSS 112, PSY 117, PSY 121

NURSE EDUCATION — Associate in Science

The Nurse Education program prepares students for a career as a Registered Nurse. Graduates of the program assume responsibilities related to direct patient care in a variety of settings, including hospitals, clinics, extended care facilities, homes, and community health agencies. Upon successful completion of this program, students are eligible to take the National Licensure Examination for Registered Nurses (NCLEX-RN). Quinsigamond's program is approved by the Massachusetts Board of Registration in Nursing and accredited by the National League for Nursing Accrediting Commission (NLNAC), 3343 Peachtree Road, NE, Suite 500, Atlanta GA 30326, 1.404.975.5000.

The program will also prepare students for further study at four-year colleges and universities, as well as provide a broad background for employment in business and industry. To assure that courses are selected that will be applicable to a degree program at a particular four-year college or university, students should make their academic advisor aware of their intent to transfer in order to satisfy the requirements of the receiving institution.

Courses in both Nurse Education and Liberal Arts are required in the program. Nursing courses include clinical experiences in area hospitals and community health agencies, as well as classroom study and laboratory practice on campus. All clinical experiences are under the supervision of Quinsigamond faculty.

Applicants should understand the State Board of Registration in Nursing reserves the right to refuse an applicant the privilege of sitting for the NCLEX-RN examination based on a Good Moral Character Licensure requirement. As a result of this requirement, a CORI and SORI check is required of all students accepted into the program and at the beginning of each semester. Students should be aware that a court record may prevent them from sitting for the NCLEX-RN examination and participation in clinical sites. More information is available from Massachusetts Board of Registration in Nursing.

Entrance into most clinical agencies will require the wearing of a school uniform. Students need to anticipate and plan for additional expenses for clinical uniforms, professional liability insurance, standardized testing, CPR certification, health immunizations and physical examinations.

To be eligible to continue in the program, the student must achieve a grade of "C" or higher in all nursing (NUR) courses and in BIO 111, BIO 112, and BIO 232. Students who have received a grade below a "C" in BIO 111, BIO 112 and BIO 232 are required to repeat the course and obtain a grade of "C" or higher by the end of the semester in which they are required or required as a prerequisite. In addition, the student must demonstrate satisfactory performance in the nursing laboratory and in the clinical settings. The student must also satisfy all course and program requirements, including regulations on attendance and conduct, in order to be eligible for certification for licensure. Students who do not have completed health files submitted to the Nurse Education and cleared by the Clinical Coordinator by July 21st and January 5th of the respective semester will be removed from their nursing courses and will have to file for readmission to the next available semester. Readmission is always based on space availability. Please review the readmission policy outlined in the QCC handbook.

Admissions Process:

Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.4308.

Admission Requirements:

- Must have a high school diploma or GED
- Must take the college placement test to determine Math and English levels if no college level courses were previously completed.
- Required TEAS V scores must be achieved within two attempts of taking the test.
  - English: 53 percent
  - Reading 53 percent
  - Math: 54 percent
  - Science: 40 percent
- Math: minimum grade of B in MAT 098 or MAT 099 or place 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.
- English: minimum grade of B in ENG 100 or place into ENG 101.
- Math and science courses must be taken within five years of application.
- Required grade must be earned within two attempts of taking and completing the course.
- BA/BS or MA/MS degree for evening program ONLY.

Note: A CORI (Criminal Offenders Record Information) report and a SORI (Sexual Offenders Records Information) are required of all students accepted into the program each semester. Students should be aware that a court record may prevent them from taking the NCLEX-RN examination and participation in clinical sites. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

Additional Costs:

Nurse Education students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills for remediation.

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

Admissions Process for Advanced Standing

- If the student has successfully completed courses in nursing at another college, he/she may qualify for credits toward a degree at QCC.
- LPNs and Paramedics can apply for advanced standings. [Call Health Careers Advising at 508.854. 4308]. Current credentialing apply for advanced standings.

Licensed Practical Nursing

Students can apply for Advanced Standing into Medical Surgical Nursing I / Maternal Newborn (NUR 105) by fulfilling the following requirements:

- Be a graduate of an accredited LPN Program in the state of Massachusetts
- Current LPN License in the state of Massachusetts.
- Satisfy admission requirements to the Associate Degree Nursing program
- Successfully complete all co-requisites for Fundamentals of Nursing I (NUR 104) prior to admission into the Advanced Placement course. (NUR 101)
- Successfully complete (with a grade of "C" or higher) a one credit Advanced Placement course.

*See previous page for specific admission requirements. Please note: ENG 101, BIO 111 and PSY 101 must be completed prior to NUR 100 and NUR 101.

Paramedics

Students can apply for Advanced Standing into NUR 105 by fulfilling the following:

- Current Massachusetts Certification as a Paramedic
- Satisfy admission requirements to the Associate Degree Nursing program
- Successfully complete all co-requisites for NUR I (NUR 111) prior to admission into the Paramedic to RN Bridge Course (NUR 100) and subsequent Advanced Placement course (NUR 101)
- Successfully complete (with a grade of C or higher) two one-credit courses, NUR 100 and NUR 101

NURSE EDUCATION — Associate in Science (Program Code: NUR)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or AP Biology.
English Composition & Literature I	ENG 101	F/S/SU			3	Coreq-ENG 101 ENG 100
Semester 2						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
Fundamentals of Nursing	NUR 104	F/S			7	Coreq-BIO 112, PSY 101, NUR 103
Current Concepts in Nursing & Health Care I	NUR 103	F/S			1	Coreq-BIO 112, PSY 101, NUR 104
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 3						
Medical Microbiology	BIO 232	F/S/SU			4	BIO 112 or CHM 103 or CHM 105
Medical Surgical Nursing I / Maternal Newborn	NUR 105	F/S			8	NUR 101 or NUR 103 and NUR 104 Coreq- BIO 232, PSY 121
Survey of Life Span Development: Conception to Death	PSY 121	F/S/SU			3	PSY 101 Coreq- ENG 100 or approp place score
Semester 4						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
History Elective*	---				3	
Medical Surgical Nursing II / Pediatric	NUR 201	F/S			10	NUR 105 Coreq--ENG 102, any HST, SOC 101 or SOC 111
Introductory Sociology (Principles) or	SOC 101	F/S				Coreq-ENG 100 or approp place score
Social Problems & Social Change	SOC 111	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 5						
Humanities Elective*					3	
Medical Surgical Nursing III / Mental Health	NUR 202	F/S			10	NUR 201 Coreq- NUR 203, Humanities Electives
Current Concepts in Nursing & Health Care II	NUR 203	F/S			2	NUR 201 Coreq-NUR 202
Total credits required					71	

The Degree:
Associate in Science

The Program:
Nurse Education

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

Please see the admission process in the program introduction.

The Next Step:
Graduates of the Associate Degree in Nursing program are eligible to sit for the NCLEX-RN exam and/or transfer to a four-year program.
- This program has transfer articulation agreements
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer

Program Coordinator: DAY
Karen Carpenter 508.854.4333
karenca@qcc.mass.edu

Program Notes:
*May be taken in either the first or second semester of the second year.

CORI/SORI/DRUG TEST:
See CORI/SORI Information on pervious page.

Technical Performance Standards:
Can be found on pages 16-19.

For additional information see program introduction on page 166-167.

Classes enter in both Fall and Spring Semesters.

NURSE EDUCATION — Associate in Science (Evening Program) (Program Code: NUE)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Summer 1 or 2)						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or AP Biology. Coreq-ENG 101
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Semester 2 (Fall)						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
Fundamentals of Nursing	NUR 104	F/S			7	Coreq-BIO 112, PSY 101, NUR 103
Current Concepts in Nursing & Health Care I	NUR 103	F/S			1	Coreq-BIO 112, PSY 101, NUR 104
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 3 (Spring)						
Medical Microbiology	BIO 232	F/S/SU			4	BIO 112 or CHM 103 or CHM 105
Medical Surgical Nursing I / Maternal Newborn	NUR 105	S			8	NUR 101 or NUR 103 and NUR 104 Coreq- BIO 232, PSY 121
Survey of Life Span Development: Conception to Death	PSY 121	F/S/SU			3	PSY 101 Coreq- ENG 100 or approp place score
Semester 4 (Summer 1 and 2)						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
History Elective*	---	F/S/SU			3	
Medical Surgical Nursing II / Pediatric**	NUR 201	SU			10	NUR 105 Coreq--ENG 102, any HST, SOC 101 or SOC 111
Introductory Sociology (Principles) or	SOC 101	F/S				Coreq-ENG 100 or approp place score
Social Problems & Social Change	SOC 111	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 5 (Fall)						
Humanities Elective*		F/S/SU			3	
Medical Surgical Nursing III / Mental Health	NUR 202	F			10	NUR 201 Coreq- NUR 203, Humanities Electives
Current Concepts in Nursing & Health Care II	NUR 203	F			2	NUR 201 Coreq-NUR 202
Total credits required					71	

The Degree:
Associate in Science

The Program:
Nurse Education

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- BA/BS or MA/MS degree for evening program ONLY
- Please see admission requirements on program pages and on page 13-15.
- Attend a Health Information Session

Please see the admission process in the program introduction

The Next Step:
Graduates of the Associate Degree in Nursing program are eligible to sit for the NCLEX-RN exam and/or transfer to a four-year program.
- This program has transfer articulation agreements
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer

Program Coordinator: EVENING
Ellen Vangel-Brousseau, RN, MS
508.854.7402 ellenvb@qcc.mass.edu

Program Notes:
*May be taken in either the summer of fall semester.
**Class may be held during the daytime.
CORI/SORI/DRUG TEST:
See CORI/SORI Information on pervious page.

Technical Performance Standards:
Can be found on pages 16-19.

For additional information see program introduction on page 166-167.

NURSE EDUCATION — Associate in Science – Advanced Placement LPN to ADN (Evening Program) (Program Code: NUL)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or High School Advance Placement Biology Coreq-ENG 101
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Semester 2						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 3 (Intersession)						
Advanced Placement Nursing I*	NUR 101	I			1	BIO 112, NUR 100 or admission to LPN to ADN program, PSY 101 Coreq- NUR 103 (credentialed) and NUR 104 (credentialed)
Current Concepts in Nursing & Health Care I** (Credentialing)	NUR 103				1	Credential
Fundamentals of Nursing** (Credentialing)	NUR 104				7	Credential
Semester 4						
Medical Microbiology	BIO 232	F/S/SU			4	BIO 112 or CHM 103 or CHM 105
Medical Surgical Nursing I/Maternal Newborn	NUR 105	S			8	NUR 101 or NUR 103 and NUR 104 Coreq- BIO 232, PSY 121
Survey of Life Span Development: Conception to Death	PSY 121	F/S/SU			3	PSY 101
Semester 5						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
History Elective***	---	F/S/SU			3	
Medical Surgical Nursing II/Pediatric****	NUR 201	SU			10	NUR 105 Coreq—ENG 102, any HST, SOC 101 or SOC 111
Introductory Sociology (Principles) or	SOC 101	F/S				Coreq-ENG 100 or approp place score
Social Problems & Social Change	SOC 111	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 6						
Humanities Elective***	---	F/S/SU			3	
Medical Surgical Nursing III/Mental Health	NUR 202	F			10	NUR 201 Coreq- NUR 203, Humanities Electives
Current Concepts in Nursing & Health Care[4,5,6]	NUR 203	F			2	Coreq-NUR 202
Total credits required					72	

The Degree: Associate in Science

The Program: Nurse Education

Admission Process:
Please see the admission process in the program introduction.

Admission Requirements:

- High School Diploma or GED (refer to page 9)
- Please see admission requirements on program pages and on page 13-15.
- Attend a Health Information Session
- BIO 111, BIO 112, PSY 101 and ENG 101 = 14 Credits.

Please see the admission process in the program introduction

The Next Step:
Graduates of the Associate Degree in Nursing program are eligible to sit for the NCLEX-RN exam and/or transfer to a four-year program.

Program Coordinator:
Ellen Vangel-Brousseau 508.854.7402
ellenvb@gcc.mass.edu

Program Notes:
*Students must successfully complete NUR 101 with a C or better to credential for NUR 103 and NUR 104.
**Credit for NUR 103 and NUR 104 is earned through the credentialing process and is required before starting NUR 105.
***May be taken in either the summer or fall semester.
****Class maybe held during the daytime.

CORI/SORI/DRUG TEST:
See CORI/SORI Information on pervious page.

Technical Performance Standards:
Can be found on pages 16-19

For additional information see program introduction on page 166-167.

NURSE EDUCATION — Associate in Science —Advanced Placement Paramedic to ADN (Evening Program) (Program Code: NUP)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Summer 1)						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or High School Advance Placement Biology Coreq-ENG 101
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Semester 2 (Summer 2)						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 3 (Fall)						
Paramedic to RN Bridge*	NUR 100	F			1	BIO 112, PSY 101
Semester 4 (Intersession)						
Advanced Placement Nursing I**	NUR 101	I			1	BIO 112, NUR 100 or admission to LPN to ADN program, PSY 101 Coreq- NUR 103 (credentialed) and NUR 104 (credentialed)
Current Concepts in Nursing & Health Care I*** (Credentialing)	NUR 103				1	Credentialed
Fundamentals of Nursing*** (Credentialing)	NUR 104				7	Credentialed
Semester 5 (Spring)						
Medical Microbiology	BIO 232	F/S/SU			4	BIO 112 or CHM 103 or CHM 105
Medical Surgical Nursing I/Maternal Newborn	NUR 105	S			8	NUR 101 or NUR 103 (credential) and NUR 104 (credential) Coreq- BIO 232, PSY 121
Survey of Life Span Development: Conception to Death	PSY 121	F/S/SU			3	PSY 101 Coreq- ENG 100 or approp place score
Semester 6 (Summer 1 and 2)						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
History Elective****	---	F/S/SU			3	
Medical Surgical Nursing II/Pediatric*****	NUR 201	SU			10	NUR 105 Coreq—ENG 102, any HST, SOC 101 or SOC 111
Introductory Sociology (Principles) or	SOC 101	F/S				Coreq-ENG 100 or approp place score
Social Problems & Social Change	SOC 111	F/S/SU			3	Coreq-ENG 100 or approp place score

Continued next page

The Degree: Associate in Science

The Program: Nurse Education

Admission Process:
Please see the admission process in the program introduction.

Admission Requirements:

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

Please see the admission process in the program introduction

The Next Step:
Graduates of the Associate Degree in Nursing program are eligible to sit for the NCLEX-RN exam and/or transfer to a four-year program.

Program Coordinator:
Ellen Vangel-Brousseau 508.854.7402
ellenvb@qcc.mass.edu

Program Notes:
*Students must successfully complete NUR 100 with a C or better before taking NUR 101.
**Students must successfully complete NUR 101 with a C or better to credential for NUR 103 and NUR 104.
***Credit for NUR 103 and NUR 104 is earned through the credentialing process and is required before starting NUR 105.
****May be taken in either the summer or fall semester.
*****Class maybe held during the daytime.

Additional Admission Requirements are BIO 111, BIO 112, PSY 101 and ENG 101 = 14 Credits.

CORI/SORI/DRUG TEST:
See CORI/SORI Information on previous page.

Technical Performance Standards:
Can be found on pages 16-19.

For additional information see program introduction on page 166-167.

NURSE EDUCATION — Associate in Science —Advanced Placement Paramedic to ADN (Evening Program) (Program Code: NUP)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 7 (Fall)						
Humanities Elective****	---	F/S/SU			3	Humanities Elective****
Medical Surgical Nursing III/Mental Health	NUR 202	F			10	NUR 201 Coreq- NUR 203, Humanities Electives
Current Concepts in Nursing & Health Care[4,5,6]	NUR 203	F			2	Coreq-NUR 202
Total credits required					73	

NURSE EDUCATION – Certificate - Practical Nurse Education

The Practical Nurse Education program prepares students for a career as a Practical Nurse. Licensed Practical Nurses (LPN) are important members of the healthcare delivery team. They work as licensed nurses within the framework specified by the Nursing Statues and Regulation of the Commonwealth.

They may be employed in various settings including, but not limited to doctors' offices, acute care, long term care, clinics and rehabilitation centers. LPN's provide direct care to patients whose conditions are relatively stable and non-complex. LPN's work as a part of the healthcare delivery team to insure the patient's plan of care is followed thoroughly. Upon successful completion of this program, students are eligible to take the National Licensure examination for Practical Nurses (NCLEX-PN). Quinsigamond's program is approved by the Massachusetts Board of Registration in Nursing, 239 Causeway Street, Boston, MA 02114, 617.727.3060 and is accredited by the National League for Nursing Accrediting Commission (NLNAC), 3343 Peachtree Road, NE, Suite 500, Atlanta, GA 30326, 1.404.975.5000.

Courses in both Practical Nursing and the biological and social sciences are required in the program. Practical Nursing courses include clinical experiences in area hospitals, community healthcare settings, and long term care facilities, as well as classroom study and laboratory practice on campus. All clinical experiences are conducted under the supervision of Quinsigamond faculty. The program can be completed in forty weeks, if pursued on a full-time basis.

Upon completion of this certificate program and successful completion of the NCLEX-PN exam, students will be prepared to obtain employment as a Licensed Practical Nurse and/or continue their studies at the Associate degree level in such disciplines as Registered Nursing, Medical Support Specialist or other related field of study.

Entrance into most clinical agencies will require the wearing of a school uniform. Students should anticipate additional expenses for clinical uniforms, professional liability insurance and standardized testing.

To be eligible to continue in the program, the student must achieve a grade of "C" or higher in all Practical Nursing (PNP) courses and in BIO 140, PSY 101, and PSY 121, and must demonstrate satisfactory progress in the laboratory and clinical components of each nursing course. Students who have received a grade below a "C" in BIO 140, PSY 101 and PSY 121 are required to repeat the course and obtain a grade of "C" or higher by the end of the semester in which they are required or required as a prerequisite. The student must also satisfy all course and program requirements, including regulations on attendance and conduct, in order to be eligible for licensure and graduation. Students who do not have completed health files submitted to the Practical Nurse Program and cleared by the Clinical Coordinator by July 21st of the respective year will be removed from their nursing courses and will have to file for readmission to the next available year.

Readmission is always based on space availability. Please review the readmission policy outlined in the QCC handbook.

Applicants should understand the State Board of Registration in Nursing reserves the right to refuse an applicant the privilege of sitting for the NCLEX-PN examination based on a Good Moral Character Licensure requirement. As a result of this requirement, a Criminal Offenders Record Information (CORI) and Sexual Offenders Record Information (SORI) check is required of all students accepted into the program and each semester thereafter. Students should be aware that a court record might prevent them from taking the NCLEX-PN examination. More information is available by contacting the Massachusetts Board of Registration of Nursing. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

Admission Process

Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.4308.

If the student wishes to be considered for the Practical Nurse Education Certificate program, he or she must have a high school diploma or general equivalency diploma (GED). To be eligible for admission into the program, the applicant must take QCC's Math and English assessment tests to demonstrate competency at the appropriate level. Applicants must test into MAT 099 and ENG 101 or higher or completion of MAT 095 with a "B" or higher and ENG 100 with a "B" or higher. Math and science courses must have been taken within the last five years.* Students will be accepted into the Practical Nurse Education program, as they complete the above requirements, on a space available basis.

*Applicants must obtain a composite score of 45% on the TEAS V.

In addition students must show evidence of being compliant with health requirements as defined by the Nurse Education Department.

Additional costs

Practical Nurse Education students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills for remediation.

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

A total of 46 credits are required for the Certificate in Practical Nursing.

NURSE EDUCATION – Certificate - Practical Nurse Education (Program Code: LP)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to the Human Body	BIO 140	F/S/SU			4	ENG 100
Practical Nursing I	PNP 101	F			10	Coreq-BIO 140
Introduction to Pharmacology	PNP 111	F			3	Coreq-BIO 140
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Semester 2						
A Survey of Life Span Development: Conception to Death	PSY 121	F/S/SU			3	PSY 101, Coreq-ENG 100 or approp place score
Semester 3						
Practical Nursing II: Medical/ Surgical Nursing of the Adult/ Aged	PNP 201	S			10	PNP 101, PNP 111, Coreq-PNP 204, PNP 210, PNP 222, PNP 233
Concepts in Mental Health	PNP 204	S			1	PNP 101, PNP 111, PSY 101, PSY 121 Coreq- PNP 201, PNP 210, PNP 222, PNP 233
Nutritional Concepts in Health and Illness	PNP 210	S			1	BIO 140, PNP 101, PNP 111, Coreq- PNP 201, PNP 204, PNP 222, PNP 233
Clinical Pharmacology	PNP 222	S			2	PNP 111, Coreq-PNP 201, PNP 204, PNP 210, PNP 233
Trends in Practical Nursing	PNP 233	S			1	PNP 101, PNP 111, Coreq-PNP 201,PNP 204, PNP 210, PNP 222
Semester 4						
Practical Nursing III: Pediatric/ Maternal/ Newborn/Leadership Management Nursing	PNP 202	SU			8	BIO 140, PNP 101, PNP 111, PNP 201, PNP 204, PNP 210, PNP 222, PNP 233, PSY 101, PSY 121
Total credits required					46	

The Certificate:
Practical Nurse Education Certificate

The Program:
Practical Nurse Education prepares students with skills and education necessary to be an effective LPN.

Admission Requirements:
- High School Diploma or GED (refer to page 9)
- TEAS V composite score of 45%
- QCC's Math & English assessment tests, must test into MAT 099 and ENG 101 or higher or completion of MAT 095 with a "B" or higher and ENG 100 with a "B" or higher.
- Attend a Health Information Session

The Next Step:
Successful graduates are eligible to take licensure exams for practical nurses, enter the workforce or pursue additional education.

Program Coordinator:
Margaret A. Yoder 508.854.7477
myoder@qcc.mass.edu

Program Notes
For additional information see program introduction on page 173.

CORI/SORI/DRUG TEST:
See CORI/SORI information in the program introduction.

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

OCCUPATIONAL THERAPY ASSISTANT - Associate in Science

The Occupational Therapy Assistant program at Quinsigamond Community College (QCC) prepares the incoming student for a career in Occupational Therapy, a profession that promotes health and wellness through engagement in valued occupations, and provides strategies for individuals to participate fully in life's activities.

Occupational Therapy is a rehabilitation profession that assists individuals who have suffered physical, psychological or cognitive difficulties, or who have developmental disabilities to achieve maximum independence. Certified Occupational Therapy Assistants (COTA) practice under the supervision of Registered Occupational Therapists (OTR) as members of a healthcare team. OT Practitioners use modalities that simulate real life situations. COTA's work in hospitals, out-patient clinics, school systems, community agencies, and other settings.

The OTA program at QCC is fully accredited by the Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association (AOTA), which is located at 4720 Montgomery Lane, Box 31220, Bethesda, MD 20824. The telephone number is 301.652.AOTA. Graduates of the program will be awarded an Associate in Science degree and, upon satisfactory completion of all academic and fieldwork experiences, the graduate will be eligible to sit for the national certification examination for the Occupational Therapy Assistant (OTA) administered by the National Board for Certification in Occupational Therapy (NBCOT). Upon successful completion of the examination, the graduate may apply for state licensure which is offered based upon the NBCOT Certification examination results.

Students in the OTA program receive both theoretical and experiential training. Fieldwork is considered an integral part of the program and takes place in the second, third and fourth semesters in the program. Students must satisfactorily complete Level I Fieldwork before going to the Level II Fieldwork experience. Level II Fieldwork must be completed within 18 months of final theory course. Students may be asked to travel within New England to experience the range of fieldwork necessary for program completion.

To be eligible to continue in the program, the student must achieve a grade of "C" or higher in all OTA courses. A grade of "C" or higher must be attained in ENG 101, ENG 102, BIO 111 and BIO 112 before Field Placement II can be started. Students who have received a grade below a "C" in ENG 101, ENG 102, BIO 111 and BIO 112 are required to repeat the course and obtain a grade of "C" or higher by the end of the semester in which they are required or required as a prerequisite. Both level II Field Placements must be completed within 18 months of the didactic coursework of the OTA program. Students who do not have completed health files submitted to the Occupational Therapy Program and cleared by the Program Coordinator by July 1st of the respective year will be removed from their occupational therapy assisting courses and will have to file for readmission to the next available year.

CORI/SORI:
A Criminal Offender Records Information (CORI) and Sexual Offender Records Information (SORI) check is required of all students enrolled in the program. Students with a felony conviction may not be able to attend community facilities for fieldwork assignments and so would be unable to complete the program. A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

OTA students must purchase membership in the American Occupational Therapy Association within the first 2 weeks of school. The cost is approximately $55. - $65.00.

All students accepted into the OTA Program must obtain Healthcare Provider (Red Cross) or Professional Rescuer (American Heart Association) CPR certification and provide documentation of immunization currency and satisfactory health status prior to beginning clinical experiences.

Admissions Process

Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.4308.

Admission Requirements:

- Must have a high school diploma or GED
- GPA of 3.0 or equivalent in high school or 3.0 in college with minimum of 10 credits or 550 Battery Average on GED.
- Must take the college placement test to determine Math and English levels if no college level courses were previously completed.
- Required TEAS scores must be achieved within two attempts of taking the test.
  - English: 70 percent
  - Reading 75 percent
  - Math: 50 percent
  - Science: 55 percent
- Math: minimum grade of B in MAT 098 or MAT 099 or place 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.
- English: minimum grade of B in ENG 100 or place into ENG 101.
- Math and science courses must be taken within five years of application.
- Required grade must be earned within two attempts of taking and completing the course.

Additional costs

Occupational therapy assistant students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills remediation.

Technical Performance Standards: Prior to application to this program, please review the Technical Performance Standards requirements on pages 16-19. Please see the admissions section of this catalog for additional information.

OCCUPATIONAL THERAPY ASSISTANT - Associate in Science (Program Code: OT)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Fall)						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or AP Biology. Coreq-ENG 101
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100 or approp place score
Introduction to Occupational Therapy: Concepts& Interventions	OTA 101	F			3	
Occupational Therapy: Methods & Modalities I	OTA 131	F			3	Coreq-OTA 101
Introduction to Psychology	PSY 101	F/S/SU			3	Coreq-ENG 100 or approp place score
Liberal Arts Elective	---				3	
Semester 2 (Spring)						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
Group Process and Interventions	OTA 103	S			4	OTA 101
Developing Professional Behaviors	OTA 105	S			3	OTA 101
Concepts & Occupational Therapy Interventions with the Physically Challenged	OTA 223	F			4	BIO 111, OTA 101
A Survey of Life Span Development: Conception to Death	PSY 121	F/S/SU			3	PSY 101, Coreq-ENG 100 or approp place score
Semester 3 (Fall)						
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Occupational Therapy with the Older Adult	OTA 211	F			3	OTA 101, PSY 121
Developmental Problems & Practice with Children	OTA 215	S			4	OTA 101, Coreq PSY 121
Concepts & Occupational Therapy Interventions in Mental Health	OTA 221	F			4	OTA 101, OTA 103, PSY 101
Occupational Therapy Methods & Modalities II	OTA 231	F			3	OTA 101, OTA 131
Semester 4 (Spring)						
Occupational Therapy Field Placement I *(see Internal Schedule)	OTA 241	S			7	All occupational therapy, English and A&P coursework
Occupational Therapy Field Placement II *(see Internal Schedule)	OTA 242	S			7	All occupational therapy, English and A&P coursework
Total credits required					68	

The Degree:
Associate in Science

The Program:
Occupational Therapy Assistant

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

Please see Admission Process in the program introduction.

The Next Step:
Graduates are eligible to sit for the national certification exam, apply for state licensure or pursue additional coursework.

Program Coordinator:
Brenda Marshall 508.854.4546
brendam@qcc.mass.edu

Program Notes:
It is highly recommended that you take HUM 101 as the Liberal Arts Elective.
Internal Schedule is defined as extended timeframe. Ask Program Coordinator for further details.

CORI/SORI/DRUG TEST:
A CORI / SORI report is required of all students accepted into the program; please see CORI/SORI in program introduction.

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

PHYSICAL THERAPIST ASSISTANT DEGREE (PTA)

This program is offered through an articulation agreement with Mount Wachusett Community College (MWCC). General education requirements can be taken at Quinsigamond Community College. All PTA courses must be taken at MWCC. Students must meet the selective admission requirements to the MWCC PTA program.

Next class accepted Fall 2010
Physical therapist assistants implement treatment procedures in the rehabilitation of injured, ill or debilitated individuals. The Physical Therapist Assistant Degree program prepares individuals to work in the healthcare field under the direct supervision of a physical therapist in a variety of settings. The program also prepares students for the PTA licensure examination in the students' respective state of practice. The program is accredited by The Commission on Accreditation in Physical Therapy Education. The next class will be accepted for September, 2010. For more information, please call 978.630.9292.

Application deadline:
The application deadline is March 1, 2010. Students applying after March 1 will be considered for acceptance if seats are available. This selective enrollment program requires additional application components. The selection process is competitive and space is limited. Contact Mount Wachusett Community College for specifics of admission criteria, call 978.630.9292. The next enrolling class will begin September, 2010.

For specific information contact MWCC:
Email mjaillet@mwcc.mass.edu or call 978.630.9292 for specific information.

Transfer options:
While there has traditionally been no direct transfer route for PTA graduates, they may chose from a variety of higher level degrees such as exercise physiology, pre-physical therapy, and massage therapy or other complementary healthcare programs. Students should consult with their academic adviser. Articulation agreements exist with Charter Oak State College and the University of Phoenix. This program qualifies for the Franklin University Community College Alliance program. Visit MWCC's transfer services website: http://transfer.mwcc.edu for more transfer information.

Additional costs
Physical therapist assistant students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills remediation.

Special Requirements: (Contact MWCC for admissions requirements)
MWCC MAT121/1224/126 or placement is required prior to semester I coursework. PTA students are required to keep pace with the incoming class and must take courses in sequential order. Applicants must meet all requirements for consideration before entering the program. Students must meet technical standards and additional requirements including immunizations, CPR certification, liability insurance, and a Criminal/Sexual Offender Records Information (CORI/SORI) check. BIO 111 and BIO 112 must be completed within five years prior to or concurrently with PTA coursework in semesters I and II. Please Note: All BIO and PTA courses require a grade of "C+" in order to be eligible for promotion to the next level.

Career options:
PTA's assist PT's in acute care and rehabilitation hospitals, long-term care, private practices, school systems, and home care/visiting nurse associations.

RADIOLOGIC TECHNOLOGY

Radiologic Technology is a twenty-two month program specializing in diagnostic medical radiography. The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRC/ERT), 20 N. Wacker Drive, Suite 2850, Chicago, IL 60606, 312.704.5300, e-mail: mail@jrcert.org.

Graduates of this program are eligible to apply for the national certification through examination by the American Registry of Radiologic Technologists (ARRT) and licensing through the Massachusetts Department of Public Health, Radiation Control program. Credentialing by the ARRT certifies the graduate as a Registered Technologist in Radiography – R.T.(R). Licensing by the Massachusetts DPH is required to be employed as a radiographer.

Radiologic Technologists work in healthcare settings including hospitals, clinics and medical offices utilizing patient care skills and highly sophisticated x-ray equipment to image the human body. Students receive instruction in the classroom and in Quinsigamond's energized x-ray laboratory on topics including: the proper care of patients of all ages and health status, the use of state of the art imaging equipment, positioning methods for imaging procedures, critical evaluation of radiographic image quality and standards for protecting themselves and others from unnecessary radiation.

Students receive practical experience through assignments to clinical education settings established at several Worcester county healthcare facilities. Clinical assignments occur during fall, winter, spring, and summer semesters. Some evening clinical experiences are required. Students should anticipate additional expenses for clinical uniforms, professional liability insurance, clinical parking fees, and materials required in the program.

To be eligible to continue in the program, students must achieve a minimum grade of "C" or higher in all Radiologic Technology (RDT) courses and in BIO 111 and BIO 112.
Students who have received a grade below a "C" in BIO 111 and/or BIO 112 are required to repeat the course and obtain a grade of "C" or higher by the end of the semester in which they are required or required as a prerequisite. Additionally, students must adhere to professional and ethical standards and behaviors as expected of healthcare professionals as well as satisfactorily complete all clinical competency examinations described in the program's Clinical Policies and Procedures manual. Students who do not have completed health files submitted to the Radiologic Technology Program and cleared by the Program Coordinator by July 21st of the respective year will be removed from their radiologic technology courses and will have to file for readmission to the next available year.

Applicants with a prior or current history of criminal offense may be challenged in their eligibility to sit for the ARRT certification exam based on non-compliance with ARRT Standards of Ethics. Additionally, some clinical education sites may limit or deny access to procedures that are necessary to completing program requirements to individuals with a criminal history. For this reason, all students accepted to the program are required to complete a CORI/SORI (Criminal Offenders Record Information) (Sexual Offenders Record Information) check prior to beginning clinical experiences; finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

All students accepted to the RT program must obtain Health Care Provider (Red Cross) or BLS for Health Care Providers (American Heart Association) CPR certification and provide documentation of immunization currency and satisfactory health status prior to beginning clinical experiences.

Admissions Process:

Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.4308.

Admission Requirements:

The admission requirements for the Radioloic Technology program are as follows:

- Must have a high school diploma or GED
- GPA of 3.0 or equivalent in high school or 3.0 in college with minimum of 10 credits or 550 Battery Average on GED.
- Must take the college placement test to determine Math and English levels if no college level courses were previously completed.
- Required TEAS scores must be achieved within two attempts of taking the test.
  - English: 70 percent
  - Reading 75 percent
  - Math: 50 percent
  - Science: 55 percent
- Math: minimum grade of B in MAT 098 or MAT 099 or place 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.
- English: minimum grade of B in ENG 100 or place into ENG 101.
- Math and science courses must be taken within five years of application.
- Required grade must be earned within two attempts of taking and completing the course.
- Review of program web site and career video.
- *4-hour clinical observation
- *Interview with Program/clinical Faculty (minimum composite score of 80%)

* Offered to academically qualified applicants only.

Request for Transfer with advanced placement from an accredited Radiologic Technology program with advanced placement are considered on an individual basis.

Additional Costs:
Radiologic technology students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills remediation.

Degree Completion Option for Graduate Radiologic Technologists:
Graduate Radiologic Technologists with documentation of current ARRT certification may be eligible to receive credit for the professional courses (RDT) towards an Associate in Science degree through the Experience Based Education (EBE) office. Qualifying candidates will be required to complete the General Education portion of the curriculum. Call 508.854.4380 for further information.

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

RADIOLOGIC TECHNOLOGY - Associate in Science (Program Code: RT)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Summer 1 and Summer 2)						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or AP Biology. Coreq-ENG 101
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Semester 2 (Fall)						
Introduction to Psychology or	PSY 101	F/S/SU				Coreq-ENG 100 or approp place score
Psychology of Interpersonal Relations	PSY 118	F/S/SU			3	ENG 100 or approp place score
Patient Care & Ethics in Radiology	RDT 102	F			3	Accepted to RT Program
Radiographic Medical Terminology	RDT 104	F			1	Accepted to RT Program
Fundamentals of Radiographic Equipment and Medical Imaging	RDT 110	F			5	Accepted to RT Program
Radiographic Positioning & Anatomy I	RDT 121	F			3	Coreq-RDT 102, RDT 104
Medical Radiography Clinic I	RDT 131	F			2	Coreq-RDT 110, RDT 121
Semester 3 (Spring)						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Medical Imaging II	RDT 112	S			3	RDT 110
Radiographic Positioning & Anatomy II	RDT 122	S			3	RDT 121
Medical Radiography Clinic II	RDT 132	S			5	Coreq-RDT 112, RDT 122, RDT 141
Radiation Science	RDT 141	S			2	RDT 110
Semester 4 (Fall)						
Medical Imaging III	RDT 211	F			2	RDT 112
Radiographic Positioning & Anatomy III	RDT 221	F			3	RDT 122
Medical Radiography Clinic III	RDT 231	F			5	Coreq-RDT 211, RDT 221, RDT 245
Medical Radiographic Equipment and Quality Assurance	RDT 245	F			4	RDT 112
Liberal Arts Elective	---				3	
Semester 5 (Spring)						
Medical Radiography Clinic IV	RDT 232	S			5	Coreq-RDT 251, RDT 252
Imaging Modalities	RDT 251	S			2	RDT 211
Radiology Seminar	RDT 252	S			2	BIO 112, RDT 211, RDT 221, RDT 231
Medical Imaging Topics	RDT 254	S			3	BIO 112, RDT 211, RDT 221, RDT 231
Speech Communication Skills	SPH 101	F/S/SU			3	Coreq-ENG 101
Total credits required					76	

The Degree:
Associate in Science

The Program:
Radiologic Technology specializing in diagnostic medical radiography.

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

Please see Admission Process in the program introduction.

The Next Step:
Graduates are eligible to apply for certification by the ARRT and Licensure by MA DPH.

Program Coordinator:
Linda LeFave 508.854.4289
lindal@qcc.mass.edu

Program Notes:
It is highly recommended that you take HUM 101 as the Liberal Arts Elective.
For more information see program website www.qcc.mass.edu/radiography

CORI/SORI/DRUG TEST:
Required of all accepted students prior to beginning clinical experiences.

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

RESPIRATORY CARE - Associate in Science

Respiratory Care is an 18-month program which prepares its graduates for employment as allied health practitioners in the specialty area of pulmonary medicine. The program is fully accredited by the Commission on Accreditation for Respiratory Care, 1248 Harwood Road, Bedford, TX 76021-4244.

Respiratory Therapists are providers of direct patient care to those with disorders which affect the lungs and impair the ability to breathe normally. Respiratory Therapists may choose to be employed in a variety of settings, including: acute and chronic care hospitals; long-term care and rehabilitation centers; sleep disorders laboratories; pulmonary diagnostic clinics; medical home care agencies; and medical equipment sales/service companies. Whatever the setting, Respiratory Therapists are essential members of the healthcare team who use their expertise and highly sophisticated medical equipment to assist clients of all ages with breathing problems.

Students receive actual client care experience at clinical education sites, which have been established at a number of healthcare facilities in the immediate Worcester area, and within a 75 mile radius of the College. All such experience is directly supervised by program faculty.

Graduates of the program are eligible to attempt the credentialing examinations offered by the National Board for Respiratory Care, Inc. Upon successful completion of the process, graduates receive the Registered Respiratory Therapist (RRT) credential.

Licensure by the Massachusetts Department of Public Health is required to work as a Respiratory Therapist within the Commonwealth of Massachusetts (for more information on licensure contract: MA Department of Public Health, Division of Health Professions on Licensure, 239 Causeway Street, 2nd Floor, Suite 200, Boston, MA 02114. Ph: 800.414.0168).

A Criminal Offenders Record Information (CORI) report and a Sex Offenders Record Information (SORI) are required of all students accepted to the program. Applicants for admission 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 is in the program, and/or a license to practice within the Commonwealth of MA after graduation. Additionally, healthcare facilities which affiliate with the program reserve the right to restrict or deny clinical privileges to a student with a prior or current history of criminal offense. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

All applicants for admission to the program should familiarize themselves with the published Technical Performance Standards which appear in this Catalog.

All students accepted to the program must hold or obtain Health Care Provider (Red Cross) or Professional Rescuer (American Heart Association) CPR certification and provide documentation of immunization currency and satisfactory health status prior to beginning the clinical component of the program.

To be eligible to continue in the Program, a student 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. Students who have received a grade below a "C" in PHY 103, BIO 111, BIO 112 and BIO 232 are required to repeat the course and obtain a grade of "C" or higher by the end of the semester in which they are required or required as a prerequisite. In addition, the student must satisfy all course and program requirements including regulation on conduct and attendance in order to remain in the program. Students who do not have completed health files submitted to the Respiratory Care Program and cleared by the Clinical Coordinator by August 15th of the respective year will be removed from their respiratory care courses and will have to file for readmission to the next available year.

Respiratory Care students should anticipate additional expenses for clinical uniforms, professional liability insurance, parking fees at clinical sites, and course materials.

Admission Process:

Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact the Health Careers Advising Office at 508.854.2718

Admission Requirements:

- Must have a high school diploma or GED
- GPA of 3.0 or equivalent in high school or 3.0 in college with minimum of 10 credits or 550 Battery Average on GED.
- Must take the college placement test to determine Math and English levels if no college level courses were previously completed.
- Required TEAS scores must be achieved within two attempts of taking the test.
  - English: 70 percent
  - Reading 75 percent
  - Math: 50 percent
  - Science: 55 percent
- Math: minimum grade of B in MAT 098 or MAT 099 or place 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.
- English: minimum grade of B in ENG 100 or place into ENG 101.
- Chemistry: minimum grade of B in high school chemistry or B in CHM 090.
- Math and science courses must be taken within five years of application.
- Required grade must be earned within two attempts of taking and completing the course.
- Review of career video
- Hospital/Health care facility site visit
- Sit-in on one Respiratory Care class

If an applicant holds the CRT (CRTT) credential awarded by the National Board for Respiratory Care, Inc. or has successfully completed courses at a CAAHEP-accredited school of Respiratory Care, then s/he may apply for advanced standing/credits toward a degree from QCC. Please contact the Respiratory Care Program Coordinator 508.854.4398 for additional information.

Additional Costs:

Respiratory care students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills remediation.

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

RESPIRATORY CARE - Associate in Science (Program Code: RS)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1 (Fall)						
Anatomy & Physiology I	BIO 111	F/S/SU			4	BIO 101 or AP Biology. Coreq-ENG 101
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Fundamentals of Respiratory Care I	RCP 103	F			2	Coreq-RCP 121
Medical Lectures I	RCP 111	F			3	
Clinical I	RCP 121	F			3	Coreq-RCP 103
Pharmacology	RCP 141	F			3	Coreq- RCP 111
Semester 2 (Spring)						
Anatomy & Physiology II	BIO 112	F/S/SU			4	BIO 111
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Physics for Respiratory Care	PHY 103	S			2	MAT 095
Fundamentals of Respiratory Care II	RCP 104	S			2	RCP 103, RCP 121. Coreq-RCP 122
Medical Lectures II	RCP 112	S			3	RCP 111
Clinical II	RCP 122	S			3	RCP 103, RCP 121, RCP 141. Coreq-RCP 104
Semester 3 (Summer)						
Critical Care I Laboratory	RCP 230	SU			1	BIO 112
Semester 4 (Fall)						
Introduction to Psychology or	PSY 101	F/S/SU				Coreq-ENG 100 or approp place score
Psychology of Interpersonal Relations	PSY 118	F/S/SU			3	Coreq-ENG 100 or approp place score
Medical Lectures III	RCP 113	F			3	BIO 112, RCP 112
Cardiopulmonary Technology	RCP 131	F			2	BIO 112
Clinical III	RCP 221	F			5	BIO 112, RCP 122
Critical Care II	RCP 231	F			3	RCP 230
Elective	---				3	
Semester 5 (Spring)						
Medical Microbiology	BIO 232	F/S/SU			4	BIO 112 or CHM 103 or CHM 105
Bioethics	IDS 215	S			3	Coreq-ENG 100 or approp place score
Medical Lectures IV	RCP 114	S			3	BIO 112, RCP 113
Clinical IV	RCP 222	S			5	BIO 112, RCP 221
Neonatal and Pediatric Respiratory Care	RCP 243	S			3	BIO 112
Respiratory Care Seminar	RCP 245	S			2	BIO 112. Coreq-RCP 222
Total credits required					75	

The Degree:
Associate in Science

The Program:
Respiratory Care

The Next Step:
Graduates are eligible to take credentialing examinations offered by the National Board for Respiratory Care, Inc/ Apply for MA licensure with the MA.D.P.H.

Program Coordinator:
Lynda Nesbitt 508.854.4398
lyndan@qcc.mass.edu

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

Please see Admission process in the program introduction.

Program Notes:
To be eligible to remain in the Program, a student 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, the student must satisfy all course and Program requirements including regulations on conduct and attendance in order to remain in the Program. For additional information see program introduction on page 182.

CORI/SORI/DRUG TEST:
Required of all accepted students prior to beginning clinical experiences.

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

SLEEP TECHNOLOGY CERTIFICATE

If you are seeking a career in the health field, have a caring and compassionate attitude, have good communication and observation skills, a career as a sleep technologist may be for you. Due to the nature of the work, sleep technologists often work at night.

Sleep Technology (Polysomnography) is an allied health specialty whose practitioners administer complex sleep/neurodiagnostic studies. Polysomnographic technologists are typically employed in hospital based clinics and sleep/neurodiagnostic laboratories.

The Sleep Technology Certificate program is offered through an articulation agreement with Northern Essex Community College (NECC). General education requirements can be taken at Quinsigamond Community College. All PSG courses are taken online through NECC with a commitment of attendance on campus at NECC for one Saturday per month throughout the certificate program.

Throughout the program, you will be participating in online classes, laboratory practice and clinical experience. Students may choose to enroll in face to face classes at NECC – Lowell Campus. Laboratory experience will involve one Saturday per month traveling to Northern Essex Community College. All clinical assignments will be in the Central Massachusetts area.

The Sleep Technology Certificate program prepares graduates for a career in sleep medicine. Graduates of the program will be prepared to take the Registered Polysomnography Technologist (RSPGT) examination. Students must earn a C or better in all PSG Courses at NECC in order to graduate. A minimum of 28 credits is required for graduation.

Admission Criteria

All admission criteria are available on the NECC website at www.necc.mass.edu/programs/health/

Additional Costs:

Emergency medical services students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, licensing examinations, and any required skills remediation.

CORI/CHRI/SORI

Students interested in participation in this academic program may be required to undergo a Criminal Offender Record Information (CORI) check, a Criminal Records Central Repository (CHRI) check and/or a Sex Offender Registry Information (SORI) check. For more information, visit www.necc.mass.edu/corisori

Finger printing may be required and drug testing will be required.

CPR: Students are required to be CPR Certified at the Health Care Provider Professional Rescuer level prior to the start of clinical courses. Students are required to complete a health evaluation, including the Hepatitis B immunization series, prior to final acceptance into the Program.

Student Professional Liability Insurance:

Students are required to carry professional liability insurance. The premium is to be paid at the time of course registration.

Accreditation Agency

The Commission on Accreditation of Allied Health Education Programs accredits the Sleep Technology Certificate program at NECC (www.caahep.org) upon the recommendation of the Committee on Accreditation for Polysomnographic Technologists (CoA-PSG), Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756, 727.210.2350. Currently there is no state licensure required.

Contact Information

John Murray
jmurray@necc.mass.edu
Office L-206
Phone: 978.738.7274
Please call to schedule an appointment

Career Option

Graduates will be able to pursue many career paths. Most sleep technologists work in sleep labs, often associated with hospitals. Positions as sleep technologists are available. Salaries are competitive.

SURGICAL TECHNOLOGY – Certificate

Surgical technologists are integral members of the medical team in the operating room. Surgical technologists work under the supervision of a physician or a registered nurse and are involved in all aspects of perioperative care. Typical responsibilities include operating room set-up, including the arrangement of necessary instrumentation, patient preparation and monitoring, complete cleanup of the surgical suite, instruments and equipment. Employment of surgical technologists is expected to grow significantly over the next three to five years. Coupled with the Worcester area's strong employment base in healthcare, graduates should anticipate good job prospects. The program is accredited by the Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756. Ph: 727.210.2350, www.caahep.org.

The curriculum provides students with the classroom and clinical experiences necessary to perform effectively as a surgical technologist. Additionally, students will be prepared to take the professional certification examination offered by the Liaison Council on Certification for the Surgical Technologist. Upon completion of the program, students will be prepared to obtain employment as a surgical technologist or to continue their studies at the Associate degree level in disciplines such as Registered Nursing or any one of the allied health professions.

Students should anticipate additional expenses for parking. All classes are scheduled at the QCC College at City Square. There are also additional costs for uniforms, transportation and/or related travel costs to the clinical site.

Students who do not have completed health files submitted to the Surgical Technology Program and cleared by the program coordinator by August 15th of the respective year will be removed from their surgical technology courses and will have to file for readmission to the next available year.

Admissions Process:
Specialized Health Careers Advising facilitates the entry of students to Health Care Programs. All students applying should contact Health Careers Advising at 508.854.4308.

In order to be considered for the Surgical Technology Certificate program, students must have a high school diploma or general equivalency diploma (GED). To be eligible for admission the applicant must take QCC's Math and English assessment tests to demonstrate competency at the appropriate level. Applicants must test into MAT 099 and ENG 101. Math course must have been taken in the last five years. All courses must be completed with a grade of "C" or higher to remain in the program. A TEAS composite score of 60% is required. Required TEAS scores must be achieved within two attempts of taking the test.

CORI/SORI:
A Criminal Offender Records Information (CORI) Sexual Offender Records Information (SORI) check is required of all students accepted into the program. Finger printing may be required and drug testing will be required. All students must submit evidence of a positive Hepatitis B titer to be admitted to the program.

Additional Costs:
Surgical technology students should anticipate additional expenses for uniforms/clinical wear, textbooks, professional liability insurance, certification examinations, and any required skills remediation.

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

A total of 41 credits is required for the certificate in Surgical Technology.

All students accepted into Surgical Technology Program must obtain Health Care provider (Red Cross) or Professional Rescuer (American Heart Association) CPR certification and provide documentation of immunization currency and satisfactory health status prior to beginning clinical experience.

Students are required to scrub 125 cases (assisted or solo) to complete the program.

During clinical rotations all activities required in the program must be educational and students may not be paid or substituted for staff.

SURGICAL TECHNOLOGY – Certificate (Program Code: ST)

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

The Certificate:
Surgical Technology

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

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

Please see Admission Process in the program introduction.

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

Program Coordinator:
Deborah Coleman 508.854.2734
dcoleman@qcc.mass.edu

Program Notes:
For additional information see program introduction on page 185.

CORI/SORI/DRUG TEST:
Required of all accepted students prior to beginning clinical experiences.

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

TELECOMMUNICATIONS TECHNOLOGY - Associate in Applied Science (Program Code: TL)

Major corporations providing voice and data communication services and Internet access require a highly trained work force. The Telecommunications Technology curriculum is designed to provide students with the knowledge and skills necessary for employment in this industry. The curriculum incorporates course work in the areas of electronic technology, telecommunications, networking and computer technology. (see page 120 for Electronics Technology and Related Areas Associate Degrees)

Course Title	Course #	Offered	Plan to Take	Grade	Credits	Prerequisites
Semester 1						
Introduction to Computer Applications in Telecommunications	CIS 115	F/S/SU			3	ENG 100
Electronics I	ELT 103	F/S			4	ENG 100, MAT 099
Digital Computer Circuits	ELT 121	F/S			4	ENG 100, MAT 099
English Composition & Literature I	ENG 101	F/S/SU			3	ENG 100
Mathematics Elective	MAT ---	F/S/SU			3	
Semester 2						
Windows Client Operating Systems[4]	CSC 141	F/S/SU			4	
Electronics II	ELT 104	F/S			4	ELT 103
Microprocessors or	ELT 122	F/S			4	ELT 121
Computer Hardware and Support	CSC 233	F/S				Coreq-CSC 141
English Composition & Literature II	ENG 102	F/S/SU			3	ENG 101
Mathematics Elective	MAT---	F/S/SU			3	
Semester 3						
Networking Technologies	CSC 234	F/S			4	Coreq-CSC 141
Internetworking Principles and Protocols	CST 231	F/S			4	Coreq-CSC 234
Laboratory Science Elective*	---	F/S/SU			3-4	
Humanities Elective**	---	F/S/SU			3	
Semester 4						
CST Elective (any 200 level CST course)	CST 2--	S			3-4	
Communications Electronics	ELT 212	S			4	ELT 104, ELT 121
Cooperative Work Experience & Seminar	ELT 299	F/S/SU			3	ELT 104, ELT 122 or CSC 233
Social Science Elective ***	---	F/S/SU			3	
Technical Elective ****	---	F/S/SU			3-4	
Total credits required					62-63	

* Recommended Math –Science tracks:
Track 1: MAT 100 college Algebra, MAT 122 Statistics, SCI 107 Science of Technology: Vision and Light or SCI 108 Science of Technology: Hearing and Sound
Track 2: MAT 123 college Math I: Pre-Calculus, MAT 124 College Math II: Trigonometry, PHY 101 Physics I

** Recommended Humanities Elective: SPH 101 Speech Communication Skills

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

**** Courses that satisfy Technical Electives are: any CSC course, any CST course, any ELM course, any 200 level ELT course, any 200 level CIS course, CIS 134, MAT 122, any 200 level MAT courses or any 200 level MNT course. For more information See program introduction.

The Degree:
A study of electronics, computers and networking, sciences, and foundational skills necessary for success in the 21st century telecommunications workplace.

The Program:
Prepares students to compete in a high performance, technologically driven market by demonstrating their ability to perform at a competent level. This is accomplished by adhering to national standards developed to measure and promote the competency of work-ready, entry-level telecommunications technicians.

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

The Next Step:
Graduates of this program are qualified for entry-level positions as telecommunications or networking technicians. Students may also continue student education at the bachelor's level
- This program has transfer articulation agreements
- More information on transfer is available on pages 22-23 or at www.qcc.mass.edu/transfer

Program Coordinator:
James Heffernan 508.854.2739
jheffernan@qcc.mass.edu

Program Notes:
- Students should note that many required courses have ENG and/or MAT prerequisites.
- The Telecommunications Technology Program has been developed with continuous input from local telecommunication providers.

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

GENERAL EDUCATION

The College offers three types of associate degrees, and the type of degree determines the minimum number of credits required in general education. The Associate in Applied Science degree requires a minimum of sixteen credits in general education; the Associate in Science degree requires a minimum of twenty credits in general education; and, the Associate in Arts degree requires a minimum of thirty-three credits in general education. These requirements are distributed across the disciplines of Humanities, Mathematics, Science, and the Social Sciences. Actual distribution requirements will vary according to the demands of each program.

GENERAL EDUCATION LEARNING GOALS

General education at Quinsigamond Community College provides students with the skills, knowledge and perspectives that enable them to achieve their academic, professional and personal goals. The following learning goals for general education are integrated into the general education and program courses that are required for each associate degree program.

Communication Skills: Students will be able to write and speak effectively.

Information Literacy: Students will be able to locate, evaluate and apply reliable and appropriate information.

Quantitative Reasoning: Students will apply the concepts and methods of mathematics to solve problems.

Scientific Reasoning: Students will relate scientific methods of inquiry to the acquisition of knowledge.

Technical Literacy: Students will utilize computer and emerging technologies effectively.

Aesthetics: Students will appreciate the variety of human experiences as expressed through the arts.

Multiple Perspectives: Students will demonstrate knowledge and appreciation of diverse cultures.

Ethics: Students will develop an awareness of personal obligations and responsibilities in one's community of influence.

Impact of Technology: Students will reflect on the impact of scientific and technological advances on the individual, society and the environment.

Civic Literacy: Students will demonstrate awareness of the responsibilities of local, national and international citizenship.

INFORMATION ON COURSE SELECTION

TYPES OF COURSES

College-level courses College-level courses are defined as all credit courses offered by the College except the developmental (pre-college level) courses.

Developmental Courses, Developmental courses, which are listed below, are the courses offered by the College to improve academic skills of students, enabling them to succeed in college-level courses. These courses cannot be used to satisfy degree or certificate requirements.

CHM 090	MAT 090
ENG 090	MAT 095
ENG 091	MAT 098
ENG 095	MAT 099
ENG 096	

Interdisciplinary Courses Interdisciplinary courses are those courses which combine subject matter from more than one academic discipline. The interdisciplinary courses can also be used to satisfy a Liberal Arts elective if they have an IDS designation in the course numbers.

TYPES OF COURSE MODALITIES

The following types of course modalities are offered at Quinsigamond Community College.

Face-To-Face

A face-to-face course is one in which instruction is delivered fully on-site with face-to-face interaction between the instructor and student. A face-to-face course may make use of computers, the internet or other electronic media in the classroom. Students may be directed to online materials provided by publishers, or to other internet accessible sources as part of their course work. A face-to-face course does not use the institution's chosen Learning Management System (Blackboard)

Web Enhanced

A web-enhanced (also, web-facilitated) course utilizes the institutions chosen web based Learning Management System (Blackboard) to augment a face-to-face course. Online resources are posted by the instructor to support specific pedagogical needs. All classes meet face-to-face as in a regular face-to-face course.

Blended
A Blended (also, hybrid) course has fewer in person course meetings than a face-to-face or web-enhanced course. A portion of the course is delivered online and a portion is delivered on-site face-to-face. Blended courses use the institution's chosen Learning Management System (BlackBoard) for the online portion of the course.

Online
An online course is a course that is provided entirely through the institution's chosen Learning Management System. No on-site class meetings are required. Although it is preferred that all assessments occur within an online course, a proctored in-person exam may be required.

Accelerated
An accelerated course runs in a compressed time and either meets more often to ensure adequate contact time or utilizes other proven accelerated learning methods to replicate the required contact hours. Specialized accelerated learning cognitive methods may also be used. An accelerated course may be offered face-to-face, online, web-enhanced or in a blended modality.

TYPES OF ELECTIVES

1. **Elective**: Any college level-course qualifies as an elective, and a student may enroll in any college-level course for which he or she meets the prerequisites.

2. **Business Elective**: Any ACC, BNK, BSL, BSS, BUS, CIS, ECO, EHS, FIN, HRM, IDS 113, MGT, MNT or MRK course.

3. **Multiple Perspectives Elective**: Courses designated as Multiple Perspectives Electives involve the study of diversity of people with respect to culture (national origin, language, religion, and ethnicity), gender, race, social class, age, sexual orientation, and ability. The study can be focused on diversity in America or global diversity in a non-Western context. The following courses are considered Multiple Perspectives Electives.

ANT 111	GEO 210	HST 216	PSY 142
ANT 221	GRT 101	HST 241	PSY 241
ART 260	HST 104	HUM 147	PSY 242
ASL 113	HST 105	HUM 211	SOC 111
BIO 141	HST 106	HUS 221	SOC 115
CHC 151	HST 133	IDS 101	SOC 211
CHC 250	HST 157	MUS 121	SOC 220
CHC 255	HST 203	PHI 121	
ECE 133	HST 204	PHI 123	
ENG 231	HST 215	PHI 201	

4. **Liberal Arts Elective**: Any **Humanities, Social Science, Behavioral Science, Science or Mathematics Elective** is considered a Liberal Arts Elective. Designations for these courses are listed next.

5. **Humanities Elective**: The Humanities courses present knowledge concerned with humanity and world culture: philosophy, literature, and the fine arts. These arts are distinguished from the sciences and are produced or intended primarily for beauty, not utility. Sculpture, painting, drawing, architecture, literature, drama, music, and the dance are examples of such expressions. Courses with the following designations are considered Humanities Electives:

American Sign Language (ASL)	Humanities (HUM)
Art* (ART)	Music (MUS)
English (ENG)	Philosophy (PHI)
French (FRC)	Spanish (SPN)
German (GER)	Speech (SPH)

*Except Applied Arts Courses

6. **Foreign Language Elective**: Any of the following serve as Foreign Language Electives. Note that these courses also serve as Humanities Electives.
American Sign Language (ASL)
French (FRC)
German (GER)
Spanish (SPN)

7. **Social Science Elective**
All the social sciences are concerned with the study of people and their behavior, both individually and as a member of groups, nations, cultures and societies. Courses with the following designations are considered Social Science Electives:

Anthropology (ANT)	Political Science (PSC)
Economics (ECO)	Psychology (PSY)
Geography (GEO)	Social Science (SOS)
History(HST)	Sociology (SOC)

8. Behavioral Science Elective
   Behavioral sciences involve seeking to discover general truths about human social behavior. Courses with the following designations are considered Behavioral Science Electives (PSY 121 is not a behavioral science course or a social science elective and not a Liberal Arts Elective):
   Anthropology (ANT)
   Psychology (PSY)
   Sociology (SOC)

9. Mathematics Elective Any mathematics college- level course (MAT 100 or above) is a Mathematics Elective. Some programs may have specific recommendations.

10. Science Elective and Lab Science Elective
    These courses present systematized knowledge derived from observation, study, and experimentation. Electives that are specifically designated as Science Electives do not require a lab. However, a science course with a lab will also fulfill the requirement. Electives that are specifically designated as Lab Science Electives require a science course that includes lab, which are all 4 credit courses. Courses with the following designations are considered science electives (3 credits) and lab science electives (4 credits).

    Biology* (BIO) Chemistry (CHM)
    Physics (PHY) Science (SCI)

    * BIO 140 is not a lab science elective

QCC HEALTH STUDENTS

Students seeking admissions to an Associate's Degree Health program (pre-health) are required to take the courses listed below. Please contact the Health Careers Advising Office in room 61A, 508.854.2718 for additional information.

Dental Hygiene	Medical Assisting	Nurse Education	Occupational Therapy
BIO 111	ACC 101	BIO 111	BIO 111
BIO 112	ALH 102	BIO 112	BIO 112
BIO 232	ALH 151	BIO 232	PSY 101
CHM 101	BIO 140	PSY 101	PSY 121
PSY 101	CIS 112	PSY 121	

Paramedic Technology	Radiologic Technology	Respiratory Care
BIO 111	BIO 111	BIO 111
BIO 112	BIO 112	BIO 112
CIS 111	PSY 101 or PSY 118	BIO 232
PSY 101 or PSY 118	SPH 101	IDS 215
SPH 101	HUM 101	PHY 103

ANITCIPATED COURSE OFFERINGS

The college has attempted to identify the cycle of course offerings. The following notations can be found at the end of course descriptions:

"F" - Indicates course is offered each Fall semester
"S" - Indicates course is offered each Spring semester
"SU"- Indicates course is offered each Summer (Sessions I & II will be determined at time of offering)

Courses that are not offered every year have been designated with an "F" or "S" and a specific year. Thus a course designated "F, 2011" means that the course will be offered in the Fall Semester, 2011. Students are encouraged to work with their advisors to plan out a sequence of courses that takes into account when courses will be offered.

The College reserves the right to deviate from the indicated cycles, although such deviations are anticipated to be minimal. The College also reserves the right to cancel courses and sections that are under enrolled.

Course Descriptions

A prerequisite for a course is listed at the end of its description. It must be successfully completed before registering for that course. The prerequisite requirement may also be fulfilled by an appropriate assessment test score. The instructor of the course section, program coordinator, academic dean, or the vice president of Academic Affairs may waive the prerequisite requirement on presentation of acceptable documentation. A corequisite requirement indicates a course that should be taken concurrently or prior to enrollment in a course.

ACCOUNTING (ACC)

ACC 101 Financial Accounting I 3 credits
This course focuses on the relationships between business activities and events and the impact they have on financial statements from a prepare/user-of-accounting perspective. Students study financial transactions for both service and merchandising businesses and relate the transactions to a company's assets, liabilities, owners' equity, revenues, expenses, and cash flow. Areas of study include the basic accounting model, the process of the accounting cycle, accounting principles and terminology, financial statement analysis, and computerized accounting applications.
Prerequisites: ENG 100 or appropriate placement score, MAT 090. F/S/SU

ACC 102 Financial Accounting II 3 credits
This course builds on the material learned in ACC101. Students use their knowledge of financial statements to analyze and communicate a variety of financial information including accounting for accruals, inventory, equity and debt issues, and cash flow statement analysis. Students are able to demonstrate the knowledge they gain by working with Web resources and MS Office software to present a financial analysis of a public corporation.
Prerequisite: ACC 101, CIS 111 or CIS 112. F/S/SU

ACC 201 Intermediate Accounting I 3 credits
This course focuses on an intensive study of financial accounting theory and concepts. Students review the accounting process, develop an understanding of the environment and structure of financial accounting, debate issues concerning financial disclosure, and study the structure of the standard major financial statements.
Prerequisite: ACC 102. F

ACC 211 Federal Taxation 3 credits
This course examines basic federal income and employment taxes. Students learn how to prepare individual, partnership, and corporation tax returns including the appropriate schedules, manually and on computers. Topics covered include analysis of tax problems, identification of tax issues, income inclusion and exclusion, deductible business and non-business expenses, gains and losses, tax credits, special taxes, and current tax laws and procedures.
Prerequisite: ENG 100. F

ACC 222 Managerial Accounting 3 credits
This course examines information used by executives and managers who work in business. Students study manufacturing accounting, budgeting forecasting, and financial statement analysis. Using computer applications, working in groups, and through classroom exercises, students learn to use and interpret accounting data as the basis for managerial decision-making and planning.
Prerequisite: ACC 102. F/S/SU

ACC 231 Computerized Accounting 3 credits
This course focuses on understanding accounting through a mastery of general ledger software applications. Students set up and maintain a computerized accounting records system by recording the transactions necessary to operate a service and merchandising business. The course covers the areas of cash, accounts receivable, accounts payable, and payroll transactions. Students learn how to create these transactions on a computer and how to understand and interpret the resulting financial reports.
Prerequisite: ACC 101. S

ACC 299 Cooperative Work Experience & Seminar 3-6 credits
This course focuses on students' opportunities to apply classroom theory to practical work experience. A seminar will be conducted so that students may exchange feedback about their work experience. The number of credits to be earned is determined by the number of weeks and hours per week of the cooperative work experience and the objective of students' learning contracts. F/S

ALLIED HEALTH (ALH)

ALH 101 Introduction to The Health Professions 3 credits
Complementing other courses in the Access Certificate to Health Careers program, this course will assist the student in choosing a specific career program. Visiting representatives of various health care delivery programs will describe their work in the health care network. Additionally, the student will study medical terminology to acquire the foundation for a professional vocabulary.
Prerequisite: ENG 091
Corequisite: ENG 096

ALH 102 Introduction to Medical Terminology 3 credits
This course provides a basic foundation for students interested in the allied health field. Emphasis is on analyzing word parts and learning basic prefixes, suffixes and word roots. The course also highlights the body systems: basic anatomy and physiology, including terms used in diseases and surgical procedures.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

ALH 103 Introduction to Pharmacology for Allied Health Professionals 3 credits
This course provides a foundation with knowledge in pharmacology, a historical view of pharmacology and explores the fundamental pharmacological concepts such as pharmacokinetics and pharmacodynamics. Students study drug classifications, their actions, indications for use, contraindications and adverse effects. Natural alternatives and herbal remedies are included. This course is designed for all students with an interest in the Allied Health Professions, as well as the general public.
Prerequisite: ENG 100 or appropriate placement score

ALH 106 (BSS 211) Medical Law and Ethics 3 credits
This course explores many legal, ethical and bioethical issues encountered in a medical office and offers suggestions for dealing with those issues in an informed, legal and sensitive manner. Students learn the various designations for medical employees (licensed, registered and certified) and understand the laws that directly relate to physicians. Also an understanding of the role of bioethics in a medical office is discussed.
Prerequisite: ENG 096. S

ALH 107 (BSS 111) Medical Coding and Billing 3 credits
This course examines ICD-9CM coding, CPT-4 coding, insurance programs, Medicare, insurance claim forms, and legal issues. The course introduces the coding systems and recordkeeping used in medical facilities.
Prerequisite: ENG 100
Corequisite: ALT 102. F/S

ALH 151 Medical Office Administration I 3 credits
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 type's letters. The course introduces verbal and non verbal methods of communication skills.
Prerequisite: ENG 100 or appropriate placement score
Corequisite: ALH 102, BSS 101. F

ALH 152 Medical Office Administration II 3 credits
This second level course teaches students administrative functions used in the medical office. Administrative competencies include medical records management, bookkeeping, payroll functions, account payable and receivable, management of charges, credits and adjustment of account entries, office inventory and maintenance, electronic healthcare records and legal and ethical issues in a medical practice.
Prerequisite: ALH 151. S

AMERICAN SIGN LANGUAGE (ASL)

ASL 111 Beginning American Sign Language I 3 credits
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. F/S/SU

ASL 112 Beginning American Sign Language II 3 credits
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.
Prerequisite: ASL 111. F/S/SU

ASL 113 Introduction to Deaf Studies 3 credits
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.
Prerequisite: ASL 111. S

ASL 200 Deaf Community Practicum 3 credits
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.
Prerequisites: ASL 112, ASL 113, CORI and/or SORI. F/S

ASL 211 Intermediate American Sign Language I 3 credits
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.
Prerequisite: ASL 112. F

ASL 212 Intermediate American Sign Language II 3 credits
This course emphasizes further development of visual/spatial orientation, vocabulary, complex sentence structures and conversational skills. Students learn to give clearly detailed descriptions of activities, interactions, plans and directions. Through in-class assignments and interactions with the Deaf community students demonstrate complex conversational receptive and expressive skills. Students learn to analyze and discuss current events in the Deaf community using ASL. The course also covers ASL to voice and voice to ASL translating.
Prerequisite: ASL 211. S

ASL 215 Introduction to the Field of Interpreting 3 credits
This course provides students with information regarding the role and function of an interpreter. Topics covered include: the history of interpreting, terminology, employment options and settings, the Registry of Interpreters for the Deaf, and the Code of Ethics. Students explore interpreting and transliteration. This course addresses the influence of culture on interpreting, equivalence issues in translation, cultural influences on context, and strategies for improved inter-cultural communication.
Prerequisites: ASL 113, ASL 211. S

ANTHROPOLOGY (ANT)

ANT 111 Cultural Anthropology 3 credits
The course introduces the concepts of cultural adaptation in small-scale and large-scale societies. It focuses on the integration of fundamental cultural institutions including economics, political organizations, family, and religion. Students learn how to explain why specific cultural differences and similarities occur and persist in the United States and other countries. Students develop an understanding of culture contact, culture change, and the role of anthropology in the modern world.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

ANT 221 Physical Anthropology 3 credits
The course examines the evolutionary foundations of human variation and diversity. Students study human evolution; primate behavior; and the interactions of culture, environment, and human biology by reviewing research on biological differences within and among modern human populations.
Corequisite: ENG 100 or appropriate placement score. F/S

APPLIED ARTS (APA)

APA 111 Color & Design I 3 credits
This course explores the fundamentals of color and light theory and the application of color and light in two-dimensional design and space. Students use computers to create and manipulate drawn images and to acquire a working knowledge of the Macintosh operating system and Adobe Illustrator software. F/SU

APA 112 Color & Design II 3 credits
This course builds on the foundation of APA 111. Students expand their knowledge of color and light theory and the application of color and light in two-dimensional space. They investigate the use of form, line, volume, and void using Adobe Illustrator software on the Macintosh operating system.
Prerequisite: APA 111. S/SU

APA 114 Digital Design Concepts I 3 credits
This course explores the fundamentals of digital design and its application in two-dimensional space. Students learn the principals and elements of design and color theory to create vector drawing and graphics associated with digital media. Students complete assignments using industry-standard software and hardware.
Prerequisite: ENG 100. F/SU

APA 115 Digital Design Concepts II 3 credits
This course builds on the foundations of Digital Media Design Concepts I. Students expand their knowledge of design, color and light theory relevant to the application of two-dimensional space. They investigate the use of form, line, volume and void using complex concepts in vector drawing and graphics. Students complete assignments using industry-standard software and hardware.
Prerequisite: APA 114. S/SU

APA 121 Graphic Design I 3 credits
This course introduces fundamentals of design and use of design principles to create forms of graphic communication. It emphasizes problem solving by design, visualization of problems and their solutions, and correlation between forms and their content, function, and context. Students study advertising and related commercial print media and create solutions to design problems using PageMaker software on the Macintosh operating system. Students gain an understanding of the importance of the relationship between formal design and the components of layout, graphic presentation, photography, and illustration.
Prerequisite: ENG 100 or appropriate placement score. F

APA 122 Graphic Design II 3 credits
This course builds on the foundation of APA 121. Topics include using typography effectively in design; visualizing communication problems and solutions; and, the correlation between type forms and content, function, and context. Students expand their understanding of the relationship between formal design and typography and the components of layout, photography, and illustration using InDesign software on the Macintosh operating system.
Prerequisite: APA 121. S

APA 151 Digital Drawing I 3 credits
This course emphasizes the consideration of line, shape, form, texture, movement, and space in developing awareness of style. Students understand line value and control its use as a means of exploring two-dimensional surfaces and three-dimensional space, form, and volume. Students develop an understanding of perception through observation and drawing from imagination and create and manipulate digitally drawn images using PhotoShop software on the Macintosh operating system. F/SU

APA 152 Digital Drawing II 3 credits
This course builds on the foundation of APA 151. It introduces cell and timeline computer animation applications in digital drawing and explores the compositional concepts of space, motion, and perspective. Students Flash MX, PhotoShop, and ImageReady Software on the Macintosh operating system to create drawings with speed, accuracy, legibility, and order.
Prerequisites: APA 151, APA 161. S/SU

APA 154 Digital Imaging and Media 3 credits
This course introduces the observational and perceptional skills necessary to construct complex and detailed drawings, illustrations, montages, and collages using digital media. Students experiment with line, space, form, volume and color to manipulate and create effects associated with electronic imaging. Students complete assignments using industry-standard software and hardware.
Prerequisite: ENG 100. F/SU

APA 155 Digital Illustration and Animation 3 credits
This course explores illustrative and animation based design processes to create original compositions and narrative styles for digital media production. It introduces cell and timeline computer animation applications to explore concepts of space, motion, and perspective. Students complete assignments using industry-standard software and hardware.
Prerequisite: APA 154, APA 161. S/SU

APA 161 Digital Photography 3 credits
This course covers the digital camera, including the artistic, theoretical, technical, and career aspects of photography. Students learn the relationship between the key features of light, composition, film usage, computer manipulation, scanning, resolution, and the final digital print. Students must have access to a single lens reflex (SLR) 35mm camera or a medium-to-high resolution digital camera. Students learn how to use the manual controls of any 35mm SLR camera or digital camera; use computer technology to scan, digitize, and manipulate images; and, prepare images for professional display using Adobe PhotoShop software on the Macintosh operating system.
Prerequisite: ENG 100 or appropriate placement score. F

APA 181 Website Design I 3 credits
This course covers the aspects of a well-designed Web site. Students plan, design, launch, and maintain a Web site using creative interfaces, text formatting, graphic images, functional site organization, and navigation links using Adobe GoLive software on the Macintosh operating system.
Prerequisites: APA 161. S

APA 221 Advertising Design 3 credits
This course covers the fundamentals of advertising including creative use of words and images in effective communication. Students develop an advertising campaign for their portfolios. Students understand the process of developing and executing advertising ideas through use of visual models via utilization of Quark Xpress software on the Macintosh operating system.
Prerequisite: APA 122. F

APA 222 Publication Design 3 credits
This course examines the fundamentals of publication design with multi-page design concepts. It covers the research, development, organization, and visual presentation of complex printed documents. Comprehensive aspects of design, content and image are addressed. Students complete assignments using industry-standard software and hardware.
Prerequisite: APA 115, APA 122. F

APA 254 Graphic Design Processes 3 credits
This course introduces graphic reproduction techniques from layout through mechanical processes used to produce a printed product. It covers graphic printing media and their advantages and limitations, including the reasons for selecting a particular printing format. Students execute in-depth work with camera-ready computer layouts, including enlargements and reductions, color separations and trapping, type specification, and stripping. Students use Quark Xpress and Adobe Acrobat software to create solutions to design problems.
Prerequisite: APA 122. S

APA 262 Photographic Illustration 3 credits
This course explores photographic and illustrative processes and computer-based design procedures. It emphasizes modifying photographic imagery in order to create original illustrative compositions and styles and the fundamentals of print and electronic media production. Students apply and utilize photography and digital drawing to produce computer modified illustrations using PhotoShop software on the Macintosh operating system.
Prerequisite: APA 161. F

APA 271 Typography 3 credits
This course introduces typographic form and design. It covers fundamental concepts from theoretical, historical, and technological contexts. It emphasizes principles of composition, spacing, and effective typographic expression as it applies to page layout with particular focus on basic letterform design, typesetting, and construction. Students complete assignments using industry-standard software and hardware.
Prerequisites: APA 115, APA 121. F

APA 275 Motion Graphics 3 credits
This course introduces the theory and practice of motion graphic production by integrating digital animation and interactive multimedia. Students explore creative and narrative aspects of digital imaging, sound, animation, and motion editing effects to produce innovative digital spaces and experiences for web and video presentation. Students complete assignments using industry-standard software and hardware.
Prerequisite: APA 154, APA 155. F

APA 282 Website Design II 3 credits
This course builds on APA 181. Students plan, design, launch, and maintain a complete Web site with creative interfaces using frames, forms, style sheets, text formatting, and animated graphics with functional site organization and navigation links using Flash MX and Adobe GoLive programming software on the Macintosh operating system.
Prerequisite: APA 181. F

APA 285 Webmaster Production Processes 3 credits
This course covers the production processes of a well-designed Web site. Students plan, design, launch and maintain a complete portfolio, business and community service organization Web site environment with creative interfaces using forms, style sheets, text formatting, graphics, animation and multimedia with functional site organization with links for navigation using Flash MX and Adobe Creative Suite CS integration software on the Macintosh operation system.
Prerequisites: APA 181, APA 262, APA 282. S

APA 286 Interactive Media Processes Portfolio 4 credits
This capstone course prepares the student to develop a presentation portfolio utilizing the media design processes of an interactive portfolio website and DVD. It covers digital animation, motion graphics, and multimedia for interactive portfolio preparation. Emphasis is placed on the relationship between technical, creative and critical thinking skills as students plan, design, launch and maintain a complete interactive media environment for final portfolio evaluation. Students complete assignments using industry-standard software and hardware.
Prerequisite: APA 275, APA 282. S

APA 287 Graphic Design Processes Portfolio 4 credits
This capstone course prepares the student to develop a presentation portfolio utilizing print and PDF applications based on industry standards. It covers advanced concepts and processes of graphic design and portfolio preparation. Projects address pre-press and PDF production for new media. Emphasis is placed on the relationship between technical, creative and critical thinking skills. Students prepare a body of their best work for final evaluation.
Prerequisite: APA 222, APA 271. S

ART (ART)

ART 101 Art Appreciation 3 credits
This course introduces the major art forms and ways to relate to them. Through the use of videos, DVDs and field trips, students learn about the diversity found in art and the impact that artistic works have. Students learn how to appreciate art by developing the skills necessary to view it through intelligent and informed evaluations.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

ART 111 A History Of Art I 3 credits
This course presents a study of art through the major historical periods in Western civilization. Course topics include pre-historic, ancient, classical, early Christian, and Byzantine artistic expressions including painting, sculpture, architecture, and the minor arts. Students learn the many aspects of the visual arts as they relate to the formal influences by examining the underlying social, political, environmental, and humanistic factors of specific historical periods. Museum trips are required.
Corequisite: ENG 101. F

ART 112 A History Of Art II 3 credits
This course covers a study of art through the major historical periods in Western civilization. It focuses on painting, sculpture, architecture, and the minor arts of the Renaissance, Baroque, and early modern periods. Students learn aspects of the visual arts of these periods as they relate to formal influences and underlying social, political, environmental, and humanistic factors. Museum trips are required.
Corequisite: ENG 101. S

ART 121 Contemporary Art 3 credits
This course covers the underlying social, political, environmental, and humanistic influences that affect contemporary artistic styles and ways artists have expressed those influences. Students examine the development of diverse styles in contemporary art by exploring the evolution of modern artistic trends from 1940 to the present.
Corequisite: ENG 100 or appropriate placement score. S

ART 131 Introduction to Drawing I 3 credits
This course examines the varied experiences involved in the drawing process while emphasizing an awareness of traditional disciplines. Students learn how to solve problems of surface organization and to develop the ability to analyze and translate three-dimensional space into a two-dimensional surface by using both perceptual and conceptual drawing methods. F/S

ART 132 Introduction to Drawing II 3 credits
This course introduces instrumental and perspective drawing, including free application of mechanical theories. Topics include art and design applications of techniques; proper instrument use; and parallel, angular, and three-point perspective. Students learn how to use both freehand techniques and mechanical instruments to render drawings with speed, accuracy, legibility, and neatness.
Prerequisite: ART 131. F/S

ART 141 Photographing People 3 credits
This course covers both posed and candid photographs of people. Students learn the proper operation of various cameras (automatic, manual, single-lens reflex, digital) and the selection of subjects, posing, and lighting. Students must supply their own photographic equipment (a working camera) and pay their own film and processing costs. F/S/SU

ART 143 Nature, Scenic, and Travel Photography 3 credits
This course covers photography of both natural and human-made subjects of interest to travelers or nature lovers. Topics include photographing wildlife, landscapes, and structures. Students learn ways of visualizing and capturing subjects at various times of the day or year. Course topics include equipment, planning, and techniques necessary to create the best photographs under varied circumstances. The course requires field trips. Students must provide their own photographic equipment (a working camera) and are responsible for the cost of their own film (if used, five rolls minimum), printing or processing, and travel and meal expenses. SU

ART 211 History of Graphic Design 3 credits
This course is a chronological exploration of graphic design from the invention of writing and to the digital revolution. Students examine the origins of type and graphic representations from the Renaissance, through Art Nouveau, the Bauhaus, and Postmodern influences. Students learn about the impact that graphic forms have made. Students study the basic concepts and movements in graphic design and the relationship of fine art, design art, photography, and emerging technologies in graphic and visual communications.
Prerequisite: ENG 101. S/SU

ART 260 American Women Artists 3 credits
This course surveys the work of American women artists from early Native American times to the present. It focuses on the accomplishments of American women artists in the face of longstanding cultural prejudices against them. Students explore the struggle of women to gain access to schools dominated by men, and examine the gains and setbacks of women artists through each historical period. Students learn the contributions of American women artists to American culture from women's perspective.
Prerequisite: ENG 100. S

AUTOMOTIVE TECHNOLOGY (AUT)

AUT 102 Fundamentals of Automotive Service 3 Credits
This course provides students the fundamentals of working in the automotive industry. It covers dealership workshop operations and organization, and how to work safely in a shop environment. Students learn to identify the major components and systems of an automobile; how to navigate both printed and electronic service information systems; and how to follow service procedures. The course focuses on the proper use of shop equipment such as hand tools, power tools, and specialty tools, including proper usage, storage and safety guidelines; fasteners, fluids, and vehicle maintenance; and measuring devices such as micrometers and dial indicators. F

AUT 111 Automotive Electrical Systems 4 credits
This course covers basic automotive electrical theory and operation including the battery and starting and charging system. Students learn electrical diagnostic tools and testing using all service publications in their available formats, obtain information needed for diagnosis, use the Symptom-to-System-to-Component-to-Cause (SSCC) diagnostic process, and learn repair procedures. F

AUT 113 Basic Automotive Electronics 3 credits
This course explores the internal workings of automotive microprocessors, interrelationship of inputs and outputs, and sensor input and output controlling devices. Through classroom exercises, students examine electronically controlled components and systems, identify and describe the functions of various sensors, learn the types of generated signals, understand the internal workings of the automotive microprocessor, and describe and explain the operation of various output devices.
Prerequisite: AUT 111. S

AUT 121 Basic Gasoline Engines 4 credits
This course covers the basic functioning of gasoline engines. Topics include operation, design, diagnostic, and repair strategies. Students disassemble measure, inspect, and reassemble engines to blueprint specifications and perform dynamic tests in a laboratory environment. Students learn how to describe the major components of a gasoline engine and explain how they contribute to an engine's performance and operation.
Prerequisites: AUT 102. S

AUT 125 Engine Testing/Performance Analysis 4 credits
This course covers basic engine performance, operations, and testing. Topics include the theory and operation of engine systems including ignition, fuel and air management, and emission control using current diagnostic methods and tools. Students diagnose and repair engine performance-related problems and learn how to explain the operations and relationships between engine performance and emissions.
Prerequisites: AUT 102. S

AUT 131 Brake Systems 3 credits
This course focuses on the basics of hydraulic principles, and the types, components, and operation of brake systems. Students learn the specific types of master cylinders, disc brakes, drum brakes, and anti-lock brakes with emphasis on diagnosing brake problems and making adjustments and repairs. The course concentrates on the diagnosis and repair of car and light truck anti-lock brakes and stability systems using equipment specified by manufacturers. F

AUT 133 Suspension, Steering, & Alignment 3 credits
This course examines conventional suspension, air suspension, and programmed/automatic ride control systems. Students learn the theory and operation of basic steering systems, rack and pinion steering systems, and variable and electronic steering systems. Topics include two - four-wheel alignment and use of specialized steering equipment. Students gain an entry-level knowledge of suspension and steering as the foundation for performing comprehensive vehicle suspension and steering performance evaluations and repairs.
Prerequisite: AUT 102. S/SU

AUT 141 Climate Control System 3 credits
This course explores the air conditioning and heater components through an understanding of basic refrigeration principles and the use of diagnostic tools. Students learn how to diagnose and repair A/C and heating related problems (including controls, switches, compressors, and clutches) and learn to perform leak testing, recharging, and safety procedures. Students acquire the knowledge necessary to obtain a National Institute Automotive Service Excellence (ASE) certification in this field.
Prerequisite: AUT 121. SU

AUT 211 Electronic Powertrain Control System 5 credits
This course covers the repair of devices that manage engine operations, emissions, and powertrain systems. Through a combination of lectures and laboratory work students learn to diagnose and repair electronic powertrain control systems. The course also examines the regulations for the second generation of On-Board Diagnostics (OBD II) and the latest developments in powertrain controls.
Prerequisite: AUT 125. S

AUT 251 Automotive Drive Train 3 credits
This course covers manual transmissions, manual transaxles, clutch systems, operation assemblies, and front wheel drive halfshafts. Students learn how to explain driveline functions, including three-, four, and five-speed manual transmissions and transaxles. They also learn how to diagnose and repair rear differentials, and locate and repair driveline vibrations problems in two-wheel drive, four-wheel drive, and all-wheel drive systems.
Prerequisite: AUT 121. F

AUT 253 Automatic Transmission & Transaxle 4 credits
This course covers the operation principles of automatic transmissions and transaxles including hydraulic and mechanical operating principles and powerflow, diagnostic procedures, disassembly, repair, and reassembly. Students learn about automatic transmission powerflow, hydraulic circuits in valve bodies, and other components. They diagnose problems by electronic testing and pressure methods. The course also covers electronic transmissions and their relationships to the powertrain control module.
Corequisite: AUT 251. F

AUT 299 Field Experience and Cooperative Education in Automotive Technology 3 credits
This course provides students with an opportunity to apply classroom theory to practical work experience in an approved facility. Students receive feedback from supervisors at the employment site who review their progress and consult with the Automotive Technology faculty on an on-going basis.
Prerequisite: Approval of Program Coordinator. F/S/SU

BIOLOGY (BIO)

BIO 101 General Biology: Core Concepts 4 credits
This course is designed for students intending to major in the health sciences, the biological sciences or for students requiring a sound knowledge of biological principles. Topics include chemistry, cell structure and function, cell division, basic genetics, molecular genetics, and evolution. The laboratory component covers basic techniques in observation, analysis, and interpretation of data relating to the topics discussed in lecture. Students learn scientific method, basic chemistry (for the understanding of biologic concepts), cells and cell membranes (structure and function), mitosis and meiosis, Mendelian genetics, molecular genetics (DNA), and the basic principles of evolution.
Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or appropriate placement score.
Corequisite: ENG 101. F/S/SU

BIO 102 Introduction to Organ Systems 4 credits
This course introduces animal form and function, and is designed for both science and non-science majors. Topics include the basic pattern of animal tissues and organ systems and the biochemical and physiological basis of organ system function within the context of evolution of animal adaptations. The laboratory component covers basic techniques in observation, analysis, and interpretation of data as related to the topics discussed in lecture as well as the study of animal structure using the fetal pig as a model. Students gain a basic knowledge of mammalian form and function of the digestive, circulatory, excretory, hormonal, reproductive, nervous, and sensory organ systems.
Prerequisite: BIO 101. F/S/SU

BIO 103 Evolution 4 credits
This course covers evolution theory and natural selection. Students interpret structural and behavioral variation in organisms, including humans; explain evidence for the theory of evolution; describe various research protocols for the study of evolution; analyze the process of human evolution and access its ecological impact; and apply evolutionary thinking in other major disciplines.
Prerequisite: BIO 101. S

BIO 104 Introduction to Plant Biology 4 credits
This course introduces the formal concepts of the science of botany as well as the impact that plants have on humans and earth. Topics include plant structure, plant growth, diversity of plants, life cycles and natural history, major plant environments of the world, and the economic influence that plants have on our species. Students gain enhanced appreciation of the importance of plants in our lives and present the fundamental concepts used in the study of plants. In the laboratory component, students learn basic scientific investigation of the plant world.
Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or appropriate placement score.
Corequisite: ENG 101. F/S/SU

BIO 105 Principles of Ecology 4 credits
This course examines the fundamental concepts of ecology. Topics include ecosystem formation within the context of habitat, population, community, biodiversity, evolution, global change and conservation. The laboratory component emphasizes the basic concepts of field research.
Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or appropriate placement score.
Corequisite: ENG 101. F/S/SU

BIO 110 Plants in Our World 4 credits
This course focuses on the uses of plants as food, medicines, drugs, energy, beverages, spices, perfumes, aphrodisiacs, fabrics, ornaments, and other enhancements. Students study the origins, history, botanical relationships and chemical constituents that make plants economically important. Topics include the history of agriculture: plant domestication: biodiversity: genetic engineering and biotechnology. Students also examine how cultural and social demands impact local and global species; ownership of plant knowledge; and the role of rural/indigenous keepers of native economies. The laboratory involves complementary topics such as deciphering a food package, making perfumes, testing drugs, identifying poisonous plants, examining cosmetics and personal products.
Prerequisite: ENG 100 or appropriate placement score; MAT 099 or appropriate placement score. S

BIO 111 Anatomy & Physiology I 4 credits
This course examines the organization of the human body at the tissue, organ, and system level. Students study the structure and function of the integumentary, skeletal, muscular, and nervous systems with emphasis on concepts of homeostasis, the complementary nature of structure and function, and the interrelationships of systems.
Prerequisite: BIO 101 or High School Advance Placement Biology
Corequisite: ENG 101. F/S/SU

BIO 112 Anatomy & Physiology II 4 credits
Students study the structure and function of the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. The course emphasizes the roles that systems play in immunity and in fluid, electrolyte, and pH balance.
Prerequisite: BIO 111. F/S/SU

BIO 140 Introduction to the Human Body 4 credits
This course focuses on the basic structure and function of the human body and major principles of microbiology. Topics include the anatomy and physiology of the various systems as well as concepts from microbiology that pertain to disease transmission and prevention.
Prerequisite: ENG 100. F/S/SU

BIO 141 Biology of Sex 3 credits
This course explores human sexuality from a biological perspective with an emphasis on the evolution of sexual behavior. Students learn recent developments in the biology of human sexuality including information from the fields of evolutionary psychology and anthropology; the structure, function, and biochemistry of the human reproductive system; the evolutionary basis of human sexual behavior; and begin to integrate this knowledge into an understanding of their own behavior and that of the species as a whole. F

BIO 220 Introduction to Evolution and Human Behavior 3 credits
This course provides an introduction to the study of behavioral evolution, and draws insights from modern evolutionary theory, basic biology, paleoarchaeology, behavioral genetics, and behavioral ecology. Topics include: the scientific foundations of behavioral evolution; the scientific methodologies of behavioral evolution; the study of evolved behavioral mechanisms to solve the problems of survival, sex & mating, parenting & kinship, aggression, cooperation; group living, and conflict resolution. At the end of the course students should be able to demonstrate an understanding of - basic principles of behavioral evolution; the methods of research in the study of behavioral evolution; the application of evolutionary theory to the study of human behavior; the evolved behavioral mechanisms that influence human behaviors; a unique insight into their interactions with other humans; and a basis for the continued study of human behavior.
Prerequisites: BIO 101. F

BIO 221 Pathophysiology 3 credits
This course focuses on the physiological changes associated with normal human function including alterations of cells, inflammation, changes in immunity, disorders of cell proliferation and differentiation, alterations in fluid, electrolyte and pH balance; alterations in perfusion, cardiac function, ventilation, elimination, and hormonal regulation. Students study the etiology, pathogenesis, morphological changes, diagnosis, and the clinical course of major and common diseases. Students learn about epidemiology, natural histories of disease, risk factors, and prevention of disease. Students gain an appreciation for the multi-factorial nature of disease and the interactions of the inflammatory response, environmental factors, and genetic predisposition in pathophysiology.
Prerequisites: BIO 112. S

BIO 231 General Microbiology 4 credits
This course explores the morphology, growth, metabolism, and genetics of microorganisms including bacteria, fungi, and viruses. Topics include microbial growth, identification, genetic manipulation techniques used in the biotechnology industry, pathogenicity, disease transmission, and immunology. The course emphasizes documentation, data manipulation, and experimental design.
Prerequisites: BIO 101 or BIO 259. S

BIO 232 Medical Microbiology 4 credits
This course examines the major groups of pathogenic bacteria. Topics include microbial control, immunization, and the physiological problems these microorganisms produce on body tissues. Student learn the general structure and function of bacteria, viruses, molds, fungi, and rickettsiae; the factors which make these microbes pathogenic, and how these factors induce the disease state; how the human body fights infection naturally; and, methods of natural and passive immunization.
Prerequisite: BIO 112 or CHM 103 or CHM 105. F/S/SU

BIO 241 Nutrition 3 credits
This course covers the nutrients including proteins, minerals, and vitamins; their sources; their digestion, absorption, and cellular function. Students also examine nutrition in pregnancy and lactation; nutrition of the elderly; obesity; fad diets; and food preservation.
Prerequisite: BIO 101 or BIO 111. F/S/SU

BIO 259 Cell Biology 4 credits
This course focuses on the structure and function of cells. Topics include organelles, membrane function, metabolism, and regulation of growth as well as collection, analysis, and documentation methods. Students explore laboratory instrumentation, cellular techniques, and manipulations employed in the biotechnology industry.
Prerequisite: BIO 101. F

BIO 260 Molecular Biology 4 credits
This course focuses on the principles of molecular biology and associated laboratory techniques. Topics include the structure and function of nucleic acids including replication, protein synthesis and sorting, and gene regulation. Students learn data collection, analysis, and documentation. The laboratory component focuses on recombinant DNA and its manipulation.
Prerequisite: BIO 259. S

BIOTECHNOLOGY (BTT)

BTT 201 Techniques in Biotechnology 6 credits
This course provides biotechnology students with an understanding of a good manufacturing practices environment. They will develop specific skills in such areas as formulation of solutions, operation of specific basic laboratory equipment, sterile operations, quality control knowledge and operation of utilities and environmental controls, as well as appropriate use of documentation. Students will also participate in a simulated manufacturing environment/laboratory utilizing good manufacturing practices.
Prerequisites: BIO 259, BIO 260, BIO 231. SU

BUSINESS (BUS)

BUS 201 Integrated Communications for Business 3 credits
This course emphasizes the creation, preparation and perfecting of effective business communication. Students write and edit letters, memos, proposals, short reports, e-mails, resumes, cover letters, and oral presentations using word processing, spreadsheets, and presentation software. Students create a portfolio of their semester's work.
Prerequisites: CIS 111, ENG 101. F/S/SU

BUS 205 Project Management 3 credits
This course provides students with the framework needed to define the scope; plan the activities, resources and timeframe; execute and manage the implementation; and evaluate the success of projects in all areas of business and industry. Students will learn techniques to assist them in managing project quality, scope, time, cost, human resources, communications, risk, procurement, and integration in the business environment. Students will prepare to sit for Project Management Institute's (PMI's) Project Management Professional exam.
Prerequisite: ENG 100. S

BUS 250 Business Administration Capstone 3 credits
This course is designed to prepare Business Administration career track students to make the transition from school to work. The course focuses on how personality traits effect relationships with coworkers and managers, as well as overall career advancement. Other topics of importance include analysis of the job market, analyzing companies, the job hunting process, including resume presentation, techniques and job interviewing skills, the basics of networking, professional dress codes, and codes of ethics.
Prerequisite: Over 42 credits completed in the Business Administration degree program. F/S/SU

BUSINESS LAW (BSL)

BSL 101 Business Law I 3 credits
This course examines law and society; the operation of law as it reflects the mores of human relations; and the ethics of business, criminal, and tort law with special emphasis on the law of contracts. Topics include the general principles of the law assigned, the nature of the United States legal system, the trial process, and the sources of law available. Students analyze court decisions and learn to apply the law both in fact situations and in reasoning in gray areas. F/S/SU

BSL 102 Business Law II 3 credits
This course covers the Uniform Commercial Code with emphasis in the areas of sales, commercial paper, property law, agency, partnership, and corporations. Students learn the general principles of law assigned, analysis of court decisions, application of law to fact situations, and reasoning in gray areas as they pertain to the UCC. F/S

BSL 103 E-Business Law & Ethics 3 credits
This course introduces legal, clerical, and cyberlegal issues as they relate to the e-business world of today. Students learn the general laws as they pertain to business with special focus on laws which pertain to e-commerce contracting, copyright, and trademark infringement. The topics of Internet crime, free speech, privacy under the U.S. Constitution, and libel and other torts are also covered. The emphasis of the course is on ethical decision-making and socially responsible and appropriate practices involving technology.
Corequisite: CIS 111. F/S

BSL 112 Introduction to Law & Paralegal Practice 3 credits
This course examines the American legal system and the paralegal profession. Students learn the functions performed by paralegals, ethical principles, federal and state court structures, litigation, sources of law, legal research and reasoning, investigation and interviewing, and law office management. Students explore career perspectives and strategies for seeking employment in the paralegal field. F

BUSINESS OFFICE SUPPORT SPECIALIST (BSS)

BSS 101 Keyboarding Applications 3 credits
This course focuses on the alphanumeric touch method of keyboarding with a personal computer, emphasizing the progressive development of speed and accuracy. Students learn basic keyboarding techniques, hardware components, and standard business needs, including business letters, forms, proposals, tabulations, and drafts. Through the course, students develop skills in composition, language arts, proofreading, and formatting. The goal of the course is for students to attain a speed of 30–35 wpm for three minutes with less than three errors.
Prerequisite: ENG 091. F/S/SU

BSS 104 Business Office Procedures 3 credits
This course prepares students for office support tasks required in a business. Topics covered include the virtual worker, current employment structure, human relations, time and organization management, records management, communication, technology used for tasks, decision-making, creative thinking, and lifelong learning skills.
Prerequisites: BSS 101, CIS 111, ENG 100. F/S/SU

BSS 112 Medical/Dental Billing and Insurance 3 credits
Students in this course acquire the entry-level skills for using patient billing software on IBM compatible computers in medical and dental offices. Students explore the steps of the patient billing process, including coding and third-party billing, become familiar with computerized recordkeeping for medical facilities, and learn how the various components of the patient billing system relate to the accounting system in a medical office.
Prerequisite: ENG 091. F

BSS 212 Medical Machine Transcription 3 credits
The course covers medical terminology, medical office procedures, typing, data entry, word processing, and creation of documents. Students learn the correct pronunciations and meanings of medical vocabulary by listening to doctors' dictation of reports. Authentic medical tapes are used. Students acquire a solid understanding of medical vocabulary and the ability to listen to dictation in order to produce transcriptions in a timely manner.
Prerequisites: ENG 091.
Corequisite: ALH 102. S

BSS 299 Administrative Professional Cooperative Work Experience 3 credits
The course provides a structured learning experience in which students apply skills and knowledge from the classroom to a work experience. A learning agreement, stipulating learning goals and outcomes, is developed by the student and instructor based on the position description. Students are required to successfully satisfy the terms of the learning agreement and complete a 150-hour paid or unpaid cooperative work experience related to their particular major. The faculty member and career placement services can provide COOP placement assistance but the ultimate responsibility of securing a timely COOP placement is with the student.
Prerequisite: BSS 104 or ALH 151. F/S/SU

CHEMISTRY (CHM)

CHM 090 Introduction to Chemistry 3 credits
This course is a foundation course for studies in biology and chemistry. Students manipulate significant figures and scientific notation; study density, energy, and their calculations; learn basic atomic structure and the periodic table; and write and solve formulas, equations, and related problems. They examine gases, chemical bonding, equilibrium, redox reactions, and rate chemistry; and, demonstrate knowledge of solutions, acid-base chemistry, and related calculations.
Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or appropriate placement score. F/S/SU

CHM 101 Introduction to the Chemistry of Living Systems 4 credits
This course is designed for students seeking careers in the health sciences and the natural sciences (biology and chemistry) by focusing on those chemicals and processes that operate in living systems. Students learn the fundamentals of inorganic, organic, and biological chemistry and apply these chemical principles in laboratory exercises.
Prerequisites: CHM 090 or one year of high school chemistry, MAT 095 with a "C" or better on the MAT 095 departmental final exam or appropriate placement score. F/S/SU

CHM 103 Principles of Chemistry I 4 credits
This is the first part of a two-semester course sequence. The course is designed for students in engineering or for students requiring a sound knowledge of chemical principles. Students learn chemical principles of atomic structure, stoichiometry, thermochemistry, gases, quantum theory, chemical bonding, intermolecular forces, and solutions.
Corequisite: MAT 123. F/S/SU

CHM 104 Principles of Chemistry II 4 credits
This course is designed for students in engineering or for students requiring a sound knowledge of chemical principles. Students learn the chemical principles of chemical kinetics, chemical equilibrium, acid-base, solubility, electro-chemistry, coordination compounds, and organic chemistry.
Prerequisite: CHM 103. F/S/SU

CHM 105 General Chemistry I 4 credits
This course focuses on the classification of matter and the behavior and characteristics of chemicals in the natural world. Topics include the basic structure of the atom, nuclear chemistry, nomenclature of chemicals, chemical reactions, the mole concept, stoichiometry, acid-base concepts, the concentration units of solutions and the gas laws. The laboratory portion of the course fosters basic laboratory skills and reinforces lecture concepts.
Prerequisite: CHM 090 or one year of high school chemistry and MAT 099 or appropriate placement score. F

CHM 106 General Chemistry II 4 credits
This course focuses on stoichiometry, bonding and periodicity in special groups, Lewis structures, intramolecular attractions, crystalline solids, kinetics, acids and bases, electrochemistry, organic chemistry and biochemistry. The lab fosters basic laboratory skills and reinforces lecture concepts.
Prerequisites: CHM 105

CHM 201 Organic Chemistry I 4 credits
This course introduces the chemistry of carbon compounds for students pursuing a career in medicine, chemistry, or modern biology by examining the relationship between organic chemistry and biology. Topics include the chemistry of the carbon atom; the structure, physical properties and reactivity of the important classes of organic compounds; stereochemistry; and IR spectroscopy. Laboratory topics include chromatography, isolation and crystallization, fractional distillation, and basic organic reactions. Three hours lecture, three hours laboratory.
Prerequisite: CHM 103. F

CHM 202 Organic Chemistry II 4 credits
This course includes the study of functional group reactions, aromaticity, NMR spectroscopy, common biological reaction types, biochemicals, biochemical pathways, and natural products chemistry. Laboratory topics include classic organic reactions; synthesis, isolation, and identification of natural products; and, polymer chemistry.
Prerequisite: CHM 201. S

COMPLEMENTARY HEALTH (CHC)

CHC 150 Health and Healing 3 credits
This course explores the mind/body/spirit dimensions of health and healing, as well as theories of health maintenance, illness prevention, balanced living, and self-care in the cultivation of health and wellness. The role of the patient-provider relationship and its relevance to health and healing is emphasized. The course also covers health and healing theories of the biomedical, integrative, complementary, and energetic perspectives.
Prerequisite: BIO 101 ENG 100. F

CHC 151 Fundamentals of Complementary Health 3 credits
This course examines fundamental characteristics, principles, cultural contexts, and modalities of integrative and complementary health including breath, Reiki, yoga, therapeutic touch, meditation, expressive therapies, sound, Tai Qi, Qi Gong, nutrition, and herbalism. Students study philosophies, educational preparation of practitioners, practice modalities, scientific basis, and efficacy and safety with an emphasis on experiential learning.
Prerequisite: ENG 100. F

CHC 250 World Medicines: Harmony and Health 3 credits
This course explores medicines of the world from folk/indigenous through biomedicine and integrative health. Students examine traditional and modern systems of medicine, including Traditional Chinese medicine, Ayurveda, Curanderismo, and Naturopathy; explore the impact of culture and meaning on health and healing; and examine connections between ancient traditions and modern views of health and well-being. Students explore perspectives of east and west in treating illness and cultivating health.
Prerequisite: ENG 101. S

CHC 255 Applications in Integrative Health 3 credits
This course explores the application of integrative and Complementary Health/Medicine in populations having particular needs. Integrative medical approach is applied to a variety of human ailments and health care needs including Cardiovascular, Cancer, Women's/Men's Health, Elders/Aging, and Children among others. Students learn how to bridge the approaches of conventional health care and CAM to achieve an Integrative Health approach in their work and clients.
Prerequisites: CHC 150, CHC 151. S

COMPUTER INFORMATION SYSTEMS (CIS)

CIS 105 Introduction to Information Technology 3 credits
This course provides an overview of the core aspects of information technology. The topics include: computer hardware, operating systems, application software, networks, information security, interactive media, and programming. The course focuses on defining how each IT area relates to, and interacts with, each other. Upon completion of the course, students have the knowledge necessary for further study in IT as well as understanding of the impact of technology on society and organizations of all types. Knowledge and competencies in this course are in National Career Cluster Core IT Standards published by the Educational Development Center (EDC). F/S/SU

CIS 111 Introduction to Microcomputer Applications 3 credits
This course focuses on basic working knowledge and hands-on experiences in word processing, spreadsheet processing, database processing, and presentation software. Students acquire an overview of computer concepts, the most common business office operating systems, the Internet, and the World Wide Web. F/S/SU

CIS 112 Advanced Microcomputer Applications 3 credits
This course is a continuation of CIS 111. Students learn advanced database and spreadsheet processing through the use of realistic business situations. They also learn how to use presentation software to create professional-looking documents.
Prerequisite: CIS 111. F/S/SU

CIS 115 Introduction to Computer Applications in Telecommunications 3 credits
This course focuses on a basic orientation to computer hardware and the use of software applications in telecommunications. Students study the Windows environment, and use integrated software packages for word processing, database management, spreadsheets, and telecommunications. Through lectures, interactive learning, and demonstrations students learn how to solve problems and transfer information via electronic media. They write reports, documents, and presentations and import and export documents between different software applications. F/S

CIS 121 Introduction to Programming With C++ 3 credits
This course focuses on the basic concept of programming, utilization of the executable codes, and implementation of these codes in problem solving. Students learn the concept of solving problems through the design and implementation of algorithmic solutions using the C++ programming language. Topics include the programming process, structured programming techniques, and basic logic formations. Practical business applications are emphasized throughout the course.
Corequisite: CIS 111. F/S/SU

CIS 134 Web Page Development I 3 credits
This course focuses on the basics of Web site design using the latest version of XHTML and CSS. Topics include text formatting, color, image maps, tables, frames, client-side forms, and insertion of audio and video files. Java Applets will be introduced. Students work on individual or team projects to create Web sites.
Prerequisite: CIS 111. F/S

CIS 135 Internet Server Technologies 3 credits
This course introduces students to the hardware, software, and protocols used on Internet servers. Internet server software and the technologies it supports will determine what features and tools developers may employ when creating Web applications. This provides students with information on the most critical Internet information services such as email, file transfer, and e-commerce.
Prerequisites: CIS 105, CIS 121. S

CIS 141 Introduction to Data Communication & Networks 3 credits
This course examines business data communications. Students learn fundamental communication concepts, communication networks, and communications hardware and software. Students study the information in a non-technical format designed to provide an understanding of data communication systems needed in today's business environment.
Prerequisite: CIS 111. F/S

CIS 223 Visual Basic I 3 credits
This course focuses on design and building of Windows-based applications using Visual Basic for Windows. Students learn Visual Basic programming concepts and create Windows applications programs to solve business problems.
Prerequisites: CIS 111, CIS 121. S

CIS 224 Visual Basic II 3 credits
This course emphasizes in-depth programming skills that are needed to create applications, develop advanced graphical user interface (GUI) applications, and manipulate mouse and keyboard events. Students learn to employ advanced Visual Basic functions for Windows, create and use sequential and random files, access relational databases, and improve error handling and debugging.
Prerequisite: CIS 223. F

CIS 225 Programming with C++ II 3 credits
This course is a continuation of CIS 121 and covers advanced topics including recursive programming, storage techniques, pointer and dynamic variables, arrays, and linked lists. The course emphasizes structured programming through the use of algorithm analysis. Students explore higher-level problem solving through user-defined functions and classes, and learn how to write programs and demonstrate proficiency in the C++ language.
Prerequisite: CIS 121. S

CIS 226 Introduction to Java 3 credits
This course explores the fundamentals of visual object-oriented programming using the Java language. Students learn how to design, write, and compile Java programs through lectures, hands-on programming assignments, and projects. The emphasis is on problem solving through algorithmic analysis. Topics include Java applications and applets, control structures, methods and classes, arrays, searches, and fundamental data types.
Prerequisite: CIS 121. F

CIS 227 Java II 3 credits
This course is a continuation of CIS 226 and focuses on higher-level visual object-oriented programming using the Java language. Students learn to design, write, and execute Java applications and applets using graphic user interface (GUI) components through lectures, hands-on programming exercises, and projects. Other topics include exception handling, classes and methods, objects and inheritance, and problem solving through the use of algorithmic analysis.
Prerequisite: CIS 226. S

CIS 228 SQL Programming 3 credits
This course introduces students to the fundamentals and functions of Structured Query Language (SQL), including relational database, table creation, updating, and manipulation concepts. Using a live data base, students learn SQL basics and then move on to the more sophisticated and challenging aspects of SQL. Students get in-depth knowledge of the language through extensive use of internet based, industry standard SQL programming and certification testing engines. Upon completion of this course, students have the skills and competencies required to program in SQL and the background necessary to continue to intermediate and advanced courses in PL/SQL and database administration.
Prerequisites: CIS 121, CIS 243 or CIS 244

CIS 229 PL/SQL Programming 3 credits
This is an intermediate course in the use of Relational Database Management Systems Procedural Language, PL/SQL. It course focuses on the concepts, design and components of relational database PL/SQL programming Langue, including creating record, types, defining transactions, the basics of SQL in PL/SQL and datatypes. The student will also manipulate RDBMS including functions related to multiple tables, compound and complex queries, exporting and importing tables, sub-queries, and reporting.
Prerequisite: CIS 228, CIS 244

CIS 234 Web Page Development II 3 credits
This course focuses on creating interactive Web sites using the latest version of XHTML, DHTML and JavaScript. Students write code for form validation, page animation, image and text rollovers, pull-down menus, slide shows, create expandable and collapsible outlines, and mouse and keyboard events to create interactive and dynamic web sites. Students also learn to code for W3CDOM. Concepts of e-commerce are discussed.
Prerequisites: CIS 121, CIS 134. S

CIS 237 Network Management 3 credits
This course examines the issues from a management perspective that are involved in maintaining and managing an information network. Students learn the requirements of an information network, the aspects of function and support information needs, user access and control, and file and directory maintenance. Other topics include disaster prevention and recovery, network printing, setting operating system parameters for increased performance, and planning and supervision of network growth.
Prerequisite: CIS 141. F/S/SU

CIS 240 Introduction to PERL 3 credits
This course introduces the fundamentals of the PERL language. Students learn how to create and execute basic PERL programs through lectures and hands-on programming assignments. The course focuses on PERL syntax, operators, control structures, and reading and writing data to files. Student use PERL to perform basic Web/common gateway interface (CGI) scripting for Web development support.
Prerequisites: CIS 121 and CIS 134. S

CIS 241 Systems Analysis & Design 3 credits
This course provides practical experience in feasibility studies, data gathering, analysis, and design of a business information system. Students study the various techniques that can be utilized, conduct a feasibility study, learn valid data collection processes, analyze existing systems, and design new information systems.
Prerequisite: CIS 121 or CIS 223 or CIS 226 or CIS 240. F/S

CIS 243 Database Management Application Development 3 credits
This course focuses on in-depth database management utilizing current database applications. Students learn the concepts of distributed database systems, query optimization, concurrency control, and deductive database and object-oriented database systems through lecture and hands-on activities. Topics include structural design, testing and debugging techniques, security, and backup and restart procedures. Students design and construct a complete database system.
Prerequisites: CIS 105 or CIS 111. F/S

CIS 244 Database Management Concepts 3 credits
This course provides an overview of the skills and the knowledge of database application systems that are used in business, government, and industry. Topics include database systems, data models, the relational database model, entity relationship modeling, normalization of database tables, advanced data modeling, introduction to Structured Query Language (SQL), database design.
Prerequisite: CIS 111or CIS 115.
Corequisite: CIS 243.

CIS 245 Database-Driven Web Pages 3 credits
This course introduces students to building database-driven pages using “open source” tools available on the Internet. The tools used in this course will be PHP (Hypertext Preprocessor), which is a server-side scripting language, and MySQL and/or MS SQLServer, a relational database management system
Prerequisites: CIS 135, CIS 121, CIS 243
Corequisites: CIS 234. S

CIS 246 N-Tier Web Applications 3 credits
This course introduces students who are already familiar with HTML, Visual Basic scripting, and database concepts to creating N-tier Web applications using Active Server pages and ActiveX data objectives. Microsoft’s Active Server Pages (ASP) technology allows the Internet developer to create browser- independent, dynamic Web pages by combining programmatic code with the three-tier client-server Web applications
Prerequisites: CIS 245, CIS 224, CIS 234. S

CIS 247 Database Administration 3 credits
This course focuses on how to fine tune a selected relational database (RDB), such as SQL SERVER/ORACLE. Topics include RDB architectural components; RDB administration tools; RDB instances; creating an RDB database; constructing Data Dictionary views; maintaining the control file; maintaining the Redo Log File; managing table spaces and data files; understanding relationships and impacts on the storage structure; managing tables, indexes and segments; maintaining data integrity; managing users, profiles, privileges, and roles; understanding and using database auditing options; using National Language Support.
Prerequisites: CIS 228, CIS 244. S

CIS 299 Cooperative Work Experience & Seminar 3-6 credits
This course provides students with an opportunity to apply classroom theory to practical work experience. Students exchange feedback about their work experience in a seminar environment. The number of credits earned is based upon the number of weeks and hours per week involved in the cooperative work experience as well as established learning objectives.
Prerequisite: Approval of Program Coordinator. F/S/SU

COMPUTER SCIENCE (CSC)

CSC 105 IT Help Desk Concepts 2 credits
This course focuses on key information needed by user support professionals, including decision making, communicating successfully with a client, determining the client's specific needs, and writing for the end user. Students are introduced to the latest in support industry trends, such as the use of Web and e-mail-based support and automated help desk software. Career paths for user-support workers are researched and discussed. This course details real-life scenarios of working professionals and issues in the IT help desk environment.
Prerequisite: CSC 141. F/SU

CSC 106 Analytical Thinking with Programming 3 credits
This course provides an introduction to analytical thinking and problem solving using a functional programming language. It covers basic logic operations, breaking down problems into smaller units, creating reusable and generic procedures, and the use of structures to represent the components of a problem. It introduces recursive techniques in the solution of selected problems and in the representation of their components. Students write and debug programs in the language chosen for the course.
Prerequisites: CIS 111, ENG 100. F

CSC 107 Programming I 3 credits
This first course in the computer programming sequence uses modern high-level languages such as Java™ under both UNIX® and Windows/Mac systems, to cover looping and branching, types and storage allocation, aggregates, objects, and classes. This course utilizes an object-based model throughout, with emphasis on constructors, set and get methods, and object composition. It includes use of standard application program interfaces (APIs) and exposure to event-driven programming, and briefly introduces inheritance to support the understanding of the API hierarchy. Students design, implement and debug several programs in the high-level languages chosen for the course.
Prerequisite: CSC 106. S

CSC 141 Windows Client Operating Systems 4 credits
This course provides the student with an introduction to Microsoft client or desktop operating systems. Hands-on activities in the laboratory closely parallel classroom discussion to give the student practical experience with the use and management of multiple desktop operating systems. Topics include operating system installation and configuration, file systems, resource management, user management, and security. This course focuses on current Microsoft desktop operating systems and prepares the student to sit for the corresponding Microsoft Certified Professional certification examination. F/S/SU/IN

CSC 201 Systems Programming 3 credits
This course provides an introduction to writing programs for use by operating systems. Students examine scripting within both Windows and Linux. Topics include command line operating system syntax, basic rules of scripting, examination of tools used for script creation, and creating scripts using both command line and graphical user interface tools.
Prerequisite: CSC 141.
Corequisite: CST 245. F/S

CSC 207 Programming with Objects 3 credits
As a continuation of CSC 107, this course expands on the notion of inheritance to present and use polymorphism as an integral part of the object-oriented programming paradigm. This course emphasizes use and design of object interfaces as supported by abstract classes and Java interface; and presents and illustrates generics methods and classes using the standard collection application program interfaces (APIs) provided by the Java™ language, under UNIX® and Windows/Mac operating systems. Students learn iterators and expanded looping mechanisms in the context of collection APIs and their implementation; and use recursive methods and data in introductory implementations of basic abstract data types. Students program extensively in the languages chosen for the course.
Prerequisite: CSC 107. F

CSC 208 Introduction to Architecture and Assembly Language 4 credits
This course presents computers from the circuit level to higher levels of abstraction. Students work from logical gates, digital circuits, and memory, through the execution model, machine and assembly languages, and the interaction with high-level languages. Topics include the organization of computers, number representatives, assembly language instruction sets and addressing modes, procedure calling and the stack, low-level input/output, and linkers and loaders. Students write and debug programs in assembly language.
Prerequisites: CSC 107. F

CSC 210 Storage Technologies 4 credits
This course covers the information needed to plan, design, manage, and use storage technology infrastructure for information management in an enterprise environment. Students learn information availability and management theories commonly used in business today, including backup, recover, and replication. Through hands-on activities, students implement solutions using modern storage subsystems such as Direct Attached Storage (DAS), Storage Attached Networks (SANs), Network Attached Storage (NAS), and Content Addressed Storage (CAS). Students prepare to sit for EMC's Storage Technologist exam. Note: Some of the products and technologies discussed in this course are subject to federal government restrictions on exports from the U.S. Accordingly, all students registered for this course shall be subject to review under the "Denied Persons List" maintained by the U.S. Department of Commerce's Bureau of Industry and Security in order to determine their eligibility to receive U.S. goods and technology information.
Prerequisite: ENG 100 or approp place score. S

CSC 211 Programming with Data Structures 4 credits
This course introduces data structures using object-oriented programming techniques and basic algorithm analysis. It covers basic structures such as lists, queues, and stack; binary trees and balanced trees; hash tables and priority queues; and set and graph representation. Students use algorithms to survey and apply recursion techniques; apply common sorting and searching algorithms such as Quicksort; graph traversal algorithms such as Floyd's and Dijkstra's; and explore depth-first traversals, divide and conquer, backtracking, and greedy algorithms. Students develop and test a variety of programs in the languages chosen for the course.
Prerequisites: CSC 207. S, 2012

CSC 221 C++ For Scientists & Engineers 3 credits
This is a course in computer architecture. Course topics include the fundamentals of software engineering; the comprehension of the engineering problem and selection of the appropriate algorithm; the relationship between analysis, design, coding and testing; programming algorithm, modularity, functions, constants; data structures, (such as records, lists, and trees) arithmetic operations and variables, accumulating, counting, and formatting output; mathematical library functions; relational expressions; logical operators, loops, solution of simultaneous linear equations; root funding; fixed increment iterations; numerical integration; rectangular approximations and trapezoidal approximations; Simpson's method; pointers and character strings are covered in this course.
Prerequisite: MAT 124.
Corequisite: MAT 233 recommended. F/S/SU

CSC 233 Computer Hardware and Support 4 credits
This course is a comprehensive study of the topics students need to learn in order to service, maintain, upgrade, and optimize personal computers. The course is designed to prepare students to take advantage of the growing need for personal computer repair and maintenance technicians. This course prepares students to sit for CompTIA's A+ certification examination.
Corequisite: CSC 141. F/S/SU

CSC 234 Networking Technologies 4 credits
Students learn how to design, install, maintain and troubleshoot both local area networks (LANs) and wide area networks (WANs). Students will learn the basics of telecommunications, home and office networking technologies, wireless networking technologies, protocols of data communications, LAN cabling, and internetworking. This course prepares students to sit for CompTIA's Net+ certification examinations.
Corequisite: CSC 141. F/S

CSC 241 Windows Server Operating Systems 3 credits
This course introduces students to current Microsoft Windows server operating systems and the techniques utilized to network computers with Windows client and server operating systems. Topics covered include establishing a user environment including permissions and rights, print servers, files system management, and advance configuration and connectivity. Students use hands-on projects and project cases to emphasize what is covered in the lecture. This course prepares students to sit for the Microsoft Certified Professional certification examination in the area of the current Microsoft server operating system.
Prerequisite: CSC 141. F/S/SU

COMPUTER SYSTEMS ENGINEERING TECHNOLOGY (CST)

CST 205 IT Security 3 credits
This course provides students with knowledge of the basic information security goals of availability, integrity, accuracy, and confidentiality. Vocabulary and terminology specific to the field of information security are discussed. Detection of exposures and vulnerabilities with their appropriate countermeasures, planning, and administrative controls are also discussed. Students become competent in the five areas of security, including general security, communications security, infrastructure security, cryptography, and operational/organizational security. Students prepare to sit for CompTIA's Security+ exam.
Prerequisites: CSC 141, CSC 234. S

CST 206 Computer Forensics 3 credits
This course provides students with an introduction to computer forensics and investigation. Students are presented with methods to properly conduct computer forensics investigations beginning with an understanding of ethics through identification of tools and techniques to prevent, identify, and/or analyze computer crime. Students prepare to sit for International Association of Computer Investigative Specialists (IACIS) certification.
Prerequisite: CSC 141. S

CST 207 Telecommunications in Business 3 credits
This course provides students with the key technical and business strategies needed to leverage telecommunications technologies effectively in the business enterprise today. This course covers the principles of implementing and managing secure integrated voice, video, and data for a converged network solution, as well as providing an understanding of the importance of the convergence of voice and data in today's enterprise. This course covers voice technologies including VOIP, IVR, phone systems, and call center management; reviews video technologies including IPTV and video conferencing; and explores the implementation of LAN and WAN-based technologies including circuit and packet-switched networks.
Prerequisite: ENG 100 or appropriate placement score. F

CST 231 Internetworking Principles and Protocols 3 credits
This course presents a detailed overview of the implementation of the Transmission Control Protocol/Internet Protocol (TCP/IP) suite. It prepares students with the necessary concepts and skills needed to configure, manage, and troubleshoot the TCP/IP environment. Upon completion of the course, students are able to configure TCP/IP clients and resources, configure and manage TCP/IP services, and troubleshoot network problems using TCP/IP utilities.
Corequisite: CSC 234. F/S

CST 235 Network Infrastructure Management 3 credits
This course represents the concepts and technologies employed to manage computer networks. It has a technical focus, employing the latest techniques in the disciplines of Network Management to provide a central solution to managing distributed Network Resources. Students design, document, and plan the implementation of a complex network environment including security, configure/use network management systems to control and troubleshoot networking equipment, and configure and use software to maintain and troubleshoot remote computer systems and resources from a central command center. This course prepares students to sit for the Microsoft Network Infrastructure Configuration exam.
Prerequisite: CSC 234.
Corequisite: CST 231. F/S/SU

CST 238 Enterprise Networking and Application Infrastructure 4 credits
This course covers the many things that turn a Local Area Network (LAN) into an Enterprise Network. The focus is on the interconnectivity between multiple operating systems and services commonly deployed in business today, such as email services, database services, and Web servers. Principles of network design and management employed in the enterprise are also researched. Current trends are further illustrated with the current technology and network operating systems in wide use today. This course prepares students to sit for the Microsoft Applications Infrastructure exam.
Corequisite: CSC 241. S

CST 240 Routing Technologies 3 credits
This course provides students with a foundation in, and apprentice knowledge of, network routing for the small to medium office and home office environment. Students gain skills necessary to install, configure, and operate LAN, WAN, and dial access services for small to medium networks, including but not limited to use of these protocols: IP, IGRP, IPX, Serial, AppleTalk, Frame Relay, IP RIP, VLANs, RIP, Ethernet and Access Lists. This course prepares students to sit for the Cisco CCNA certification examination.
Corequisite: CST 231. S

CST 245 UNIX Operating Systems 4 credits
This course provides students with a strong foundation in UNIX operating systems. Students explore the implementation of UNIX in a networked environment as a file/print server in an end-user environment and also as a special-purpose server, such as Web, e-mail, and database servers. Topics include installation and rebuilding of the operating system kernel, configuration, system administration and maintenance, and troubleshooting. This course focuses on topics that prepare students to sit for CompTIA's Linux+ certification exam.
Corequisite: CSC 141. F/S/SU

CST 246 UNIX Operating Systems II 3 Credits
This course provides students with the knowledge to implement and maintain UNIX-based server technologies. Students install server-based Linux and those packages required to support Linux clients. Server components are discussed and then implemented by students and include: DNS, DHCP, NIS, NFS, and SAMBA. Students explore configuration of log files, remote access, task automation, security, and virtualization. After completing this course students have the required knowledge to sit for the Novell Server Administration courses 3037 and 3038.
Prerequisite: CST 245. F/S/SU

CST 250 Web Server Administration 1 credit
This course is one of three in a series developed to introduce students to the growing complexities of network and application administration in today's enterprise computing environments. This course focuses on Web Servers, emphasizing IT best practices, and providing practical knowledge on how to administer Web Servers in a Windows and Linux environment. Students learn the differences between two common Web Server architectures and environments, Microsoft IIS, and Apache, and learn the basics of using Web Server management consoles and command lines to package and deploy web sites in both environments. Topics such as IIS Manager, Virtual Directories, Web Activation Service, and FTP are examined.
Prerequisite: CST 245 or CSC 141. S

CST 251 SQL Server Administration 1 credit
This course is one of three in a series developed to introduce students to the growing complexities of network and application administration in today's enterprise computing environments. This course focuses on SQL Server, emphasizing practical knowledge on how to administer SQL Server in a Windows environment. Students learn the basics of Relational Database Management Systems along with an overview of products on the market today. Students are introduced to installing and configuring SQL Databases, creating database tables and indices, and accessing data using SQL commands such as SELECT, UPDATE, DELETE, JOIN, and stored procedures. Topics related to administering a Microsoft SQL Server installation is also covered, including SQL Server Management Studio, security considerations, and performance management.
Prerequisites: CSC 141. S

CST 252 Exchange Server Administration 1 credit
This course is one of three in a series developed to introduce students to the growing complexities of network and application administration in today's enterprise computing environments. This course focuses on Exchange Server, emphasizing practical knowledge on how to administer an Exchange Server in a Windows environment. Students learn the basics of installing and deploying Exchange, its integration with Active Directory, using the Exchange Management shell, user and contact administration, mailbox management, and enterprise considerations such as security, backup and recovery strategies, and secure mobile access.
Prerequisite: CSC 241. S

CST 260 Enterprise Network Convergence 3 credits
This course provides students with the key technical knowledge needed to plan, configure, and verify the implementation of complex enterprise switching solutions. Students explore the principles of managing secure converged data over local area networks, including both physical and protocol options commonly used in business today. Students implement these technologies using Cisco products and sample solutions. At the end of the course, students prepare to sit for Cisco's CCNP Implementing IP Switched Networks (SWITCH) exam.
Prerequisite: CST 240, CST 207. S

CST 265 Wide Area Networks 3 credits
This course provides students with the key technical and business strategies needed to engineer and troubleshoot wide area network (WAN) technologies effectively in the business enterprise today. Students explore the principles of implementing and managing converged data in a secure manner over WANs, including both physical and protocol options commonly used in business today. Students implement these WAN technologies using Cisco products and examples. At the end of the course, students prepare to sit for Cisco's CCNP Implementing IP Routing (ROUTE) exam.
Prerequisite: CST 240. F

CST 299 Cooperative Work Experience & Seminar 3 credits
This course provides students with a structured learning experience, in which they apply classroom theory to a practical work experience. The seminar provides opportunities for students to exchange feedback about their work experience. The number of credits earned is determined by the number of weeks and hours per week required by the cooperative work experience and the objectives of the student's learning contract.
Prerequisite: Approval of program coordinator. F/S/SU

CRIMINAL JUSTICE (CRJ)

CRJ 101 Introduction to Criminal Justice 3 credits
This course covers the philosophies and historical background of the American criminal justice system. Students discuss the organization, operation, and processes of the components of the justice system: police, courts, and corrections. Students study the nature of crime, the characteristics of criminals and victims, and several contemporary issues confronting each part of the system, such as the use of force by the police, changes in sentencing practices, and the growth in the prison population.
Prerequisite: ENG 100. F/S/SU

CRJ 102 Response to Terrorism 3 credits
This course covers the fundamentals of preparing an organization and community for terrorism in the 21st century. Areas of study include the concept of threat assessment, prevention, mitigation, and response. Students learn about crisis and consequence management, and the methods used to plan for and respond to domestic terrorist incidents involving nuclear, biological, or chemical weapons of mass destruction. F/S/SU

CRJ 111 Criminal Law 3 credits
This course examines the American court system from the perspective of the various ways in which antisocial or criminal behavior is stemmed or prevented by this formal mechanism of social control. Areas of study include common law, morality, decency, crimes against persons and property, and the history of several landmark cases. Students learn the statutory definitions of crime, the importance of constitutional proscriptions, and the motivations and origins of criminal behavior.
Corequisite: ENG 100. F/S/SU

CRJ 113 Constitutional Law 3 credits
This course focuses on the Bill of Rights; the Due Process clause of the Fourteenth Amendment; and, the laws of arrest, search and seizure, right to counsel, self-incrimination, and entrapment. Areas of study include judicial interpretations, civil rights, and individual liberties. Students learn the constitutional framework for criminal justice procedures and policies. The course provides a basis for understanding the principles and reasons on which the U.S. Constitution is based and the application of U.S. Supreme Court decisions.
Corequisite: ENG 100. F/S/SU

CRJ 123 Contemporary Corrections 3 credits
This course examines the history, philosophy, and components of the American corrections system. Areas of study include the origins of correctional systems in the U.S. and the development of the major programs that make up the correctional system—jails, probation, intermediate punishments, prisons, and parole. Students learn about life in prison, the management of correctional programs, the increases in imprisonment over the last two decades, rehabilitation, and controversial issues such as the death penalty.
Prerequisite: ENG 100. S

CRJ 207 Criminal Investigation 3 credits
This course covers the fundamentals of investigation. Students learn the duties and responsibilities of an investigator, interview and interrogation techniques, search methods, techniques of protecting a crime scene, and the collection and preservation of evidence. Areas of study include the modus operandi system, scientific aids, electronic information gathering systems, court preparation, and case follow-up. Students learn the basics of technical writing as it applies to criminal investigation.
Prerequisite: ENG 101. F/S/SU

CRJ 208 Technologies in Criminal Justice 3 credits
This course examines the application of developing technologies in the field of criminal justice. Students learn forensic science techniques, computer applications for disasters and emergencies, record management systems, crime mapping, and automated fingerprint identification systems. The course also covers computerized booking systems, integrated criminal justice information systems, less than lethal weapons, and "interoperable" wireless communications. Students explore the relationships of these new technologies and how they influence changes in criminal justice agency policy and procedure.
Prerequisite: ENG 100. F/S/SU

CRJ 211 Evidence & Court Procedure 3 credits
This course examines the adjudication process and the influence of both case law and established practices of the courts. Areas of study include due process; evidentiary rules; burden of proof; hearsay; and offender, victim, and witness recall. Students learn the relevance of constitutional law to the adjudication process and examine the processing of a real case to understand the strengths and weaknesses of the current judicial process.
Prerequisite: ENG 101. F/S/SU

CRJ 213 Theories in Criminology 3 credits
This course focuses on various criminological theories. Areas of study include early explanations of criminal behavior and their modern counterparts. Areas of study include an overview of criminological theories regarding various types of violent crimes, property crimes, business and government crimes, drug-related crimes, and fraud-related crimes. Students learn these basic theories and their relationship to criminal investigations.
Prerequisite: ENG 100. F/S/SU

CRJ 221 Probation & Parole in the Criminal Justice System 3 credits
This course focuses on the theories and practice of probation and parole. Areas of study include recidivism, responses of paroling authorities to public pressures, and court controls and their implications for rehabilitative efforts. Students learn about the efforts to create alternatives to incarceration. Among the methods considered is the feasibility and effectiveness of reintroducing individuals into communities as part of their treatment while they are still under sentence. Other new programs used in crime control strategies are also explored. S

CRJ 231 Introduction to Policing 3 credits
This course focuses on the philosophy and history of policing, limitations imposed on law enforcement in a democratic society in accordance with the Constitution; and the role and place of law enforcement in the total criminal justice process. Students study law enforcement agencies; examine the current challenges facing the contemporary police officer and practical police problems. Areas of study include homeland security, community policing, and crime control concepts. Students will be expected to demonstrate mastery of these areas before proceeding to more advanced coursework in the curriculum.
Prerequisites: ENG 100. F/S/SU

DENTAL ASSISTING (DAS)

DAS 101 Clinical Science I 3 credits
This course covers terminology and procedures performed in a general dental office. Students learn oral diagnosis, treatment of dental disease, management of medical emergencies, and dental therapeutics.
Corequisites: BIO 140, DAS 151. F

DAS 102 Dental Sciences 3 credits
This course provides knowledge and understanding of the development, form and function of the structures of the head and neck and oral cavity including dental anatomy of the teeth, histology and embryology of the teeth and periodontium, and the embryonic development of the face and teeth in order to understand the rationale behind the performance of general dentistry procedures.
Prerequisite: DAS students only.
Corequisite: DAS 101. F

DAS 105 Clinical Science II 4 credits
This course explores the concepts of preventive dentistry, patient education and motivation, and dental specialties. Topics include dietary considerations for the dental patient; the psychology of human behavior as it relates to working and communicating with patients, other dental personnel, and society; and, restorative dentistry equipment and methods. Students prepare for the DANB CDA examination through a review of chairside materials, laboratory materials, and procedures.
Prerequisite: DAS 101. S

DAS 111 Practice Management 3 credits
This course introduces students to office principles including reception techniques, appointment control, third-party billing, financial records, and manual and computerized accounting procedures. Students learn the basics of Microsoft Windows®, Word®, and PowerPoint®. Students learn effective oral communication through presentations on selected topics. Students prepare for employment through study of interviewing skills and creation of a resume. S

DAS 124 Introduction to Oral Pathology 1 credit
This course is an introduction to the etiology, incidence, and disease process of common oral and dental pathological conditions. Students gain familiarity with diseases of the teeth and supporting structures, developmental disturbances of the oral cavity, and neoplasms; and, distinguish normal from abnormal tissue.
Prerequisite: DAS Students only. S

DAS 151 Dental Assisting I 4 credits
This course prepares students to provide chairside assistance to the dentist in all phases of general and specialty dentistry. Topics include principles of four-handed dentistry, instrument use and identification, exposure control, OSHA regulations, and hazard control recommendations. Students explore dental ethics, jurisprudence, and manipulation of chairside intraoral materials. Students gain a familiarity with a professional dental setting through a 36-hour externship in a local dental office.
Corequisite: DAS 101. F

DAS 153 Dental Assisting Clinical Practicum 2 credits
In the setting of a general dental office 60 hours rotation, students apply the skills and knowledge acquired in the classroom by competently performing dental assisting functions including participating in four-handed chairside techniques and related dental assisting procedures. Students are responsible for recruiting patients to participate in full-mouth radiographic series.
Prerequisite: BIO 140, DAS 101, DAS 151. IN

DAS 155 Dental Assisting II 6 credits
In the setting of general and specialty dental office rotations, students apply the skills and knowledge acquired in the classroom by competently performing dental assisting functions including participating in four-handed chairside techniques and related dental assisting procedures. A minimum of 200 externship hours is required. Students must attend weekly seminars to discuss extern issues and topics related to the practice of dentistry. The course also provides a review for the DANB CDA examination.
Prerequisite: DAS 153. S

DAS 299 Dental Externship 3 credits
Students apply classroom knowledge to a practical work experience. Students share learning experiences through a bi-weekly seminar conducted in conjunction with a 120-hour externship. Students prepare objectives for their work experience as part of a learning contract and portfolio.
Prerequisites: BSS 111, BSS 112. S

DENTAL HYGIENE (DHY)

DHY 111 Dental Hygiene Process I 4 credits
In this fundamental course, students are introduced to the dental hygiene process of care through lecture and laboratory sessions. The theoretical concepts presented in this lecture are expanded upon and applied in the laboratory setting. Emphasis is placed on patient assessment in the dental hygiene process of care, including: disease transmission theory and regulatory guidelines, infection control practices, medical histories, vital signs assessment, intra and extra oral examination, soft and hard deposits, caries theory, removal of extrinsic stains/biofilm, dentifrices and mouth rinses, and the develop of basis instrumentation skills. Skills are developed through practice on mannequins and student partners.
Prerequisites: BIO 112, CHM 101, DHY 125. F

DHY 112 Dental Hygiene Process II 5 credits
This course continues theoretical preparation in the dental hygiene process of care. Emphasis is on the action and administration of fluorides, caries prevention, prevention and management of medical emergencies including medicolegal implications, dental hygiene care planning, introduction to ultrasonic instrumentation, health promotion, and care of special needs clients. In the clinical setting, emphasis is on patient assessment, care planning, patient education, basic hand and ultrasonic instrumentation, care of oral appliances and application of caries preventive agents. Students are expected to use critical thinking and problem solving skills when planning and implementing patient care. A weekly one-hour Service-Learning component integrates with the academic experience.
Prerequisites: BIO 112, CHM 101, DHY 111, DHY 131
Corequisite: DHY 250. S

DHY 113 Dental Hygiene Process Summer Clinic 1 credit
This course continues preparation in the dental hygiene process of care. Emphasis is placed on developing and refining hand and ultrasonic instrumentation skills, non-surgical periodontal care planning, evaluation of the response to dental hygiene care, periodontal maintenance, techniques for QCC dental nutritional counseling and intraoral photography. Students demonstrate their understanding of the dental hygiene process of care in implementation and evaluation using critical thinking, problem solving and sound judgment in providing direct patient care in supervised clinical sessions.
Prerequisites: DHY 112, DHY 250. SU, 2012

DHY 116 Practice Management for the Dental Hygienist 1 credit
This course introduces students to the duties related to dental practice management administrative functions and to dental office software, as it relates to the provision of clinical services used in the day-to-day operations in a dental setting. Students learn interpersonal and communication skills a well as basic computer skills to utilize dental practice management software for basic office procedures.
Prerequisite: DHY 111. IN

DHY 121 Anatomy of the Head & Neck 2 credit
This course provides a theoretical and practical study of the anatomy of the head and neck. Students apply this foundational knowledge of anatomical principals and concepts to dental hygiene practice and the provision of comprehensive dental hygiene care. Students will gain in depth knowledge in head and neck anatomy including: anatomical nomenclature, identification of dento-osseous structures, location and function of muscles, nerves, lymphatics, glandular tissues, blood supply and the anatomy involved in the administration of local anesthesia.
Prerequisite: Admission to dental assisting or dental hygiene program. F

DHY 123 Oral Histology & Embryology 2 credits
The student will study the microscopic anatomy of the oral tissues. Oral structure and its embryonic development and function will be presented. The student will gain knowledge in the cellular structure and embryonic development of the head, face, and oral cavity. F

DHY 124 Periodontology 2 credits
This course provides a gross and microscopic study of the anatomy and physiology of the supporting structures of the teeth. The student will gain theoretical and practical knowledge in the etiology, the classification, and principles of examination and treatment of periodontal disease. An ability to recognize normal versus abnormal states of periodontium tissues is an expected learner outcome. S

DHY 125 Dental Anatomy 1 credit
This course examines the anatomy and morphology of the human permanent and primary dentitions. The student will gain a theoretical and practical knowledge of tooth anatomy and relate those anatomical principles to the dental hygiene process of clinical care. The student will identify the anatomy of the human teeth. F

DHY 126 Oral Pathology 2 credits
The student is introduced to the basic principles and process of pathology. Emphasized are the disease process, pathology of the oral cavity, and their relationship to caring for the total patient. The student is expected to recognize visually normal and abnormal tissue and gain a theoretical and practical knowledge of diseases of the teeth and supporting structures and developmental disturbances of the oral cavity and neoplasms. S

DHY 131 Dental Radiology 3 credits
This course provides an introduction to the history of dental radiology, radiation hazards and protection, and the production and control of the dental x-ray beam. Classroom and laboratory instruction in x-ray exposure and processing techniques, as well as interpretation of dental x-rays, are designed to prepare the student for future clinical x-ray experience. F

DHY 150 Local Anesthesia for the Dental Hygienist 2 credits
This course provides the dental hygiene student with the essential skills and knowledge necessary to deliver safe and effective administration of local anesthetics for pain control. Through lectures and clinical experience, students learn to select appropriate anesthetic agents for each patient, select and prepare local anesthetic equipment, locate anatomical landmarks for each injection site and provide comfortable and safe maxillary and mandibular injections. Emphasis is placed on prevention, recognition and management of complications associated with local anesthetic administration. Students serve as patients for each other during laboratory sessions.
Prerequisites: Bio 111, CHM 101, DHY 111, DHY 121, DHY 125, DHY 131.
Corequisite: BIO 112, DHY 112. S

DHY 201 Health Promotion 2 credits
This course examines the role of the dental hygiene professional in the promotion of patient-client health and well-being and in the prevention of disease. The multiple dimensions of health will be integrated with theories, principles, and processes of teaching and learning, communication, motivation and strategies for behavior change. Particular patient populations with unique health promotion needs are also presented. The learner will gain an overview of holistic nature of health and the importance of patient-provider relationships. F

DHY 202 Dental Ethics, Jurisprudence, & Professional Issues 2 credits
This course explores the ethical and legal obligations of the Dental Hygiene professional. Content will include the major ethical theories applied in healthcare, the ethical code of the Dental Hygiene profession, and the resolution of ethical dilemma. The learner will become familiar with the legal regulation of their profession including practice acts, licensure, risk management, and quality assurance. A component of the course experience is devoted to preparing for dental hygiene employment and includes current professional issues, preparation of a resume, participation in employment interviews and selecting a career position. S

DHY 211 Dental Hygiene Process III 5 credits
This course continues the preparation in the dental hygiene process of care. Emphasis is placed on the theory of implementation of care for periodontally involved patients including advanced periodontal instrumentation, ultrasonic instrumentation, and the use of chemotherapeutic agents. Students evaluate dental hygiene care through case study applications. Emphasis is placed on the student demonstrating understanding of dental hygiene implementation and evaluation using critical thinking, problem solving, professional demeanor and sound judgment in providing direct patient care in supervised clinical session
Prerequisites: BIO 112, DHY 113. F

DHY 212 Dental Hygiene Process IV 6 credits
This clinical theory course emphasizes dental practice management and the various dental specialties: General, Orthodontics, Pediatrics, Endodontics, Periodontics and Oral surgery practice. Lectures provided by dental specialists highlight the role of the dental hygienist in each area. The clinical component emphasizes mastering the delivery of the dental hygiene process of care while demonstrating independent decision making, sound judgment, and critical thinking and problem solving skills. Emphasis is placed on the treatment of periodontally involved patients requiring advanced instrumentation skills. Service-learning externships include oral health promotion and provision of services to specific target populations in the community.
Prerequisite: DHY 211. S

DHY 231 Dental Pharmacology 2 credits
This course studies the basic principles of pharmacology and anesthesiology and applies this knowledge to the treatment of patients. The student will gain knowledge of drugs, drug actions, and the efficacy of both those drugs used in dentistry and those impacting on the treatment of patients. The course content will include the physical and chemical properties, preparations, mode of administration, and effect on body systems, as well as reference to medical emergencies associated with dental treatment. F

DHY 241 Dental Materials 2 credits
This course studies the physical properties of dental materials encompassing principles of various materials, composition, and uses. The student will be introduced to a variety of dental materials in the classroom and laboratory settings. Emphasis is placed on the rationale for use of particular materials, selection criteria for various manipulative techniques of materials, and the importance of knowledge of materials for the dental hygienist and how these affect his/her responsibility in a clinical setting. F

DHY 242 Dental Public Health 2 credits
This course introduces dental public health and community dentistry. Emphasis is placed on the dental care delivery system, public health methodology, scientific evaluation, health care financing, and patient groups being served. The student will utilize classroom presentation and discussion, outside research, library assignments, and community experiences to become familiar with this aspect of the healthcare delivery system. S

DHY 250 Nutrition in Oral and systemic Health 2 credits
The course provides an overview of the function and food sources of extreme essential to systemic and oral health with an emphasis on the role of nutrients in the development and maintenance of the oral tissues throughout the life cycle. Attention is given to specific life cycle nutrition and health issues that may impact oral health.
Prerequisite: BIO 112
Corequisite: DHY 112 S

EARLY CHILDHOOD EDUCATION (ECE)

ECE 100 Introduction to Early Childhood Competencies 3 credits
This course helps students currently working in licensed early childhood settings understand, demonstrate, and document the nationally recognized Child Development Associate (CDA) competencies. The course covers criteria for establishing a safe, healthy learning environment; the implementation of curricula and programs to support the cognitive, social, physical, language, and creative potential of children; and, cultural and linguistic diversity within the curriculum. Students review information and documentation procedures necessary for earning the Child Development Associate national credential including the development of the resource file.
Prerequisite: ECE 102. ENG 100
Corequisite: ECE 202. F

ECE 101 Introduction to Early Childhood Education 3 credits
This course is an introduction to early childhood education. Students study the history and contributing theories of the field and the basic aspects important to quality programs for young children, from birth to fourteen years of age. Course content includes studies of child development, the types of programs available; qualifications for teachers and staff; state regulations monitoring programs, state Guidance Policy, the Massachusetts Early Childhood Standards; career opportunities; special education considerations, and current issues in early childhood education. During a ten-hour field experience students make observations in the Quinsigamond Children's School and focus on guidance practices; children's play; integrated curriculum practices; transitions and routines; and appropriate methods for addressing special needs of young children.
Prerequisite: ENG 100. F/S/SU

ECE 102 Growth & Development of the Young Child 3 credits
Students study the dynamics of child growth and development from birth to 14 years of age, thereby acquiring a complete view of the development of a healthy personality in the child. Students also identify rates and patterns of growth in young children. They also develop an understanding of the implications for creating healthy environments for children, individually and in groups. Discussion of special needs will be addressed throughout the course. During a ten-hour field component, students observe infants, toddlers, preschool children and interview school age children. The focus of these observations includes applying developmental theory to the behaviors observed and to interpret the behaviors according to theories covered in this course.
Prerequisite: ENG 100. F/S/SU

ECE 103 Health, Safety & Nutrition in Programs for Young Children 3 credits
This course examines the role of the early childhood educator in providing physical safety, health requirements, and proper nutrition for young children, with emphasis on their emotional and physical well being.
Prerequisite: ENG 100. F

ECE 110 Development of School Age Children (6-16) 3 credits
This course presents the theoretical framework for designing culturally relevant and developmentally appropriate practices for use in after school programs for school age children. Students examine developmental theories regarding cognitive, social, emotional, and physical aspects of the school age child's growth and development; the critical role family and friends play; and, positive guidance practices. Students plan individualized activities necessary for quality educational experiences in a culturally diverse after school program. It is strongly recommended that students in this course work in after school programs for school age children.
Prerequisite: ENG 100. F

ECE 112 Family Issues & Dynamics 3 credits
This course focuses on the family life cycle, economics, family interactions and patterns, and family diversity; and, the course examines the effect these variables have on children's growth and development. Students relate these variables to their own personal family history and then examine this information in order to support children and families in school settings.
Prerequisite: ENG 100. F/S/SU

ECE 113 Curriculum Planning for School Age Children 3 credits
This course emphasizes the curriculum planning process for programs serving school age children outside of the classroom. Students observe children and plan developmentally appropriate curriculum plans to address the social, emotional, physical, and intellectual needs of children. Curriculum plans include children's hobbies, games, art experiences, creative dramatics, music, conflict resolution, career exploration, and study skill development. Students also develop plans for cultural and linguistic diversity and explore strategies for including families in the program.
Prerequisite: ENG 100. S

ECE 123 Fieldwork with Infants and Toddlers
(Observation and Experience) 3 credits
Students spend the first part of this course observing infants and toddlers to become familiar with the growth and developmental stages of these children. Specific observations cover the physical, social, cognitive and emotional needs of infants and toddlers. The impact of the caregiver's ability to nurture, support and encourage and set limits is also considered. After the first sixteen hours of observation students, under the supervision of a licensed infant/toddler teacher take part in the in the daily routines, interact with the children and build competencies necessary to become a competent infant/toddler teacher.
Prerequisite: ENG 100. S

ECE 131 Planning Programs for Young Children 3 credits
This course examines ways to work with young children to support growth and development for the whole child (physically, cognitively, socially, and emotionally) from birth to age 8. Content includes the development of daily and long range curriculum plans and organization of learning centers within the classroom. Students discover ways to accommodate children's special needs and how to work with families and communities. The course reviews the value of play and the importance of cultural diversity. Students make connections between children's development and their learning experiences.
Prerequisite: ENG 100. S/SU

ECE 133 Developing a Multicultural Curriculum for
Young Children 3 credits
This course examines the importance of incorporating cultural diversity into preschool programs by having students look at themselves, children, and families in relationship to race, culture, gender, and physical attributes. The course focuses on curriculum planning using multicultural/anti-bias materials and activities, and emphasizes techniques for empowering children through dialogue that is respectful of diversity.
Prerequisite: ENG 100. S

ECE 141 Child Abuse & Neglect 3 credits
This course covers families under stress and the causes of child abuse and neglect. The course examines laws, services, and programs that attempt to alleviate or prevent family dysfunction characterized by child mistreatment. Students identify signs of child abuse and neglect and learn their professional obligations with regard to working with families and reporting to authorities.
Prerequisite: ENG 100. S

ECE 201 Orientation to Family Child Care 3 credits
This course introduces students to state licensing regulations for family childcare. It covers the child care provider's role as teacher and parent supporter, how to set up and maintain a developmentally and culturally appropriate learning environment in the home, and how to use positive discipline based on principles of child growth and development. Students demonstrate knowledge of child health, safety and nutrition.
Prerequisite: ENG 100.

ECE 202 Fieldwork with Young Children I 3 credits
This course provides onsite supervision and consultation for students who are developing skills and competencies as they work directly with young children in a school setting (ages 2.9-under 7 years old and not yet enrolled in first grade). Early Childhood Education faculty observe and consult with students during this process. Students demonstrate and document competence in the following areas: setting up and maintaining a safe, healthy learning environment for children; providing positive guidance for children; implementing an age appropriate, culturally sensitive curricula; providing appropriate social experiences for young children; communicating and cooperating with team members appropriately; documenting self growth over time; and demonstrating awareness of the total classroom at all times. S

ECE 204 Fieldwork with School-Age Children 3 credits
This course provides on site supervision and consultation to students who work directly with school age children (ages 5-16) in before and after school settings. Students develop individual learning contracts then demonstrate and document competencies necessary for working in quality after school programs. These competencies include skills in behavior management, curriculum development, understanding and support of children and families with special needs, knowledge of community resources and skills in supporting school transitions. In addition to the onsite observations and consultations, students attend group seminars to discuss information and share learning experiences.
Prerequisites: ENG 100 or higher, ECE 110. S

ECE 212 Advocacy Issues in Early Care and Education 3 credits
In this course students learn advocacy skills for young children, their families and the early childhood profession. Leadership tools including principals and methods of effective community organization, the effective use of communication media, debating skills, coalition building, fundraising strategies and policy formation are addressed. The historical overview of early of early childhood education and the current socio-economical systems that impact today's political decision-making process are emphasized. Current early childhood advocacy issues including quality early childhood education for all, universal healthcare and adequate compensation for the early childhood workforce are among the advocacy issues covered in this course. Students gain strategies in public policy advocacy necessary to today's professional early childhood educator.
Prerequisite: ENG 100, Four Early Childhood Education Courses. S

ECE 221 Infant & Toddler Curriculum and Development 3 credits
This course examines the developmental stages of infants and toddlers. Using a holistic approach, students explore health and safety concerns, plans for stimulating learning experiences, and the design of indoor and outdoor environments specific to infants and toddlers. Students plan developmentally appropriate infant/toddler curricula and explain the connection between the physical environment and quality programs for infants and toddlers.
Prerequisite: ENG 100. F

ECE 231 Curriculum For Young Children I 3 credits
This course examines the value and functions of equipment, multicultural materials, and developmentally appropriate activities in preschool settings. Students learn how to develop curriculum that promotes sensitivity toward diversity through hands on classroom activities using the Massachusetts Early Childhood Program Standard and Guidelines for Preschool Learning Experiences. Attention is given to special accommodations to meet the needs of all children. A professional portfolio is developed during this course.
Prerequisites: ENG 101, ECE 101, ECE 102 or PSY 123.
Corequisites: ECE 251, ECE 253. F

ECE 232 Curriculum For Young Children II 3 credits
This course focuses on curriculum planning that is developmentally appropriate for young children. Students create and design plans and physical space using the Massachusetts Early Childhood Program Standards and Preschool Learning Experiences as a guide. Students implement the plans in a classroom setting (ECE 254 Supervised Student Participation II), and address the effectiveness of their plans through observation and assessment procedures. Attention will be given to special accommodations to meet the needs of all children.
Prerequisites: ECE 231, ECE 251, ECE 253, ENG 101.
Corequisites: ECE 252, ECE 254. S

ECE 234 Creative Experiences for Young Children 3 credits
This course examines the approach and meaning of creative experiences for children. Students develop an awareness of creativity in themselves and the children they teach through exploring material and participating in activities. Students learn the value of creativity, the importance of experiences, activities that are sensory and multicultural, and the ways of implementing a creative curriculum into all areas of the classroom.
Prerequisite: ENG 100.

ECE 237 Nature & Science for the Young Child 3 credits
This course explores nature and science curricula appropriate for young children. Students develop a hands-on science curriculum and to help children discover the world around them.
Prerequisite: ENG 100. SU

ECE 238 Supervision in Early Childhood Settings 3 credits
This course covers the critical elements involved in on-site supervision in early childhood settings. The course emphasizes observing, recording, and analyzing data, and giving constructive feedback to the classroom teacher. Students develop conference skills and interpersonal communication strategies, demonstrate team-building skills and sensitivity to cultural issues, and gain knowledge of basic adult development. Students also write formative and cumulative evaluations.
Prerequisites: ENG 100. F2011

ECE 242 Young Children with Special Needs 3 credits
This course explores ways of meeting the challenges of preschool children with special needs. Students study ways to construct and design environments to support children and their families. Students are introduced to evolving social policies and legislation supportive of young children with special needs and their families, and observe intervention programs for young children.
Prerequisites: ENG 100, PSY 123 or ECE 102. S

ECE 243 Administration in Early Education and Care 3 credits
This course covers the administration routines and activities in a variety of early care and education settings. Content includes program and staff management, community relationship skills, budgeting, staffing, and program development. Students review meeting standards and license requirements, encouraging parent participation, and fundraising. Students explore elements of supervision and policy formation.
Prerequisites: ECE 102 or PSY 123. F/SU

ECE 244 Communication for Collaboration 3 credits
This course emphasizes leadership skills needed for communication and collaboration within Early Childhood Education settings. Students examine adult development and individual style in relationship to leadership skills in early education settings. The role emotional intelligence plays in interpersonal dynamics and communication when working with staff and families is addressed.
Prerequisites: ECE 102 or PSY 123. F/S

ECE 245 Advocacy and Ethics for Social Justice in Early Care and Education 3 credits
This course examines the critical role advocacy plays in early education and care. Students use the National Association for the Education of Young Children's Code of Ethics in their work to support advocacy for quality early childhood programs, and in addressing local/international issues for children and families.
Prerequisites: ECE 102 or PSY 123

ECE 246 Seminar and Field Experience: Leadership in Early Education and Care 3 credits
This course examines students' field experiences in connection with leadership skills and competencies. Students select a focus competency directly related to the early childhood field experience and assume a leadership role working with staff and families. Seminar sessions support the students' self-examination of leadership competencies. Students demonstrate these specific leadership competencies in class and at the fieldwork placement. Skills required include reflective and analytical thinking, demonstration of logic, use of supportive interpersonal skills, clear written and oral communication and the ability to problem solve in group settings.
Prerequisites: ECE 102 or PSY 123

ECE 251 Integrating Theory and Practice I: Guidance of Young Children 3 credits
This course covers major theories of Early Childhood Education and the Guides to Speech and Action developed by Katherine Baker. The implications of cultural, positive guidance practices as stated in the Department of Early Education and Care Child Guidance Policy, and the Massachusetts Early Childhood Program Standards and inclusion strategies compose the major focal area of this course. Student increase awareness of political and social issues that influence the lives of children, families, and the field of early education and care. Students observe young children throughout the course to identify positive guidance strategies, improve recording, observation and assessment skills.
Prerequisites: ENG 101, ECE 101, ECE 112, ECE 102 or PSY 123
Co-requisites: ECE 231, ECE 253. F

ECE 252 Integrating Theory and Practice II: Observing, Recording and Authentic Assessment 3 credits
This course focuses on observation, documentation and assessment of young children based on the developmental theories covered in ECE 251 Integrating Theory and Practice I: Guidance of Young Children I. Students conduct extensive observations of young children in natural settings. Students record their observations and interpret the data. The course provides students with a working knowledge of young children with special needs, individual planning for inclusion, anti-bias strategies for inclusion and professional portfolio development.
Prerequisite: ECE 251
Corequisites: ECE 232, ECE 254. F/S

ECE 253 Supervised Student Participation I 4 credits
This course provides students with practical experience (150 hours) working with young children in the Quinsigamond Children's Laboratory School and in a community school setting under faculty supervision. Competencies introduced include working as a team member; developing, implementing and evaluating appropriate activities for young children; demonstrating positive guidance strategies and including strategies identified in the Office of Child Care Services Guidance Policy; keeping children safe and healthy; and, creating and maintaining a developmentally appropriate inclusive learning environment.
Prerequisites: ENG 101, ECE 101, ECE 112, ECE 102 or PSY 123
Corequisites: ECE 231, ECE 251. F

ECE 254 Supervised Student Participation II 4 credits
This course provides the students with an extended opportunity (150 hours) to relate theory to practice in the Quinsigamond Children's Laboratory School working under faculty supervision. Students act as lead teachers throughout the semester to observe children closely and use the Massachusetts Early Childhood Program Standards to plan, implement and evaluate curricula for young children. Students set up and maintain the total learning environment; provide appropriate guidance for young children and implement inclusion strategies as needed.
Prerequisites: ENG 101, ECE 231, ECE 251, ECE 253.
Corequisites: ECE 232, ECE 252. S

ECE 255 Discipline: Guiding Children's Behavior 3 credits
This course helps students examine and interpret young children's behavior. The course examines a variety of positive approaches to discipline. Students discover how materials and use of space contribute to children's behavior; learn appropriate speech and action to guide children toward cooperation and productive interactions with others; and, develop realistic expectations of young children according to the child's developmental level.
Prerequisite: ENG 100. F/S

ECE 256 Language Development in Early Childhood Education 3 credits
This course reviews the research in the development of language of young children and considers the implications for teachers of young children. Students acquire skills necessary to facilitate language development with young children.
Prerequisite: ENG 100. SU

ECONOMICS (ECO)

ECO 215 Principles of Macroeconomics 3 credits
The course examines the broad and general aspects of an economy and covers the traditional macroeconomic elements of an introductory economics program. Students study the theories of supply and demand, national income, fiscal and monetary policy, cyclical fluctuations, economic growth, inflation, employment, and international trade. Students learn how to understand and interpret statements and policies made by both national and world leaders.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

ECO 216 Principles of Microeconomics 3 credits
The course examines particular aspects of an economy and covers the traditional microeconomic elements of an introductory economics program. Students study pricing, input/output costs, resource allocation, farm policy, income distribution, and environmental issues. Students gain an understanding of various market structures as they relate to the national economy.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

ELECTROMECHANICAL TECHNOLOGY (ELM)

ELM 251 Instrumentation and Control Technology 4 credits
This course covers the theory and application of mechanical processes and their control circuits. All major aspects of a control system are studied, including controllers, drivers, actuators, sensors and feedback control. Topics include AC and DC motors, brushless motors, stepper motors, sensors, transducers, servomechanisms, and pneumatics. Students gain skills designing, characterizing, and troubleshooting small-scale control systems.
Prerequisites: ELT 104, ELT 121. F

ELM 253 Semiconductor Processes 3 credits
This course introduces students to the processes used to manufacture semiconductor integrated circuits. Areas of study include wafer preparation, contamination control, oxidation, diffusion, thin films, ion implantation, photolithography, and etching. Emphasis is placed on the physical effects of temperature, pressure, time and other factors on the wafer during each process. F

ELM 256 Robotics and Automated Systems 4 credits
This course provides students with an overview of the systems and concepts involved in today's highly automated manufacturing environments. Robotic systems, an important component of an automated system, are also studied. Topics include equipment safety, robotic systems, SCADA networks, manufacturing execution systems (MES), and statistical process control (SPC). Students learn and practice systematic troubleshooting, using a highly automated manufacturing system as well as robotic systems.
Prerequisite: ELT 104, ELT 121. S

ELM 257 Introduction to Programmable Logic Controllers 4 credits
This course focuses on the principles and application of programmable logic controllers (PLCs) in the control of control manufacturing processes. Students learn the fundamental parts of PLCs and the role each plays in providing an effective system of control. Students develop and implement PLC programs and learn methods of interfacing the PLC with external input and output devices.
Prerequisite: ELT 121. F/S

ELM 299 Cooperative Work Experience & Seminar 3-6 credits
This course provides students with a structured learning experience while applying classroom theory to a practical work experience. Students participate in a seminar where they exchange feedback about their work experiences. The number of credits earned is determined by the number of weeks and hours per week required by the cooperative work experience and the established learning objectives.
Prerequisite: Approval of program coordinator. F/S/SU

ELECTRONICS TECHNOLOGY (ELT)

ELT 103 Electronics I 4 credits
This course provides an introduction to DC and AC electrical circuits. Students learn the concepts of voltage, current, resistance, magnetism, and power and energy and the relationships between them. Methods of circuit analysis using Ohm's Law, Kirchoff's Laws, and network theorems are studied. 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.
Prerequisites: ENG 100, MAT 099. F/S

ELT 104 Electronics II 4 credits
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.
Prerequisite: ELT 103. F/S

ELT 105 CAD For Technicians 3 credits
This course provides basics skills with special emphasis on computer-aided drafting (CAD) as it applies to electronics. Students learn laboratory safety techniques, schematic and logic diagrams, the use of electronic simulation software, the integration of graphics with office and business software applications for technical reports, and an introduction to soldering techniques.
Prerequisite: ENG 100. F

ELT 110 Computer Electronics 4 credits
This course prepares students for the hardware applications associated with computer systems. Content includes direct current and alternating current applications. Principles of semiconductor operations and power supplies applicable to computer systems are studied.
Prerequisites: ENG 100, MAT 099. F

ELT 121 Digital Computer Circuits 4 credits
This course explores digital computer fundamentals including number systems, digital code, logic gates, Boolean algebra, combinational logic, and flip-flops. Students learn the functions of the basic computer circuits used in the operation of all computer systems and troubleshooting techniques. 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.
Prerequisites: ENG 100, MAT 099. F/S

ELT 122 Microprocessors 4 credits
This course examines the hardware and software associated with the Motorola MC6800 8-bit microprocessor. The hardware portion of the course covers the registers and busses of the 6800 chip and its associated random access memory (RAM), read-only memory (ROM), asynchronous communications interface adaptor (ACIA), and peripheral interface adaptor (PIA) chips. The software section covers assembly and machine language programming of the 6800 including how to write, run, analyze, and debug programs of those levels. Students also learn how to interface the 6800 chip to a variety of peripheral devices. The course also provides an overview of other microprocessor chips, such as MC68HC11 and the MC68000.
Prerequisite: ELT 121. F/S

ELT 211 Electronic Instrumentation 4 credits
This course examines practical shop electronics emphasizing the theory of operation and application of electronic instruments. Students learn the three main aspects of measuring systems (input/detector, processing, and output/display), analog and digital meters, DC and AC bridges (manual and automatic), potentiometers and potentiometric bridges, and theory of operation and applications of oscilloscopes. In addition, students examine analog/digital (A/D) and digital/analog (D/A) converters, transducers, operational amplifiers and analog computer circuits, fiber optics, and automatic test equipment.
Prerequisites: ELT 104, ELT 121. F

ELT 212 Communications Electronics 4 credits
This course introduces transmitting and receiving AM, FM, and PM circuits, antennas, transmission lines, and microwave transmissions. Students also learn types of data transmissions including lasers and fiber optics.
Prerequisites: ELT 104, ELT 121. S

ELT 253 Microprocessor Interfacing 3 credits
This course examines current interfacing concepts related to a microprocessor system and its peripheral devices with an emphasis on state-of-the-art advanced microprocessors. Students use a peripheral interface adapter (PIA) to provide handshake control of parallel I/O operations; interface digital-to-analog and analog-to-digital converters in a 6800 based microcomputer system; interface the 6850 ACIA to a 6800 based microcomputer system to provide serial communications; and, interface and program a 2708 erasable programmable read-only memory (EPROM) chip. They also learn how to interface the 6840 programmable timer module (PTM) to a 6800 computer system.
Prerequisite: ELT 122

ELT 299 Cooperative Work Experience & Seminar 3-6 credits
This course provides students with a structured learning experience by applying classroom theory to practical work experience. Students participate in seminars to exchange information about their work experience. The number of credits earned is determined by the number of weeks and hours per week required by the cooperative work experience and the established learning objectives.
Prerequisites: ELT 104, ELT 122 or CSC 233. F/S/SU

ELEMENTARY EDUCATION (EDU)

EDU 101 Elementary Education: Teaching and Learning 3 credits
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 field experience (pre-practicum) of fifteen hours beyond classroom time is required. This fieldwork is divided between grades one and two, grades three and four and grades five and six. Please note: Students are required to have a recent CORI/SORI on file to participate in the fieldwork which is required for successful completion of the course.
Prerequisite: ENG 101 or appropriate placement score. S

EMERGENCY MEDICAL TECHNICIAN (EMT)

EMT 101 Basic Emergency Medical Technology 7 credits
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. F/S/SU

EMT 102 Intermediate Module I 1 credit
This course covers the roles and responsibilities of the EMT-Intermediate, including the laws governing the EMT-I, and emphasizes the EMT-I as a healthcare professional. Topics include the components of the Emergency Medical Services Communications System, radio communication, the role of the dispatcher, procedure in relaying pertinent information to the physician, and introduction of medical terminology.
Prerequisite: EMT 101 or equivalent. F

EMT 103 Intermediate Module II 2 credits
This course covers the four phases of patient assessment, including an overview of basic anatomy and physiology, systematic assessment of the patient with information on obtaining the patient's medical history, and procedures in performing a physical examination. It includes a concise method of recording findings, and definitive field management.
Prerequisite: EMT 102. F

EMT 104 Intermediate Module III 3 credits
This course covers the anatomy and physiology of the respiratory system. Topics include patient assessment, management of specific disease processes, and management techniques of respiratory emergencies with an emphasis on endotracheal intubation.
Prerequisite: EMT 103. F

EMT 105 Intermediate Module IV 2 credits
This course covers detailed analyses of fluids and electrolytes, and acid-base balance. Topics include general management principles of shock including pathophysiology, assessment, and management. Students learn intravenous therapy and the use of the pneumatic antishock garment.
Prerequisite: EMT 104. F

EMT 106 Intermediate Module V 4 credits
This course develops clinical skills by placing students in an Emergency Department and Anesthesia Department of a hospital. Students deliver optimum patient care by performing adult and pediatric assessments, IV therapy, and endotracheal intubation.
Prerequisite: EMT 105. F

EMT 107 Intermediate Module VI 3 credits
This course develops clinical skills by having students deliver patient care in a pre-hospital advanced life support emergency medical services system.
Prerequisite: EMT 106. F

EMT 108 Introduction to Advanced Pre-Hospital Care 4 credits
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.
Corequisites: BIO 140 or BIO 111, EMT 109, EMT 110, EMT 112, EMT 114. F/S

EMT 109 Pharmacology for Advanced Pre-Hospital Care 2 credits
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.
Corequisites: BIO 140 or BIO 111, EMT 108, EMT 110, EMT 112, EMT 114. F/S

EMT 110 Patient Assessment and Human Systems 2 credits
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.
Corequisites: BIO 140 or BIO 111, EMT 108, EMT 109, EMT 112, EMT 114. F/S

EMT 112 Patient Assessment/Pharmacology Laboratory Component 1 credit
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.
Corequisites: BIO 140 or BIO 111, EMT 108, EMT 109, EMT 110, EMT 114. F/S

EMT 114 Life Span and Healthcare Issues for Pre-Hospital Care 4 credits
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.
Corequisites: BIO 140 or BIO 111, EMT 108, EMT 109, EMT 110, EMT 112. F/S

EMT 115 Advanced Pre-Hospital Care 4 credits
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.
Prerequisites: EMT 108, EMT 109, EMT 110, EMT 112, EMT 114.
Corequisites: BIO 112 or BIO 140, EMT 116, EMT 117, EMT 118, EMT 119. F/S

EMT 116 Cardiology and Advanced Cardiac Life Support 4 credits
This course provides the student with the knowledge and skills needed to recognize and successfully manage cardiovascular emergencies encountered in the field. Following the standards of the American Heart Association, and the National Registry of EMT's, students learn cardiac anatomy and physiology, ECG recognition, and 12 lead ECG. Extensive coverage is devoted to the pharmacological and electrical management techniques used in treating acute cardiac events, including respiratory and cardiac arrest.
Prerequisites: EMT 108, EMT 109, EMT 110, EMT 112, EMT 114.
Corequisites: Bio 112 or BIO 140, EMT 115, EMT 117, EMT 118, EMT 119. F/S

EMT 117 Trauma 3 credits
This course is intended to present to the paramedic student a comprehensive insight into traumatic injury to the human body, its causes, types and implications. The impact on trauma survival and the concept of well-developed regional trauma systems will be discussed. An emphasis will be placed upon the evaluation and management of both blunt and penetrating trauma in relationship to regional anatomy.
Prerequisite: EMT 108, EMT 109, EMT 110, EMT 112, EMT 114.
Corequisites: BIO 112 or BIO 140, EMT 115, EMT 116, EMT 118, EMT 119. F/S

EMT 118 Neonatal and Pediatric Emergencies 2 credits
This course provides the paramedic student with a general understanding of the newborn and the newly born with overviews of structure and function of the cardiovascular and respiratory system. Neonatal resuscitation will be presented, along with neonatal assessment. This course provides the paramedic student with a general understanding of the pediatric patient and the interaction that is necessary with their family members. Growth and development, anatomy and physiology review, pathophysiology, assessment and management of pediatric emergencies are stressed within this course.
Prerequisites: EMT 108, EMT 109, EMT 110, EMT 112, EMT 114.
Corequisites: BIO 112 or BIO 140, EMT 115, EMT 116, EMT 117, EMT 119. F/S

EMT 119 Topics in Advanced Life Support 3 credits
This course includes the assessment and management of the toxicological emergencies, infectious diseases, a detailed review of hematology, endocrine emergencies, anaphylaxis, and environmental emergencies. Also included are a written research paper and an oral presentation by each student further expanding on topics within the syllabus.
Prerequisites: EMT 108, EMT 109, EMT 110, EMT 112, EMT 114.
Corequisites: BIO 112 or BIO 140, EMT115, EMT 116, EMT 117, EMT 118. F/S

EMT 202 Clinical Placement for the Paramedic 7 credits
This course gives the student the opportunity to deliver optimum patient care at several clinical hospital sites, using a preceptor approach. Clinical rotations occur within the following departments: Intensive/Critical Care Unit, Emergency Department, Anesthesiology (Operating Room), Pediatric Emergency Department, Pediatric OR, Pediatric PAR, Psychiatric, Labor and Delivery, and Elective and Miscellaneous rotations. Students are monitored by the clinical coordinator.
Prerequisites: EMT 115, EMT 116, EMT 117, EMT 118, EMT 119. S/SU

EMT 203 Field Placement for the Paramedic 5 credits
The paramedic Field Practicum provides the student with an opportunity to utilize and refine the skills and knowledge gained throughout the program in a realistic, pre-hospital setting, using a preceptor approach. Students will be assessed per rotation by the Field Coordinator for accuracy of field log, written patient assessments, stress management, and understanding of field principles.
Prerequisites: EMT 202. F/SU

EMT 251 Critical Care Transport 5 credits
This course is designed to prepare the nationally registered paramedic, registered nurse, and/or registered respiratory therapist to become a Critical Care Transport Specialist. Students study ventilators, 12-lead ECG's, thermodilution catheters, intravenous pumps, pharmacology, invasive lines, intra-aortic balloon pumps, and complications of transport. Additional topics include documentation, affiliation agreements, and medical/legal issues.
Prerequisites: Nationally Registered Paramedic or Registered Nurse or Registered Respiratory Therapist and CPR and ACLS Certification

ENERGY UTILITY TECHNOLOGY (EUT)

EUT 100 Introduction to Energy Industry 3 credits
This course provides students with an overview of the energy utility industry and occupational opportunities, including but not limited to history of providing reliable service, regulatory influences, electric/gas energy flow and basic terminology, typical conditions for employment, and career opportunities.
Co-requisite: ENG 100 or appropriate placement score. F

EUT 101 Fundamentals of the Energy Industry 4 credits
This course provides students with an overview of the energy utility industry and occupational opportunities, including but not limited to the history of natural gas and electrical service, regulatory influences, energy flow, basic natural gas and electrical terminology, typical conditions for employment, and career opportunities.
Corequisite: ENG 100 or appropriate placement score. F

EUT 110 Electrical Principles I 4 credits
The course examines the foundations of basic DC circuit analysis concepts. Topics include voltage and current sources, Ohm's law, Kirchhoff's Laws, concept of resistance, conductance, capacitance, inductance, network topologies such as elements in series and parallel, Thevenin's and Norton's Theorems, and transient behavior of RC and RL circuits. Students utilize computer software tools and laboratory experiments to reinforce concepts.
Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or placement by the Computerized Placement Test.
Corequisites: ENG 100 or appropriate placement score, EUT 101. F

EUT 111 Electrical Principles II 4 credits
This course presents the foundations of basic AC circuit analysis. Topics for parallel and series circuit include: voltage and current sources, phase and phasor relations, resistance, inductance and capacitance in sinusoidal drive circuits, and Bode plots. Thevenin's, Norton's Maximum Power and Superposition theorem are applied. Transient behavior of networks, transformers and filters are analyzed. Computer software tools and laboratory experience are utilized to reinforce concepts.
Prerequisites: EUT 110. S

EUT 115 Generation, Transmission and Distribution 4 credits
This course presents an overview of the electrical generation process and power plant systems and functions. Students analyze transmission lines for impedance, reflection, and standing wave concepts. Students learn the operation and design of utility power distribution systems including planning; load characteristics; and the application of distribution transformers, substations, primary and secondary systems, and voltage regulation and voltage reductions.
Prerequisite: EUT 110. S

EUT 120 Industrial Safety 3 credits
This course provides an introduction to the principles of safety, guidelines for the design of equipment, and explanations of why certain practices should or should not be followed. This course will evaluate human reactions in normal and abnormal conditions. Students compare features required for safe working conditions to industry standards.
Prerequisite: EUT 101. S

EUT 190 Energy Utility Technology Practicum 3 credits
This course introduces students to the training labs of a major power transmission and distribution company. Students work in a facility learning how to splice wires, connect fuses and transformers and learn the industry standard techniques. Students become familiar and learn the safe use of the tools and equipments used in the power industry. Topics include: splicing, meters, underground, overhead lines, transformers, substation, circuit breakers and regulators. Note: This course may be conducted in two locations.
Corequisites: EUT 111, EUT 115, EUT 120. S

ENGINEERING (ERG)

ERG 101 Engineering Graphics 3 credits
This course focuses on engineering drawing utilizing computer-assisted drawing (CAD) techniques. It introduces descriptive geometry and the basic theory of orthographic projections. Students create orthographic, isometric, sectional views and assembly drawings and dimensioning using CAD software.
Prerequisite: MAT 099. F/S/SU

ERG 211 Introduction to Materials Science 3 credits
This course explores the fundamental properties of engineering materials utilizing micro and macro methods of material design. Students learn the atomic structures, chemical properties, and physical behavior of engineering materials, including biomaterials.
Prerequisites: CHM 103, PHY 105. F/SU

ERG 221 Statics 3 credits
This course covers a vector approach in studying static systems. Areas of study include the resultant of concentrated and distributed force systems, two and three-dimensional equilibrium, trusses, plane friction, centeroids, and moments of inertia. Students learn how to use integral equations to determine centeroids and moments of inertia for various geometrical shapes and derive and graph equations of shear and moment.
Prerequisites: MAT 234, PHY 105, PHY 106
Corequisite: MAT 235. F/IN

ERG 223 Thermodynamics 3 credits
This course introduces the laws of thermodynamics through the study of systems and the flow of energy across system boundaries. Students learn the First Law of Thermodynamics (utilizing heat, energy, work, enthalpy) and the Second Law of Thermodynamics (and the property of entropy) and their macroscopic and microscopic implications. The course focuses on the application of thermodynamics to engineering systems.
Prerequisites: CHM 104, MAT 235, PHY 106. S

ERG 225 Strength of Materials 3 credits
This course emphasizes stress and strain and the mechanical properties of materials. Topics include axial load, torsion, bending and deflection of beams, Hooke's Law, Mohr's circle, transfer shear, combined loading, stress, strain transformation, design of beams, and buckling of columns. Students use integral and differential equations to solve problems in design of beams and structures.
Prerequisites: ERG 221, MAT 235
Corequisite: MAT 238. S

ENGLISH (ENG)

ENG 090 Basic Reading Skills 3 credits
This course focuses on developing reading skills. Students locate main ideas, recognize supporting details, locate transitions, identify patterns of organization, analyze the use of inferences and vocabulary. They employ skimming and scanning techniques, analyze word meaning through contextual and word structure analyses, and develop dictionary skills. The minimal passing grade for developmental courses is a "C".
Prerequisite: Appropriate placement score. This developmental English course cannot be used to satisfy degree or certificate requirements. F/S/SU

ENG 091 Intermediate Reading Skills 3 credits
This course helps students to read independently in college level courses. Students acquire strategies for improving vocabulary and reading comprehension as well as critical thinking skills while emphasizing both academic reading and reading for studying. The minimal passing grade for developmental courses is a "C".
Prerequisite: A grade of "C" or better in ENG 090 or appropriate placement score. This developmental English course cannot be used to satisfy degree or certificate requirements. F/S/SU

ENG 095 Basic Writing Skills 3 credits
This course helps students develop competence in written communication by practicing writing clear sentences and paragraphs. Students learn how to recognize and use basic sentence patterns and to write coherent paragraphs containing a topic sentence, idea development, and a strong conclusion. Students complete a variety of writing assignments and develop the skills needed for ENG 096, Intermediate Writing. To continue to the next level of English courses, students must pass the departmental final exit examination (or appropriate placement on the placement exam).
Prerequisite: Appropriate placement score. This developmental English course cannot be used to satisfy degree or certificate requirements. F/S/SU

ENG 096 Intermediate Writing Skills 3 credits
This course helps students develop writing competence by practicing writing paragraphs and essays. Students learn to write unified, supported, coherent essays using grammatically sound sentences. Assignments focus on writing a variety of paragraphs and essays in order to prepare for college-level writing courses. To continue to the next level of English courses, students must pass the departmental final exit examination (or appropriate placement on the placement exam).
Prerequisite: Passing the ENG 095 departmental writing final examination or appropriate placement score. This developmental English course cannot be used to satisfy degree or certificate requirements. F/S/SU

ENG 100 Introduction to English Composition 3 credits
This course is an introduction to college-level essay writing emphasizing the writing process from planning and drafting through revising and editing. Students refine their style of writing by focusing on sentence structure and language usage and write essays displaying unity, support, and coherence. Students practice expository writing using a variety of rhetorical strategies. The exploration of writing is examined through reading and analyzing essay models. Students develop familiarity with research tools.
Prerequisite: Passing ENG 091 with a grade of C or higher and passing the ENG 096 departmental writing final examination essay or appropriate placement score. F/S/SU

ENG 101 English Composition & Literature I 3 credits
This course focuses on how to develop essential writing skills including organization, correctness, and support of ideas. A research project is required to produce a documented essay that integrates materials from Internet and traditional sources according to standard disciplinary format. Students develop and sharpen the interpretive and analytical skills necessary to evaluate the soundness and appropriateness of sources for their work.
Prerequisite: ENG 100. F/S/SU

ENG 102 English Composition & Literature II 3 credits
This course employs literary texts to provide examples for students to continue and refine writing and reading skills. Assigned readings include plays, poems, novels, short stories, epic narratives, personal essays, and satire. Writing assignments emphasize students' close reading skills and their interpretation and analysis of creative works.
Prerequisite: ENG 101. F/S/SU

ENG 200 Children's Literature 3 credits
This course introduces students to the nature, variety, and artistry of children's stories. Students examine various modes of the genre and investigate why stories are necessary and popular teaching vehicles for the intellectual growth and development of children. Students discuss and explore numerous tales, fables, myths, and literary archetypes. Special emphasis is placed on selected visually orientated stories and their context in today's society. Students write individual reports and interact in panel discussions, commentary, and discussions of the merits of contemporary works.
Prerequisite: ENG 102. F/S/SU

ENG 202 Creative Writing 3 credits
This course centers on weekly student writing of poems, short stories, plays or personal essays. Specific Projects will be determined by individual and group interests. Group discussion of works-in-process will aid the student to achieve a significant creative writing project for the semester. Examples of creative excellence will be read and discussed, with some attention to critical and aesthetic theory.
Prerequisite: ENG 102. F

ENG 203 Writing Poetry 3 credits
This course focuses on writing fixed and free verse forms. Students learn the technical vocabulary of poetry and apply it to the work of classic and contemporary poets, as well as their own work and the work of their peers. Students present their poems in a group setting, and receive and provide both oral and written critiques.
Prerequisite: ENG 102. F

ENG 204 Writing Fiction 3 credits
This course focuses on writing short story and/or novel prose. Students learn the technical vocabulary of the craft and apply it to the work of classic and contemporary fiction writers, as well as their own work and the work of their peers. Students present their writing in a group setting, and receive and provide both oral and written critiques.
Prerequisite: ENG 102. S

ENG 205 Technical and Workplace Writing 3 credits
This course covers the theory and practice of writing appropriate to the workplace. While the course is designed for students interested in technical applications, it is useful for anyone who intends to enter an occupation that requires writing assignments such as resumes, reports, or proposals, instructions, web pages, abstracts, technical descriptions, and letters and memos in either traditional or electronic format. Other technically-oriented assignments may be included as well. Students explore concepts such as critical thinking, empathy, style, tone, persuasion, precision, simplicity, readability, ethics, etiquette, graphics, electronic and hard copy elements of design, and collaborative writing. Students develop a portfolio to show prospective employers.
Prerequisites: ENG 102, Computer literacy. F/S/SU

ENG 212 Death & Dying in the Literature of the Western World 3 credits
This course surveys the many issues suggested by death as a topic of writing. Students explore the literary treatment of death including suicide, the attitudes of societies toward the dying and the dead, and the answers provided by religions and philosophies. Through study of literary sources from ancient Greece to modern America, students define "life" and "death" in order to understand significant attitudes and trends toward death in Western society.
Prerequisite: ENG 102. F

ENG 215 The Hero in Literature, Myth, and Film 3 credits
This course covers various cultural concepts of the hero in fiction, nonfiction, myth, and film. Topics include the oral tradition, the nature of civilization, and heroic topics such as transformation of consciousness, initiation, illumination, search for identity, the quest, and continuity. Reading selections include passages from The Odyssey, Beowulf, The Bagavhad Gita, and The Táin Bó Cuailgne . Typical film selections include Star Wars, Lord of the Rings, Ghandi, Excalibur, and Sir Gawain; plus background films on Celtic, Indian, Middle Eastern, and classical cultures. Students write several short papers and complete a final project demonstrating their understanding of universal heroic themes.
Prerequisite: ENG 102. S

ENG 231 Masterpieces of World Literature I 3 credits
This course examines the history and growth of great books and ideas and their relevance to modern times. Students read literary selections from the ancient world to the 18th century to help them understand the sense and perspectives of major world writers. Students learn to demonstrate an understanding of both Eastern and Western literary traditions through class discussions and written assignments.
Prerequisite: ENG 102. F

ENG 232 Masterpieces of World Literature II 3 credits
This course complements ENG 231 Masterpieces of World Literature I by examining the history, growth, and cross influences of ideas and their impact on views of the modern world. Students study major writings and writers of both Eastern and Western literature from the 18th century to the present. Students learn how to understand the universal themes of great literature and the relevance of those themes in the modern world.
Prerequisite: ENG 102. S

ENG 241 British Literature I 3 credits
This course explores British literature from its beginnings to 1750. Students examine major representative authors of the Anglo-Saxon, medieval, Renaissance, metaphysical, and Restoration periods. Students study the major developments in English literature and develop an understanding of the relevancy of key themes of early British literature to present works. The course also explores the evolution of the English language from its beginnings in Old English to its modern-day form.
Prerequisite: ENG 102. F

ENG 242 British Literature II 3 credits
This course explores British literature from 1750 to the present. Students explore key literary and cultural movements that occurred during the Romantic, Victorian, 20th century, and contemporary periods. Selected works cover several literary genres including poetry, drama, the essay, the short story, and the novel.
Prerequisite: ENG 102. S

ENG 251 American Literature I 3 credits
This course examines American literature from approximately 1600–1870, covering poetry, fiction, essays, and autobiography. Students explore literary movements and major authors of major American time periods including the Puritan, colonial, Revolutionary, Romantic, Transcendentalist, and abolitionist eras. Students examine how writers influenced both their own times and subsequent generations.
Prerequisite: ENG 102. F

ENG 252 American Literature II 3 credits
This course examines American literature from the mid-1800s to the present, including poetry, fiction, essays, and autobiography. Students explore literary movements, major authors, and trends of the various time periods. Topics include American regional writing; American Realism; literature during and between the two world wars; the literatures of American minorities; and the contemporary literature of disillusionment. Students explore texts both as literary works and as products of historical forces.
Prerequisite: ENG 102. S

ENG 255 The American Short Story 3 credits
This course focuses on reading and analyzing selected short stories of renowned American writers. Students participate in class discussions and write papers to demonstrate close reading skills, to express individual interpretation, and to understand the common themes and unique literary characteristics of the genre. Students view films based on the literary selections to enlarge their perceptions of themes, characters, and settings. The course also covers cultural and historical contexts that influenced the authors.
Prerequisite: ENG 102. F/SU

ENG 260 Special Topics in English 3 credits
Special Topics in English provides an opportunity for specialized literary study of various topics from year to year. Special Topics may feature a particular literary theme, an historical era, a genre, a single author or group of authors, specific regional or national literature, or other topics defined by the teaching professor. Research papers or projects may constitute a significant portion of the course requirements. This course will vary in any number of ways according to the discretion of the instructor and the instructor's choice of text(s).
Prerequisite: ENG 102. F

ENGLISH AS A SECOND LANGUAGE (ESL)

ESL 103 English as a Second Language: Writing I 3 credits
This course focuses on paragraph development, including an emphasis on sentence structure and the writing process. Students learn grammar in the context of specific writing activities. Students respond in writing to prompts and short readings. The minimal passing grade for ESL courses is a "C".
Prerequisites: Non-native speaker of English; High school diploma or GED and appropriate placement score. F/S

ESL 104 English as a Second Language: Writing II 3 credits
This course refines paragraph writing skills while introducing and developing the essay. Students learn more complex grammar and sentence structure. Students write paragraphs and essays, in response to simple prompts and readings. The minimal passing grade for ESL courses is a "C".
Prerequisites: Non-native speaker of English; High school diploma or GED and ESL 103 passed with a grade of "C" or higher, or appropriate placement score. F/S

ESL 105 English as a Second Language: Writing III 3 credits
This course develops students' skills in essay writing. Students focus on writing and revising longer pieces using complex structures and appropriate rhetorical modes. The minimal passing grade for ESL courses is a "C".
Prerequisites: Non-native speaker of English; High school diploma or GED and ESL 104 passed with a grade of "C" or higher or appropriate placement score. F/S

ESL 113 English as a Second Language: Reading I 3 credits
This course focuses on reading skills and vocabulary development. Students develop and demonstrate reading comprehension through class discussions and written responses in complete sentences and short paragraphs. The minimal passing grade for ESL courses is a "C".
Prerequisites: Non-native speaker of English; High school diploma or GED and appropriate placement score. F/S

ESL 114 English as a Second Language: Reading II 3 credits
This course emphasizes reading longer passages and increasing academic vocabulary. Students develop and demonstrate comprehension and critical reading skills through class discussions and written responses in paragraphs and short essays. The minimal passing grade for ESL courses is a "C".
Prerequisites: Non-native speaker of English; High school diploma or GED; and ESL 113 passed with a grade of "C" or higher or appropriate placement score. F/S

ESL 115 English as a Second Language: Reading III 3 credits
This course focuses on the critical reading skills necessary to understand content course readings. Students demonstrate their ability to comprehend, analyze and synthesize information through class discussions and more complex writing assignments. The minimal passing grade for ESL courses is a "C".
Prerequisites: Non-native speaker of English; High school diploma or GED; and ESL 114 passed with a grade of "C" or higher or appropriate placement score. F/S

ESL 133 English as a Second Language: Listening/Speaking I 3 credits
This course focuses on the speaking and pronunciation skills that are necessary in an academic setting. Students practice speaking by responding to open-ended questions in response to class readings or discussions on a topic. Students prepare and give brief presentations in class using academic vocabulary. The minimal passing grade for ESL courses is a "C".
Prerequisites: Non-native speaker of English and High school diploma or GED and appropriate placement score. F/S

ESL 134 English as a Second Language: Listening/Speaking II 3 credits
Non-native speakers of English learn basic and intermediate spoken English skills necessary for social and academic interaction. The course explores American language customs, practical grammar, and correct pronunciation, including elements of intonation, stress, and rhythm.
Prerequisites: Non-native speaker of English; High school diploma or GED; and ESL 133 passed with a grade of "C" or higher or appropriate placement score. F/S

ESL 135 English as a Second Language: Listening/Speaking III 3 credits
This course helps non-native speakers of English develop the oral language fluency necessary for social and academic interaction. Students gain advanced skills to understand spoken English and to increase their facility in spoken English. The course focuses on assisting students to acquire a larger vocabulary in order to participate more easily in social and academic situations.
Prerequisites: Non-native speaker of English; High school diploma or GED; and ESL 134 passed with a grade of "C" or higher or appropriate placement score. F/S

ESL 143 English as a Second Language: Note-Taking I 3 credits
In this course, students learn to develop a system of note-taking while listening to short academic lectures. Students use their lecture notes and course reading to complete a variety of academic assignments, such as, responding to comprehension questions in sentence and paragraph form. The minimal passing grade for ESL courses is a "C".
Prerequisite: Non-native speakers of English and High School Diploma or GED and appropriate placement score. F/S

ESL 144 English as a Second Language: Note-Taking II 3 credits
In this course, students continue to develop a system of note-taking while listening to academic lectures. Students use their lecture notes and course readings to summarize and synthesize information in paragraphs and short essays. The minimal passing grade for ESL courses is a "C".
Prerequisite: Non-native speakers of English; High School Diploma or GED; and ESL 143 passed with a grade of "C" or higher or appropriate placement score. F/S

ESL 145 English as a Second Language: Note-Taking III 3 credits
In this course, students refine their academic note-taking skills in preparation for content area courses. Students use their lecture notes and course readings to summarize, synthesize and evaluate information in paragraphs and essays. The minimal passing grade for ESL courses is a "C".
Prerequisite: Non-native speakers of English; High School Diploma or GED; and ESL 144 passed with a grade of "C" or higher or appropriate placement score. F/S

ENVIRONMENTAL HEALTH AND SAFETY (EHS)

EHS 101 Survey of Environmental Health & Safety in the Workplace 3 credits
This course provides an overview of the responsibilities for regulatory health, safety, environmental quality, and resource conservation practices. Students learn to prepare manifest and compliance records, Material Safety Data Sheets (MSDS), and other required legal forms. They also learn to develop and direct safety activities and maintain emergency action and contingency plans with respect to fires, hazardous spills, and health related issues. F

EHS 115 Hazardous Materials & Hazardous Waste Management 3 credits
This course explores concepts related to the chemical properties of hazardous waste and materials in business and industry. Students learn how to deal with health hazards associated with storing, handling, and transporting hazardous waste and materials and how to describe, plan, and react to extremely hazardous areas. Topics include laws, regulations, and standards for emergency response personnel. S

FINANCE (FIN)

FIN 111 Personal Financial Planning 3 credits
This course examines the tools, terminology, and applications necessary to successfully manage financial matters in our daily lives. Topics include the personal financial planning process, career strategies, money management, personal taxation, financial institution services, and consumer credit. Evaluation techniques related to housing, transportation, insurance, investments, real estate, and retirement planning are also covered.
Prerequisites: MAT 090 or appropriate placement score. F/S/SU

FIN 216 Small Business Finance 3 credits
The course emphasizes a practical approach to small business finance that allows students to master the basic elements of financial management. Topics include principles of entrepreneurial finance, preparing pro-forma financial forecasts, measuring and evaluating financial performance, business financial planning, as well as financing options available to small business owners. This course is intended for individuals interested in starting a small business.
Prerequisites: ACC 101. S

FIN 221 The Stock Market and Investments 3 credits
This course provides an introduction to financial investments and the stock markets. Students study the purposes and history of the stock markets and the primary investments they control including stocks, bonds, and mutual funds.
Prerequisite: ENG 100, MAT 090 or appropriate placement scores. F/S

FIN 250 Principles of Finance 3 credits
This course covers the principles and practices of financial management that are used in business. Topics examined include acquisition of funds, cash flow, financial analysis, capital budgeting, working capital requirements, and capital structure.
Prerequisites: ENG 100, MAT 099 or appropriate placement scores. F/S

FIRE SCIENCE (FSC)

FSC 101 Principles of Emergency Services 3 credits
This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics; life safety initiatives. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network. F/S

FSC 103 Introduction to Fire Prevention 3 credits
This course introduces fundamental information regarding the history and philosophy of fire prevention, including the organization and operation of a fire prevention bureau and use of fire codes. Students learn how to identify and correct fire hazards. The course also covers the relationship of fire prevention to built-in-fire protections systems, fire investigation, and fire and life safety education. F

FSC 104 Fire Behavior and Combustion 3 credits
This course explores the theories and fundamentals of how and why fires start, spread, and how they are controlled. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network.
Prerequisite: FSC 101, ENG 100 or appropriate placement score. F/S

FSC 105 Incident Command System Management 3 credits
This course examines the history of the Incident Command System from "Firescope" to the current National Incident Command System (ICS). The course covers the use of the appropriate ICS procedures when working with several different agencies as a unified group. Students learn the appropriate procedures for dealing with a variety of incidents including fires, multi-casualties, hazardous materials, search and rescue, natural disasters, and terrorism. Students examine case studies and exercises to help them learn how to apply ICS procedures to various situations. F/S

FSC 121 Building Construction for Fire Protection 3 credits
This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network.
Prerequisite: FSC 101, ENG 100 or appropriate placement score. F/S

FSC 123 Introduction to Fire Protection Systems and Equipment 3 credits
This course focuses on design and operation of fire detection and alarm systems. Students learn about heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers. F/S

FSC 131 Fire Fighting Tactics and Strategy 3 credits
This course reviews fire chemistry, equipment, and personnel. Students learn basic fire fighting tactics and strategies, methods of attack, and preplanning to prevent fire problems. Fire situations are presented for analysis and study of accepted fire fighting practices. F/S

FSC 151 Occupational Safety and Health for Emergency Services 3 credits
This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network. F/S

FSC 201 Principles of Fire and Emergency Services Safety and Survival 3 credits
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network.
Prerequisite: FSC 104, FSC 121. F/S

FSC 203 Fire Prevention 3 credits
This course provides advanced knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspections; fire and life safety education; and fire investigation. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network.
Prerequisite: FSC 104, FSC 121, ENG 101. F/S

FSC 211 Fire Department Management and Planning 3 credits
This course explores the principles of organization as they apply to fire departments, including the history of the types and methods of fire department organization. In addition, students learn about insurance and fire defenses, personnel and equipment, water supply issues, departmental functions, and administrative issues. S

FSC 213 Public, Labor, and Human Relations 3 credits
This course examines labor relations and negotiations as they affect the fire service. Students examine the issues surrounding labor-management relations and the techniques used to identify the common interest of parties involved in labor negotiations. F

FSC 215 Fire Company Officership 3 credits
This course focuses on the scope and functions of the fire company officer in the fire department. Students explore the role of the fire service, departmental organization, and administrative and management procedures. The course also covers training, public relations, tactics and strategy, and fire prevention. F

FSC 231 Fire Codes and Ordinances 3 credits
This course covers the history and development of state and municipal codes as they influence the field of fire prevention. Students learn about the nature and scope of legal statutes and related codes in fire protection and control. F

FSC 223 Fire Protection Systems 3 credits
This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network.
Prerequisite: FSC 203. F/S

FSC 230 Fire Investigation I 3 credits
This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the firesetter, and types of fire causes. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network.
Prerequisite: FSC 104, FSC 121. F/S

FSC 233 Fire Investigation & Arson 3 credits
This course explores the history, development, and philosophy of fire investigation and detection. Areas of study include inspection techniques, gathering evidence, and development of technical reports. Students learn the fundamentals of arson investigation, processing of criminal evidence, and criminal procedures related to various state and local statutes. S

FSC 241 Fire Protection Hydraulics and Water Supply 3 credits
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network.
Prerequisite: MAT 95 or appropriate placement score. F/S

FSC 242 Hazardous Materials 3 credits
This course reviews basic chemistry and focuses on the problems related to the storing and handling of hazardous materials. Students learn the laws, standards, and fire-fighting practices used in extreme fire-hazard areas. Demonstrations are used to illustrate and supplement the class work. F/S

FSC 263 Introduction to Fire and Emergency Services Administration 3 credits
This course introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics, and leadership from the perspective of the company officer. This course follows the curriculum established by the Fire and Emergency Services Higher Education (FESHE) network.
Prerequisite: FSC 203, SPH 101. F/S

FRENCH (FRC)

FRC 111 Beginning French I 3 credits
The course covers the fundamentals of French grammar as a foundation for speaking, understanding, reading, and writing the language. It includes brief readings in the everyday aspects of the French-speaking world. In addition to gaining an understanding of the fundamentals of French grammar, students develop a basic working vocabulary of 500 words. Previous knowledge of French is not required. F

FRC 112 Beginning French II 3 credits
Students progress further in the foundations of the language, including understanding, speaking, reading, and writing. Students improve reading and speaking skills through the study of short pieces on contemporary French life and culture. Students study the French grammatical structure and develop a working vocabulary of 850 words. They also read and respond to short, simple French texts.
Prerequisite: FRC 111. S

FRC 211 Intermediate French I 3 credits
Students study French literature and culture through selected readings. They develop their reading, speaking, and comprehension skills of basic French and develop a working vocabulary of approximately 1,000 words.
Prerequisite: FRC 112. F

FRC 212 Intermediate French II 3 credits
The students master a working vocabulary of approximately 1,400 words and engage in more intensive practice through oral/aural drill and reading and discussing selected graded texts.
Prerequisite: FRC 211. S

GENERAL STUDIES (GST)

GST 101 Becoming A Successful Student 1 credit
The course focuses on the college environment and services, study and learning skills, self-awareness, and self-development. The course is taught in a seminar format. F

GST 110 College Survival Skills 3 credits
The course focuses on increasing success in college. Students identify and develop study and life skills by exploring learning styles, reading strategies, listening styles, memory techniques, note-taking skills, and test-taking strategies. Students learn goal setting, characteristics of successful students, time management, self esteem, effective end efficient communication strategies, positive health habits, and an appreciation and respect for diversity in an academic environment. Other topics include utilizing student support services and other campus resources, and developing strategies for using a personal computer as a study aid. F/S/SU

GEOGRAPHY (GEO)

GEO 210 World Regional Geography 3 credits
This course will give the student a foundation for understanding the geographic regions of the world. It will also introduce the basic methods of geographic analysis for understanding regional patterns, thereby enabling the student to gain insight into, and comprehension of, global culture and world events. Upon successful completion of the course, the student will be able to perform the following: locate and map basic place names of the globe (the continents, major realms and regions, major countries and cities, and major physical and cultural features); compare, contrast, and interpret maps and geographic data, and articulate his/her understanding of current global problems from a regional perspective.
Prerequisite: ENG 101. F/S

GERMAN (GER)

GER 111 Beginning German I 3 credits
This course covers the fundamentals of German grammar as a foundation for speaking, understanding, reading, and writing the language. Students explore brief readings in the everyday aspects of the German-speaking world to develop a basic working vocabulary of 500 words. Previous knowledge of German is not required. F

GER 112 Beginning German II 3 credits
This course emphasizes understanding, speaking, reading, and writing German. Students learn and develop basic reading skills through study of short contemporary pieces on modern German life and culture. Students study German grammar structure and develop a working vocabulary of 850 words. They also read and respond to short, simple German texts.
Prerequisite: GER 111. S

GER 211 Intermediate German I 3 credits
Students review the fundamentals of the German language and continue the study of German literature and culture through selected readings. Students continue to develop reading, speaking, and comprehension of German while acquiring a working vocabulary of at least 1,000 words.
Prerequisite: GER 112. F

GER 212 Intermediate German II 3 credits
Students develop intermediate German skills through intensive oral/aural drills, reading assignments, and discussion of selected graded texts. Students learn how to read, speak, write, develop, and master a working vocabulary of at least 1,400 words.
Prerequisite: GER 211. S

GERONTOLOGY (GRT)

GRT 101 Introduction to Aging 3 credits
This course focuses on issues in gerontology and normal psychological, social, and physical changes in the older adult. Students examine relevant theories in aging: disengagement, activity, developmental, and the concept of Shrinking Life Space. Students learn about problems facing the older person, such as isolation, dependency, illness, and institutionalization. External forces impinging on the aging individual will also receive attention. The course methodology includes guest lecturers from the community, visits to geriatric institutions, and experiences with the elderly population.
Prerequisite: ENG 100. F/S/SU

HEATING, VENTILATION & AIR CONDITIONING (HVC)

HVC 101 Basic Refrigeration Systems and Heat Theory 4 credits
This course introduces students to the basic concepts of heat transfer that dictate the behavior and operation of both heating and cooling systems. Topics lay the groundwork for the basic refrigeration cycle, including sensible, latent, and specific heat. Temperature and pressure concepts are also applied to refrigeration system models. This course includes a laboratory component.
Prerequisites: Enrollment limited to HVC majors only

HVC 102 Basic Electricity 4 credits
Students are exposed to AC fundamentals, Ohm's Law, and other circuit rules effecting circuit behavior, as well as basic electrical components used to develop series and parallel control circuits. Laboratory exercises focus on creating wiring diagrams, and then applying them to actual wiring practices on working circuitry. Students are trained in the use of electrical meters to develop troubleshooting procedures. Electrical Safety is incorporated into all activities. This course includes a laboratory component.
Prerequisite: Enrollment limited to HVC majors only

HVC 103 Air Conditioning Systems 5 credits
This course is a study of mechanical air conditioning equipment used in comfort cooling, heat pump, and other heating applications. Hands-on laboratories cover the installation and use of electrical controls, system evaluation, and mechanical and electrical troubleshooting of residential and light-commercial applications. This course includes a laboratory component.
Prerequisite: HVC 101; Enrollment limited to HVC majors only

HVC 104 Massachusetts Refrigeration Code 4 credits
This class explores the regulations of the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE 15) and the Refrigeration Safety Code to ensure that systems are assembled and installed to code specifications as well as being safe for buildings and its occupants. Laboratory exercises apply ASHRAE 15 and Environmental Protection Agency regulations to shop-built projects that illustrate compliance in both installation and service procedures. This course includes a laboratory component.
Prerequisite: HVC 101; Enrollment limited to HVC majors only

HVC 105 Massachusetts Electrical Code 4 credits
Wiring practices required by the Mass. Electrical Code (National Electrical Code) are detailed as they apply to the wide variety of heating, ventilation, air conditioning, and refrigeration equipment. Laboratory exercises demonstrate the application of these practices on controls, relays, timers, motors, circuit protection and electrical supplies for safety and functionality. This course includes a laboratory component.
Prerequisite: HVC 102; Enrollment limited to HVC majors only

HISTORY (HST)

HST 104 World History I: Beginning to 1500 3 credits
This course examines the world's ancient and pre-modern peoples, cultures, and civilizations. It emphasizes themes such as the development of agriculture and rise of civilization, formation of empires, development of religions, and economic and cultural interaction between regions of the world.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

HST 105 World History II: 1500 to World War One 3 credits
This course examines the convergence of the world's people, cultures, and civilizations on a global scale beginning around the 16th century. It emphasizes themes such as the emerging global economy, colonialism, revolution, industrialization, imperialism, and the rise of the nation-state.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

HST 106 World History III: World War I to Present 3 credits
This course examines recent and current interactions between the world's peoples, cultures, and civilizations. It emphasizes themes such as nationalism, migrations, technology, and economic and cultural interaction on a global scale.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

HST 115 U. S. History Beginnings to 1865 3 credits
This course surveys the period from pre-Columbian times to the end of the Civil War. Topics include Native American cultures and societies; colonization; origins and development of slavery; American Revolution; establishment of the United States; industrialization and immigration; westward expansion; sectional politics and Civil War. Students examine the Constitution in light of politics, society, economy, and culture of the period.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

HST 116 U.S. History: 1865 to Present 3 credits
This course surveys the period from the end of the Civil War to present-day. Topics include Reconstruction; Gilded Age, populism and progressivism; imperialism; World War I; Great Depression and New Deal; World War II; Cold War; the Sixties; conservatism; globalization and September 11th's aftermath. Students examine the Constitution in light of politics, society, economy, and culture of the period.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

HST 133 History of Puerto Rico 3 credits
This course examines selected topics concerning Puerto Rico from the pre-Columbian period through Spanish conquest and colonization, and considers its relationship with the United States since the Spanish American War. Students develop an understanding of the Native American and Spanish heritage of Puerto Rico. Sections are offered in Spanish.
Prerequisite: ENG 100 or appropriate placement score. S

HST 152 The Holocaust & World War II 3 credits
This course examines the rise of Nazism in Germany and the two-fold war of aggression it spawned against Germany's neighbor states and the world's Jewish community. Topics include the long history of militarism, nationalism, racist theory, and religious prejudice upon which Nazism was based, and the ways in which the Holocaust and World War II continue to affect our world.
Prerequisite: ENG 100 or appropriate placement score. S

HST 153 The Bible as History 3 credits
This course explores scripture both as a source of evidence and as a subject of study. Students examine history by applying the assumptions, tools, and methods of modern historical criticism to selected books and passages of the Old and New Testaments; identify the human authors of these documents; and evaluate the historicity and purpose of their narrative content. Students also examine the origins, history, and relationship of the Jewish and Christian faiths and their respective critical analyses and interpretations of scripture.
Prerequisite: ENG 100 or appropriate placement score. S

HST 157 Genocide 3 credits
This course examines the historical phenomenon of genocide—an attempt to annihilate an entire race, nation, culture, ethnicity, religion, or other identifiable human group. Students identify common characteristics of all genocides, focus on particular examples, and consider more recent manifestations of the phenomenon including hate crimes.
Prerequisite: ENG 100 or appropriate placement score. F

HST 202 Topics in the History of Civilization 3 credits
This course examines in-depth a selected topic from the history of civilization. Students develop greater knowledge, insight, and sophistication than might be obtained from a survey course while retaining historical and chronological perspectives. Topics vary from semester to semester.
Prerequisite: ENG 100 or appropriate placement score.

HST 203 African American History I, Beginnings to 1865 3 credits
This course examines the history of African Americans from their African origins and forced migration to and settlement in America to the end of the Civil War. Topics include the development of slavery, conceptions of race, struggle for freedom, development of African American culture, and life of free blacks before the Civil War.
Prerequisites: ENG 100 or appropriate placement score. F/S

HST 204 African American History II, 1865 to Present 3 credits
This course examines the history of African Americans from the end of the Civil War to present day. Topics include Reconstruction, Jim Crow, the Great Migration, black nationalism, the Harlem Renaissance, black culture and society, the civil rights and restorative justice/reparations movements, and the role African Americans today play in the economic, political, and social life of the United States.
Prerequisites: ENG 100 or appropriate placement score. F/S

HST 211 Topics in American History and Culture 3 credits
This course is an in-depth examination of a selected topic from the history of civilization. Students develop greater knowledge, insight, and sophistication than might be obtained from a survey course while retaining historical and chronological perspectives. Topics vary from semester to semester.
Prerequisite: ENG 100 or appropriate placement score.

HST 212 The United States Constitution 3 credits
This course examines the events and writings, which influenced the framers of the United States Constitution. It covers the principles, philosophies, and reasoning on which the Constitution is based, and how historical events, court cases, amendments, and evolving interpretations have made it a living document for each generation of Americans. Students consider the intent of the framers of the Constitution and judge the extent to which it has realized their expectations.
Prerequisite: ENG 100 or appropriate placement score.

HST 215 American Ethnic History 3 credits
This course explores the pluralistic dimension of American history. Students examine the experience of various racial, ethnic, and immigrant peoples in the political, economic, social, and cultural development of the United States.
Prerequisite: ENG 100 or appropriate placement score. F/S

HST 216 History of Native Americans in North America 3 credits
This course explores the history of Native Americans in North America from earliest archeological periods to the present. Students examine the migration and settlements of native peoples, development of Native American societies and cultures in the pre-Columbian era, their encounters with Europeans and Africans, and their responses to the challenges of conquest, dispossession, and colonialism in North America.
Prerequisite: ENG 100 or appropriate placement score. F/S

HST 232 Worcester's History 3 credits
This course traces the social, industrial, and political transformations in the "Heart of the Commonwealth" from the initial encounters of native Nipmuc people with Europeans in the 1600s to Worcester's present. Students examine the city's local perspective on important topics in American History including colonial town life; the American Revolution; the anti-slavery, women's rights and other reform movements; the Civil War; industrialization; immigration; ethnic diversity; and labor.
Prerequisite: ENG 100 or appropriate placement score. F

HST 241 History of Chinese Civilization 3 credits
This course surveys Chinese civilization from its origins to the present. Students examine geography, economy, society, culture, and politics. Students explore and discuss significant features of Chinese civilization to understand the ways that it deals with the same basic human problems as Western civilizations.
Prerequisite: ENG 100 or appropriate placement score. S

HOTEL & RESTAURANT MANAGEMENT (HRM)

HRM 101 Introduction to Hotel/Restaurant Management 3 credits
This course covers the hospitality industry, including food service, lodging, tourism, casinos, recreation, and convention management. Students learn the departments of hotels, restaurants, and travel organizations both individually and in relation to each other. Students examine the management process as it applies to the hospitality industry in order to select an area of interest for their own careers. F/S

HRM 111 Basic Foods: Basic Boucher & Patissier 4 credits
This course introduces commercial food preparation and production management. Students learn basic principles of commercial cookery, including methods of preparation, nutrition, cost, and organization and management of commercial kitchens. Topics include the purpose and use of recipes; portion control techniques; and the selection, cooking, and handling of stocks and sauces, soups, meat, poultry, fish, vegetables, starches and salads. Students learn basic principles of kitchen operation and management and the safe usage of food service equipment. Students individually plan, produce, and serve products in the student-run diner at the Worcester Senior Center.
Corequisite: HRM 115. F

HRM 112 Basic Foods: Garde-Manager & Saucier 4 credits
In the laboratory portion, students in a restaurant setting produce food, including appetizers, soups, salads, entrees, vegetables, and desserts. In the classroom portion, students calculate potential and actual operating food costs, assess and design menus and operations methods, and modify recipes for special diets or quantity production.
Corequisite: HRM 115. S

HRM 115 Sanitation Certificate 1 credit
This course examines the principles of sanitation in the hospitality and food service management fields. It focuses on sanitation and health, serving sanitary food, keeping a sanitary food environment, and managing a safe hospitality property. Students learn the skills necessary to gain certification in the National Restaurant Association Safe Serve Examination. F

HRM 121 Hospitality Law and Ethics 3 credits
This course examines the US laws that most impact hospitality operations in the areas of lodging, beverage service, foodservice, casino management, and convention planning. Using case studies, students learn hospitality management policies in order to minimize legal liability; the responsibilities and legal rights under the law for innkeepers, bartenders and employers; and the consequences of failing to meet those responsibilities. F

HRM 131 Food and Beverage Cost Control 3 credits
This course provides experience in identifying, analyzing, and creating controls for production, labor, and revenues necessary to ensure profitable foodservice operations. The main topics studied are forecasting, budgeting, and analyzing costs of food, beverages, and labor, in addition to the internal controls required for effective cost management. This course is required for both the foodservice track certificate and the foodservice track degree. S

HRM 135 Front Office Operations 3 credits
This course focuses on operations and procedures of lodging management for inns, hotels, resorts, clubs, and casinos in order to relate front office operations to other departments. Using property management software, students learn the mechanics of the front office in two general areas—customer service and financial management. In customer service, the course focuses on reservation inquiries, recording, availability, denials, check-ins, rate selection, walk ins, and room status. Students also learn procedures related to special equipment needs, housekeeping, settlement, and checkout. In the financial management section, students learn guest accounting, night audits, and revenue. F

HRM 136 Front Office Management 3 credits
This course focuses on the application of hospitality service principles related to customer service including planning, organization, implementation and management of service systems and staff. Through case studies, students experience communication, problem solving, and decision-making as related to the effective management of the front office. The course also stresses customer-centered concepts in the areas of hiring, training, and motivating employees. Students participate in the International Customer Service Association's CS certification program. S

HRM 137 Introduction to Casino and Gaming Operations 3 credits
This course uses a combination of lecture, guest speakers, experiential learning and independent study to examine the theory, practice and business of gambling. Students discover how the gambling industry operates, analyze many of the popular games, and explore the phenomenon and impact of legalized commercial gaming.

HRM 139 Bar and Beverage Management 3 credits
This course focuses on the management of beverage operations including wine, beer, and spirit liquor. Students study grape growing, fermentation, aging, production, and primary taste characteristics of wine; beer-brewing techniques and brew houses; and the main ingredients and production of whiskeys, bourbon, tequila, gin, and vodka. Students also learn the components of beverage operations including production, control, storage, and purchasing; and the marketing, service, and accounting functions. The course emphasizes the legal and social responsibilities of managing beverage operations. S

HRM 201 Hospitality Accounting 3 credits
This course covers managerial accounting in the hospitality industry including financial statement interpretation and cost accounting internal control. The course emphasizes the ability to analyze financial statements through the use of financial ratios. Students learn the use of the balance sheet, income statement, and the statement of cash flow; examine financial control systems used in the food and beverage management; and understand the budget cycle, sales forecasting, and the capital budgeting process in specific hospitality operations.
Prerequisite: ACC 101. S

HRM 215 Contract Foodservice Management 3 credits
This course covers the basic systems found in contract foodservice operations such as schools, healthcare facilities, and corporate environments. Students examine consumer needs with an emphasis on planning cyclical and pre-set menus, kitchen layout and design, and facilities planning and equipment selection. Students also review the foodservice and prototype contract, the contracting process, and catering services as a function of contract foodservice operations. Students attend a restaurant trade show or conduct research and complete a project on equipment and/or facility design.
Corequisite: HRM 115. F/S

HRM 216 Nutrition for Foodservice Management 3 credits
This course is an introduction to human nutrition in foodservice management, focusing on basic nutrition including macro and micronutrients, recipe development and modification, and nutrient analysis. It also covers food purchasing, receiving, storage, and preparation for optimum nutrient retention. It emphasizes menu planning and food preparation for foodservice managers in healthcare, institutional settings, and spas. Students plan the development and marketing of healthful menu alternatives, understand special diets, and understand the roles of culture and religion in diet and menu preparation.
Corequisite: HRM 111 or HRM 112. F

HRM 218 Dining Room and Banquet Management 3 credits
This course covers dining room staffing and employee training; basic service rules, techniques and styles (American, French, Russian, a la carte, buffet, butler); proper table setting, plating and presentation; and table etiquette. Students understand menu types (static, cycle, and market menus) and managing by menu. Using the student-run restaurant, students plan a merchandising and sales promotion and plan and develop special events, with emphasis on management approaches that achieve good customer relations and satisfaction. S

HRM 232 Hotel Meetings: Sales and Operations 3 credits
This course focuses on front-of-the-house operations, from meeting the client through planning and selling an event. Topics include deciding room size and set up, food and beverage requirements, guest services, special equipment requirements, cost, and contracting for the event. The course also covers back-of-the-house operations including accounting, contracting with vendors, and staff scheduling and management. Students learn the marketing, planning, and management of large and small hotel meetings, functions, and conventions. F

HRM 235 Management in the Hospitality Industry 3 credits
This course is a capstone course for hospitality management students. It is designed to enhance leadership ability while focusing on the principles of effective management in the context of the hospitality industry. Students study how to develop, motivate and empower high performance teams and to put quality management tools into action to increase sales and customer service. An assessment tool developed by the American Motel/Hotel Association (AMHA) enables students to develop an understanding of, and skills, in the following areas: coaching and counseling, communication, managing change, performance management, setting goals and standards, managing conflict, problem solving, and decision making. S

HRM 236 Destination Marketing and Management 3 credits
Students develop an understanding of destination marketing to a level where they are able to make marketing strategy recommendations for the promotion of tourism for a variety of visitors. A partnership with the Central Massachusetts Visitor and Convention Bureau serves as an experiential lab to promote the examination of the role of tourist, the tourism manager, and the central Massachusetts region as a destination. Topics covered in this course may change according to the current demand, events, or issues. F

HRM 299 Hotel/Restaurant Management: Cooperative Education 3-6 credits
This course provides a blend of classroom theory and practical job experience through periods of on-campus instruction and supervised off-campus employment. Cooperative Education helps students decide if they have selected a profession to which they are willing to commit themselves. Bringing field experience into the classroom discussion takes a new relevancy, and learning is enhanced. Individualized outcomes are developed among the student, a faculty supervisor, and the employer.
F/S/SU

HUMANITIES (HUM)

HUM 101 Critical Thinking and Problem Solving 3 credits
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.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

HUM 142 Internet Communications 3 credits
This course examines humans' relationship to cyberspace by analyzing the content and development of Web sites, search services, and e-mail. Students focus on material published in the humanities and evaluate sources from online databases to write a research project. Course topics include privacy and security issues, cyber ethics, copyright, online learning, censorship, Internet access, and Internet standards. Students create an online portfolio of course projects to demonstrate their ability to navigate the Internet with efficiency and to gain awareness of its power and limitations.
Prerequisite: ENG 100 and computer literacy. S/SU

HUM 147 Genocide 3 credits
This course deals with genocide—the attempted physical annihilation of an entire race, nation, culture, ethnicity, religion, or other identifiable human group. Students examine the phenomenon of genocide and identify characteristics common to all genocides and then focus on the particulars of a single genocidal event chosen by the instructor from history and current affairs. The course also examines related phenomena such as hate-crimes.
Prerequisite: ENG 100. S 2011

HUM 151 Forbidden Subjects 3 credits
This course explores censorship. Students gain a comprehensive overview of past and present censored material through extensive readings. Particular censored works are examined and discussed in class to enable students in developing rational thought processes.
Prerequisite: ENG 101. SU

HUM 210 Journaling in Context: New England's Great Thinkers 3 credits
This course introduces the New England Transcendental diarists of the nineteenth century, including: Henry David Thoreau, Ralph Waldo Emerson, Margaret Fuller, and Bronson Alcott. Students read significant journal entries written by these authors, and learn how to develop their own personal journal. Students take part in investigative exploration of journal entries from the nineteenth century with the objective of understanding chronological events, gathering insight regarding local and national matters, and correlating past cultural events to contemporary issues. Topics of discussion and research will consist of: social activism, utopian communities, societal experimentation, consumerism and industrialism, and personal philosophy.
Prerequisite: ENG 101. F

HUM 211 The Sixties in America 3 credits
This course introduces students to the dramatic events occurring in the decade of the 1960s. Students examine significant developments of the era through an exploration of various cultural media including texts, videos, art, music, and theater. The course covers Civil Rights and Black Power movements; the war in Vietnam and related controversies; the rise of the counterculture; the contemporary Women's Movement; the student revolution; and the beginnings of the Environmental Movement. Students examine the relevance of the events of the 1960s to the issues facing the 21st century.
Prerequisite: ENG 101. F/S

HUM 214 Great Debates of The Western World 3 credits
This course focuses on presenting opposing views of controversial questions. Students discuss classic issues such as romanticism vs. classicism, militarism vs. pacifism, and liberalism vs. conservatism. Students also examine topics including abortion, pornography, and genetic engineering. They learn how to explore the variety and complexity of human values while maintaining a framework of a rational and fair-minded approach to all sides of every dispute.
Prerequisite: ENG 101. S

HUM 231 The Movies, Politics, & the Critics 3 credits
This course introduces the terminology of filmmaking, basic principles of film criticism, and various Hollywood political controversies. Students explore topics such as montage, auteur theory, censorship, blacklisting, etc., and analyze works according to prescribed standards for film reviews. Students also examine major artistic, financial, and sociological innovations in the film making industry.
Prerequisite: ENG 101. SU

HUM 232 Survey of Hollywood Film 1920 to Present 3 credits
This course offers a foundational survey of Hollywood film from its inception through the present. Students study a chronological series of films selected to represent the ethno-cultural diversity of that history, films that demonstrate major developments in Hollywood film art over time. Students become familiar with the language of film, and the theoretical approaches and critical terminology used by film scholars to analyze the form. Students learn how to apply the theories and terms learned by use of them in class presentations and in class discussion, as well as in the writing of essays in the genre of film analysis.
Prerequisite: ENG 101. F

HUM 233 Play Production: Theory 3 credits
This course introduces students to the various aspects of play production: play writing, acting, directing, makeup, business matters, and dramatic criticism. It focuses on providing a basic appreciation of the whole dramatic experience and developing expertise in several areas of play production. Students rehearse and perform a scene from a play and to demonstrate an understanding of blocking techniques, character identification, line memorization, timing and rhythm, and creative problem-solving techniques.
Prerequisite: ENG 101. F/S

HUMAN SERVICES (HUS)

HUS 101 Introduction to Human Services 3 credits
This course focuses on the historical, political and social aspects of human services. Students gain core knowledge of common problems in living, consumer populations, helping models. Students learn about the agencies and services available in the Worcester area and identify strategies for effective delivery of human services. Upon completion students will be able to explain the value of participant empowerment, access appropriate supportive services, and expeditiously navigate the human service system.
Prerequisite: ENG 100. F/S

HUS 121 The Helping Relationship: Delivering Human Services 3 credits
This course explores the knowledge, skills and personal characteristics that are critical for an effective helping relationship. The helping relationship is one that partners with and empowers others. Course material is built upon research about human behavior, life stage theory, intervention strategies and strength-based practice. Using demonstration, lecture, role-play and hands on experience, students learn the fundamentals of: basic helping skills, crisis intervention, behavior modification, case management and accurate recordkeeping.
Prerequisite: ENG 100. F/S/SU

HUS 122 Community Development 3 credits
This course examines community development—a process of social action in which the people of a community organize themselves for planning and action. Students learn how people define their common needs, make group and individual plans to meet their needs; and, supplement community resources with services and materials from governmental and non-government agencies outside the community. Social, cultural, and cognitive processes involved in community development are examined through readings and hands-on projects. Upon completion students demonstrate an understanding of the theory and practice of community development strategies frequently used in health education and human services. F

HUS 125 Group Process for Human Services 3 credits
This course examines the theory, process, and practice of group work in human services through lecture and experiential methods. Students learn the value of groups, the stages of group development, the roles and tasks of the group facilitator, and the strategies for dealing with common group problems. Course material will focus on the unique issues of groups commonly found in human service programs: education, discussion, growth, support, and self-help. The experiential component provides the students opportunity to participate in a group with the goal of enhancing self-awareness of personal qualities and skills required for effective group leader roles.
Prerequisites: HUS 101 and HUS 121. F/S/SU

HUS 131 Introduction to Developmental Disabilities 3 credits
This course examines a variety of developmental disabilities such as mental retardation, autism, syndromes (e.g. Down Syndrome, Fetal Alcohol Syndrome), neurological, sensory, and health impairments, learning disabilities, and emotional and behavioral disorders. The course incorporates a sociopolitical perspective laws, legislation, court cases, and attitudes on the treatment and support of people with developmental disabilities. Effective teaching and intervention strategies are explored. Special attention is devoted to addressing barriers to integration and the impact on the individual and his/her family. Students explore their own beliefs and biases regarding people with disabilities and their possible role as change agents in society.
Prerequisite: ENG 100 or appropriate placement score, HUS 101. F/S

HUS 141 Community Service: Delivering Human Services 3 credits
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.
Prerequisites: ENG 100, HUS 101 and HUS 121. F/S/SU

HUS 143 Direct Support Practicum 3 credits
Students contract for a minimum of 10 hours per week at a practicum placement and a weekly seminar at the College. Practicum's 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.
Prerequisite: HUS 101. F/S

HUS 145 Special Topics in Developmental Disabilities 3 credits
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.
Prerequisite: HUS 101, HUS 131. F/S

HUS 151 Families and Children with Special Health Care Needs 3 credits
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 twenty (20) hours of practical experience including agency orientation, parent networking and self-advocacy groups.
Prerequisite: HUS 101. F/S

HUS 221 Cultural Competence for Human Service Workers 3 credits
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.
Prerequisites: ENG 101, HUS 101 and SOC 101. F/S/SU

HUS 231 Legal and Ethical Concepts in Human Services 3 credits
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.
Prerequisites: HUS 101, HUS 121 and HUS 141. F/S

Survey of Hollywood Film 1920 to Present 3 credits
This course offers a foundational survey of Hollywood film from its inception through the present. Students study a chronological series of films selected to represent the ethno-cultural diversity of that history, films that demonstrate major developments in Hollywood film art over time. Students become familiar with the language of film, and the theoretical approaches and critical terminology used by film scholars to analyze the form. Students learn how to apply the theories and terms learned by use of them in class presentations and in class discussion, as well as in the writing of essays in the genre of film analysis. (Course description as it would appear in the course catalog)
Prerequisite: ENG 101

HUS 243 Human Services Practicum 4 credits
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.)
Prerequisites: HUS 101, HUS 141, PSY 231. F/S

INTERDISCIPLINARY STUDIES (IDS)

IDS 101 Valuing Diversity 3 credits
This course focuses on multiculturalism and emphasizes the value of understanding and respecting cultural diversity in today's pluralistic societies. Students explore and discuss issues of race, ethnicity, gender, social class, religion, access, ability, sexual preference or orientation, language, age, size, and appearance.
Corequisite: ENG 100 or appropriate placement score. F/S

IDS 113 Ethical Issues in Business & the Professions 3 credits
This course is designed to examine the ethics of professional conduct, evaluate business practices and organizations, using the case study methods and confront students' ethical challenges facing the professional in the light of current business goals, values, and practices in relation to the constantly changing societal expectations.
Corequisite: ENG 100 or appropriate placement score. F

IDS 121 The True Believers: Perspectives on Terrorism 3 credits
This course examines the phenomenon of terrorism by exploring various theories that look into its nature. Students identify groups and tactics as well as the responses of government and law enforcement agencies to reduce incidences of terrorism.
Corequisite: ENG 100 or appropriate placement score. S

IDS 141 Perspectives on Aging 3 credits
This course explores the normal aging processes and problems that can arise as a result of aging. Topics to be included are as follows: biological changes associated with aging; psychological factors that impact on the adjustment to aging; health/illness issues; and economic conditions that may affect the life style of the aging person. The students understand the aging processes and the impact of these processes on individuals and on the social groups with whom they interact.
Corequisite: ENG 100 or appropriate placement score. S

IDS 200 Honors Colloquium: Special Topics 3 credits
This course is a team-taught seminar that serves as a capstone experience for students in the QCC Honors Program. Students examine timely issues from many disciplines using a variety of perspectives. The seminar provides a stimulating and challenging experience, covers a broad area of knowledge, and emphasizes inquiry, discovery, critical thinking, and discussion methods to encourage meaningful participation from both students and faculty.
Prerequisite: Enrollment in Honors Program or permission of Honors Coordinator. ENG 102-Honors, 30 college credits. S

IDS 215 Bioethics 3 credits
This course provides an introduction to ethical thinking as it relates to the life and health sciences. Students examine ethical issues surrounding continuing developments in biology and biomedicine; identify ethical components in the application of biological knowledge to areas of human activity; analyze an ethical problem in biology and human activity; and, analyze a problem in biology and medicine to arrive at an ethically valid course of action for the individual or society.
Corequisite: ENG 100 or appropriate placement score. S

INSURANCE (INS)

INS 121 Principles of Liability and Property Insurance 3 credits
This course introduces the insurance industry and risk management. Students learn what insurance is, who provides insurance, how insurance is regulated and how the financial performance of insurers is measured. Also covered are insurance marketing, underwriting, claims, insurance contracts, property loss exposures and policy provisions, liability loss exposures and policy provisions. An examination of risk management includes understanding losses and loss exposures, the risk management process, risk financing, risk control techniques, the risk manager's role, risk management in an organization, pre- and post-loss goals, and personnel exposure. Students sit for two American Institute for Chartered Property Casualty Underwriters (AICPCU) national exams: RM 350 (Risk Management) and INS 21 (Property and Liability Insurance).
Prerequisite: ENG 100
Co-requisite: INS 122. F

INS 122 Principles of Personal Insurance 3 credits
This course introduces student to the field of personal insurance. Topics covered include: insurance and society, personal auto policy, homeowners insurance, other residential insurance, other personal property and liability insurance, personal loss exposures and financial planning, life insurance, and health and disability insurance. In addition, students are introduced to commercial insurance. Students sit for the American Institute for Chartered Property Casualty Underwriters (AICPCU) national exam INS 22 (Personal Insurance).
Prerequisite: ENG 100
Co-requisite: INS 121. F

INS 123 Principles of Commercial Insurance 3 credits
This course introduces students to the field of commercial insurance. Topics covered include commercial property, loss of business income, commercial crime, equipment breakdown insurance, inland and ocean marine, commercial general liability, commercial auto, business owners insurance, farm insurance, Workers Compensation and Employers Liability, professional and management liability insurance, aircraft insurance, surety bonds, and miscellaneous coverages. Students sit for the American Institute for Chartered Property Casualty Underwriters (AICPCU) national exam INS 23 (Commercial Insurance).
Prerequisite: ENG 100, INS 121, INS 122
Co-requisite: INS 125
Restriction: In order to register for this course, students must provide proof of a passing grade on AICPCU national exams INS 21 and INS 22. S

INS 125 Delivering Insurance Services 3 credits
This course introduces students to the field of claims handling and customer service in the insurance industry. Topics covered include claim handling processes, practices, operations, and management as well as the essential principles of insurance policy. Students also learn the material covered in the AICPCU ASI 25 course including customer identification, customers and quality, the benefits of customer orientation, continuous quality improvement, process management, process improvement models and tools, leadership/teamwork/organizational structures, and monitoring and evaluating progress. Students sit for two American Institute for Chartered Property Casualty Underwriters (AICPCU) national exams: AIC 33 (Introduction to Claims) and AIS 25 (Delivering Insurance Services).
Prerequisite: ENG 100, INS 121, INS 122
Co-requisite: INS 123
Restriction: In order to register for this course, students must provide proof of a passing grade on AICPCU national exams INS 21 and INS 22. S

LIBERAL ARTS (LIB)

LIB 101 Introduction to Liberal Arts 3 credits
This course introduces the liberal arts intellectual tradition, the purpose of which is to help students on the journey of learning how to learn. It draws from the humanities, mathematics, natural, social, and behavioral sciences. Students examine a broad range of knowledge and possible professions, explore how human knowledge has developed and grown through history, and develop the ability to discuss multicultural relationships and connections among the various liberal arts through written and oral participation and reading from original sources.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

MANAGEMENT (MGT)

MGT 101 Introduction to Business 3 credits
This course provides a broad overview of the business world. Students learn to apply basic business concepts and principles to a variety of business situations. Topics include business terminology, the legal forms of business organizations, the impact of the economy on business, and the basic functions of management including marketing, banking and financing, accounting, and technology.
Prerequisite: ENG 100. F/S/SU

MGT 211 Principles of Management 3 credits
This course examines the primary functions of management. Students increase self-awareness; develop personal and interpersonal skills, lead group activities, and organize discussions. They learn how to analyze various business situations, defend possible solutions to problems, and communicate their ideas in effective written and oral formats.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

MGT 215 Human Resource Management 3 credits
This course focuses on the role of the human resources department, its function in the organization and how it supports the success of people at work. Students learn how companies recruit and select new employees, determine who gets promoted, and how salary and job performance measurement decisions are made. Students learn the importance of benefits and non-financial factors in selecting an employer, the impact of laws that protect employee rights, and how employees should use the HR staff for guidance on career development, education and training opportunities, grievances, coping with change, and personal issues that affect their jobs.
Prerequisite: ENG 100 or appropriate placement score. F/S

MGT 216 Entrepreneurship 3 credits
This course examines entrepreneurship — the ability to organize, manage, own, and assume the risk of a business venture. Students gain an understanding of the role of the entrepreneur, learn how to develop a business plan, and become familiar with business and management functions as they relate to the operations of a business. The areas of finance, marketing, law, tax, insurance, and credit are examined. In addition, students learn the competitive, economic, and personnel considerations necessary to organizing and owning a business.
Prerequisite: ENG 100. F/S/SU

MGT 221 Industrial Management 3 credits
This course examines production/management systems in a competitive industrial business environment. Students learn how industries develop manufacturing methods, schedule jobs, manage inventories, lay out plants, control quality, and increase productivity.
Prerequisite: ENG 100 or appropriate placement score. S

MGT 225 Quality Engineering Management 3 credits
In this course, students learn a broad body of knowledge required to achieve a competitive position through continuing process/product improvement by application of proven management, planning, and technical analytical techniques. The topics include planning for quality improvement through effective management at all company functional levels from design concept through to customer acceptance. Applicable statistical analytic techniques will be covered. Students who successfully complete this course will be able to carry out basic functions of quality engineering, planning and managing for quality; utilize quality cost data; and develop and utilize quality information and data analysis, as applied to producing high quality and reliable products.
Prerequisite: ENG 100 or appropriate placement score, MAT 122

MGT 235 Principles of E-Commerce 3 credits
This course examines commercial Internet activity and will explore the basic framework for understanding e-business strategy through environmental, technical, ethical, and legal concerns. Students will analyze the e-business models on line today and the strategic business planning involved. Internet research, case studies, and classroom activities will aid students in developing their own business plan.
Prerequisite: ENG 100 or appropriate placement score. S

MGT 299 Cooperative Work Experience Seminar 3-6 credits
This is a structured learning experience designed to provide students with the opportunity to apply classroom theory to a practical work experience. A seminar will be conducted so that students may exchange feedback about their work experience. The number of credits to be earned is determined by the number of weeks and hours per week of the cooperative work experience and the objectives of the students' learning contract.
Prerequisite: ENG 100 or appropriate placement score.

MANUFACTURING TECHNOLOGY (MNT)

MNT 101 Mechanical CAD I 3 credits
This course introduces computer-aided design (CAD) software. Students develop an understanding of the commands needed to produce a two-dimensional drawing. Topics include drawing setup, geometry creating, editing functions, layer techniques, dimensioning, model and paper space, title block creation, and plotting a completed drawing. Other related topics include multi-view drawings, selection and arrangement of orthographic views, section and auxiliary views, and isometric and oblique drawings. Students gain proficiency in the operation of a PC-based CAD system and a functional understanding of basic computer-aided drafting techniques.
Prerequisite: CIS 111 or CIS 115 or Approval of Program Coordinator. F/S

MNT 102 Mechanical CAD II 3 credits
Students study attributes, blocks and Externally Referenced drawing files (XREF), advanced dimensioning, manipulating geometry, slide creation, multi-view layouts, and an overview of three-dimensional operations. The major focus of the course is an individual design project and presentation achieved through extensive hands-on exercises. Students are prepared to take a CAD certification exam and to manage a computer-aided design project in industry.
Prerequisite: MNT 101. SU

MNT 103 Solid Modeling 3 credits
This course focuses on computer aided design topics needed to produce parts, assemblies and drawings using Industry prevalent Solid Modeling software. Students become familiar with screen layout, cursor feedback symbols, feature manager, constraint geometry, editing functions, and template creation. Extensive hands-on exercises allow students to create complex 3D extrusions from a series of 2D sketches and apply fillets, rounds, chamfers, and patterns. Additional topics include revolving sketches and extruding using shelling, ribbing, sweeping and lofting. Upon completion of this course, students are proficient in creating and animating drawing assemblies and associated part drawings, and producing a bill of materials, and have functional understanding of 3D parametric modeling software.
Prerequisite: MNT 101. F

MNT 105 Geometric Tolerancing and Blueprint Reading 4 credits
This course focuses on the use of blueprint reading and geometric tolerancing to depict the dimensional and performance requirements of individual parts or components. Blueprints control manufacturing processes and manufacturability by conveying specific information necessary to control the manufacturing operation, assembly, and quality outputs. Students gain the skill to transition from a two-dimensional pictorial drawing to a three-dimensional abject with size, shape, mass, and functionality. S

MNT 110 Manufacturing Processes I 3 credits
This course examines present day manufacturing processes and occupations. Students learn various manufacturing processes including precision inspection and measurement, forging and casting, and powder metal processing. Students gain an understanding of the properties of metal, process automation, and the basics of cost estimating. In addition, students learn a practical approach to managing a project to provide the technical experience necessary in current manufacturing industries. F

MNT 115 Instrumentation in Manufacturing 3 credits
This course covers practical applications of instruments that are frequently used in current manufacturing industries. Students learn an overview of basic electronic theory with an emphasis on the operational aspect components such as programmable logic controllers (PLCs), pressure gauges, transducers, strain gauges, electronic recorders, and controllers. Class projects help students develop the analytical ability necessary for using manufacturing instrumentation.
Prerequisite: MNT 110. S

MNT 120 Production Planning and Controlling 3 credits
Production Planning and Controlling are the essential elements of the Manufacturing conversion process. This is a problem-based course that allows students to develop basic principles and techniques of production and inventory control systems, including master planning, forecasting, inventory management, material requirements planning, capacity management, production activity control, lean production, and other modern production and inventory control techniques and issues. The role of production planning and controlling is to get the right resources in the right quantity to the right place at the right time as efficiently as possible.
Prerequisite: ENG 100. F

MNT 130 Quality: Fundamentals of Six Sigma 3 credits
TQM and Six Sigma Quality programs form an integral part of efficient, modern manufacturing techniques. This course focuses on the underlying principles and techniques of Total Quality Management (TQM) with the emphasis placed on TQM applications. Topics covered include, management philosophy; teachings of quality "gurus"; TQM models, standards, and implementation guidelines; process management tools, the applications, including SPC and Six Sigma. Students develop a working knowledge of the best practices in Quality and Process Management.
Prerequisite: ENG 100. S

MNT 140 Introduction to Lean Manufacturing 3 credits
This course focuses on entry-level knowledge of the "Lean Manufacturing" methodology. This course familiarizes students with the fundamental philosophy of "Lean Manufacturing" and provides them with a basic tool set that enables the identification, measurement, and elimination of non-value added activities in a manufacturing setting. Students gain the understanding that "Lean Manufacturing" maximizes product profit, has a minimal effect on product quality, and reduces overhead costs.
Prerequisite: ENG 100. F

MNT 210 Computer Numerical Control 4 credits
This course introduces the essential concepts of computer numerical control (CNC) and its impact on manufacturing and productivity. The course focuses on manual programming of different types of CNC systems, with a strong emphasis on the understanding of G and M codes used in current applications. Students learn to write a variety of part programs for both milling and turning operations.
Prerequisite: MNT 101.
Corequisite: MNT 102 or MNT 103. F

MNT 215 Fundamentals of Computer-Aided Manufacturing 4 credits
This course explores the fundamental concepts of computer-aided manufacturing through lectures and laboratory experience. Topics include machining using a graphical software package to generate part programs for a CNC mill and a thorough review of manual part programming with emphasis on how to use the CNC program. Students learn how to integrate the program with the machine to fabricate the part. Students develop proficiency in editing graphics and using turning software to create part programs for full-size CNC turning centers.
Prerequisites: MNT 102 or MNT 103, MNT 210. S

MNT 216 Manufacturing Processes II 4 credits
This course develops and expands skills learned in previous manufacturing courses. Students solve problems in manufacturing through analysis, measurement, and implementation of computer aided design (CAD), computer aided manufacturing (CAM), statistical process control (SPC), and computer numerical control (CNC) applications. Students participate in group projects to gain proficiency in various methods and tools. Students gain competency in critical thinking, working in teams, and project management skills applicable to process creation, maintenance, and development.
Prerequisites: MNT 102 or MNT 103, MNT 210. S

MNT 217 Process Automation and Robotics 3 credits
This course provides students with an overview of the systems and concepts involved in today's highly automated manufacturing environments. Robotic systems, an important component of an automated system, are also studied. Topics include automation design, robotic systems, manufacturing execution systems (MES), statistical process control (SPC), and Visual Basic programming. Students learn and practice systematic troubleshooting, using a highly automated manufacturing system as well as robotic systems. F, 2012

MNT 218 Lean Manufacturing and Six Sigma 3 credits
This course focuses on entry-level knowledge of the "Lean Manufacturing" methodology and includes the fundamentals of "Six Sigma". It familiarizes students with the fundamental philosophy of "Lean Manufacturing" and provides them with the tools that enable the identification, measurement, and elimination of non-value-added activities in a manufacturing setting. Students gain the understanding that "Lean Manufacturing" maximizes product profit, has a positive effect on product quality, and reduces overhead costs. Students develop a working knowledge of the best practices in quality and process management. S, 2012

MNT 220 Advanced Topics in AutoCAD 3 credits
This course focuses on advanced topics in AutoCAD. Topics include complex assembly drawings, World Coordinate System/User Coordinate System, Wireframes, 3D creation and manipulation of geometry, solid and parametric modeling, rendering, and selected topics from the Mechanical Desktop module in AutoCAD. Students learn competencies necessary for advanced computer-aided design including solid modeling and rendering.
Prerequisite: MNT 102. S

MNT 299 Cooperative Work Experience & Seminar 3 credits
This course provides students with a structured learning experience while applying classroom theory to a practical work experience. Students participate in a seminar to exchange information about their work experience. The number of credits earned is determined by the number of weeks and hours per week required by the cooperative work experience and the established learning objectives.
Prerequisite: Approval of program coordinator. F/S/SU

MARKETING (MRK)

MRK 111 Principles of Real Estate 3 credits
This is an introductory course covering the legal and economic factors involved in the buying and selling of real estate. The course will benefit anyone planning to take the salesperson's real estate examination. The successful student learns licensing laws, concepts of property, deeds and contracts, mortgages, financing, purchase and sale agreements, appraisals, and commission structures.
Prerequisite: ENG 100 or appropriate placement score. F/S

MRK 201 Principles of Marketing 3 credits
This course presents an overview of marketing management in modern organizations including an introduction to the concept of marketing, the role of marketing in society and the firm, marketing terms, and the various factors that influence marketing decision-making. Students learn how to apply those factors to analyze customers, competition, marketing strengths, and marketing weaknesses. Students study market research and selection, consumer buying behavior, and product development including pricing, promotion, distribution, and global marketing strategies.
Prerequisite: ENG 100 or appropriate placement score. F/S/SU

MRK 221 Sales & Sales Management 3 credits
This course examines the selling function in companies with emphasis on the dynamics of the sales process. Students learn how to qualify sales prospects, plan a presentation, secure and open the sales interview, deliver a product demonstration, handle objections, and close a sale. Areas of study include compensation, management of a field sales force, the development of leads, sales training, and leadership styles. Students also prepare a resume, learn job interview techniques, and gain an understanding of a career in sales.
Prerequisite: ENG 100 or appropriate placement score. F/S

MRK 231 Advertising 3 credits
This course focuses on the role and importance of advertising in the marketing plan of an organization. Students learn how to prepare a detailed advertising plan using the most appropriate media. Topics covered include the history of advertising, selecting effective media, creating an advertising message using the selected media, and how an advertising agency functions.
Prerequisite: ENG 100 or appropriate placement score. F

MRK 239 Internet Marketing 3 credits
This course examines the current technologies and their application in today's marketing opportunities through the Internet. The course introduces a variety of topics utilizing student Web site projects such as Internet operations, buyer and buyer's behaviors, sellers, legal issues, marketing research, products, brands, place, price and promotion, and data feedback and analysis.
Prerequisite: CIS 111, ENG 100 or appropriate placement score. S

MATHEMATICS (MAT)

MAT 090 Basic Mathematics Skills 3 credits
This course is designed for students with little or no background in mathematics. Major topics include the following: whole numbers, fractions, decimals, percents, ratios, proportions, basic statistics (finding mean and reading graphs, charts and tables) and an introduction to algebra. Technology tools are utilized in this course. All students are required to participate in a unified comprehensive final exam to be administered during final exam week and achieve a "C" or better on this exam (or appropriate placement on the placement exam) in order to move on to the next level of math courses.
Prerequisite: Appropriate Place Score. F/S/SU

MAT 095 Beginning Algebra 3 credits
This course covers all basic operations of real numbers, linear and literal equations, graphing lines (using tables, x and y-intercepts), the arithmetic of polynomial expressions including properties of exponents, solving and graphing linear inequalities, perimeters and areas of basic figures, scientific notation and intrasystem metric conversions. Technology tools are utilized in this course. All students are required to participate in a unified comprehensive final exam to be administered during final exam week and achieve a "C" or better on this exam (or appropriate placement on the placement exam) in order to move on to the next level of math courses.
Prerequisite: MAT 090 with a "C" or better on the MAT 090 departmental final exam or placement by the Computerized Placement Test. F/S/SU

MAT 098 Math Skills for Allied Health Careers 3 credits
This course focuses on practical and useful applications of mathematics for students intending to enter the health science fields. Students examine mathematical topics as they relate to health application. Topics include: basic arithmetic computations in health applications; review of algebra; systems of measurement; medication labels; prescriptions, and syringe calculations; modeling health applications with ratios and proportions; dosage calculations; basics of statistics; and logarithms, ionic solutions and pH.
Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or placement by the Computerized Placement Test. F/S

MAT 099 Intermediate Algebra 3 credits
This course covers major topics in the study of algebra. Students learn to factor polynomials (common factor, grouping, difference of squares and trinomials), perform arithmetic operations on rational expressions and complex fractions, and solve rational, quadratic (by factoring and formula) and literal equations. The course also covers applications including the use of the Pythagorean theorem, understanding the definition of radical expressions, simplifying radical expressions containing numerical and variable radicands, graphing linear equations using slope-intercept concepts, and solving 2x2 systems of linear equations by graphing and elimination. Technology tools are utilized in this course. All students are required to participate in a unified comprehensive final exam to be administered during final exam week and achieve a "C" or better on this exam (or appropriate placement on the placement exam) in order to move on to the next level of math courses.
Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or placement by the Computerized Placement Test. F/S/SU

MAT 100 College Algebra 3 credits
This course continues the areas of study presented in Intermediate Algebra with more advanced treatment. Students perform arithmetic operations on rational expressions; solve equations with fractions; factor expressions; simplify complex fractions; simplify exponential expressions, roots, radicals, and rational exponents; solve linear systems using several techniques; use the midpoint and distance formulas; recognize and graph the equation of a circle; solve linear and absolute value inequalities; solve quadratic equations by completing the square and by using the quadratic formula; solve equations containing radicals or absolute values; and perform arithmetic operations on radical expressions and complex numbers.
Prerequisite: "C" or better on the MAT 099 departmental final exam, or Placement by the Computerized Placement Test. F/S/SU

MAT 108 Applied Technical Mathematics I 4 credits
This course covers major topics in the study and applications of algebra and trigonometry. Students will review fundamental concepts of algebra and approximate numbers with problem-solving strategies. Students will learn to graph and write linear equations in several forms; graph functions; solve and apply systems of linear equations; apply perimeter, area, and volume to basic geometric shapes; factor polynomials; perform arithmetic operations on algebraic fractions; solve and apply quadratic equations; solve and apply right triangle trigonometry; be introduced to vectors. Technology tools are utilized in this course.
Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or placement by the Computerized Placement Test. F/S

MAT 111 Mathematics for Educators I 3 credits
This course focuses on the critical Mathematical concepts necessary for students who are pursuing an Early Childhood Education and/or GS Elementary Education degree. Students construct and apply problem solving techniques to solve problems, apply arithmetical operations on integers, rational numbers and decimals, and develop an understanding of mathematical relationships using equations, draw conclusions based upon geometric pattern and interpret data. Students construct geometric patterns and graphical data into algebraic equations; construct a geometric or graphical model given an algebraic equation. Students use measurement instruments, units, and procedures for problems involving length, area, angles, volume, mass, and temperature.
Prerequisite: MAT 099 with a "C" or better on the MAT 099 department final exam or placement by the Computerized Placement Test. Restricted to General Studies-Elementary Education Transfer Option and ECE Program students. F/S/SU

MAT 112 Mathematics for Educators II 3 credits
This course continues the comprehensive focus on the critical Mathematical concepts necessary for students who are pursuing an Early Childhood and/or General Studies Elementary Education degree. Students construct and apply problem solving techniques to solve problems, develop an understanding of mathematical relationships using equations, draw conclusions based upon geometric patterns and interpret data. A review of the fundamental concepts of functions and algebra is emphasized. Students develop a deep level of understanding of functions from an algebraic and graphical perspective in order to become successful elementary and middle school teachers. Other topics may include geometry, measurement, statistics and probability. Instructor modeling is an integral component of the course.
Prerequisite: MAT 111. Restricted to General Studies- Elementary Education Transfer Option and ECE students. S

MAT 121 Topics in Mathematics 3 credits
This course explores various areas in contemporary mathematics and consists of two components: required topics and optional topics. Required topics include mathematical patterns and problem solving, consumer finance, probability, statistics and Euclidean and transformational geometry. Optional topics may be chosen from the following: linear functions and applications; numeration systems; sets; logic; graph theory; election theory; apportionment; tessellations and fractals; and cryptography; in addition, instructors may also choose to expand upon the required topics.
Prerequisite: MAT 099 with a "C" or better on the MAT 099 department final exam or placement by the Computerized Placement Test. F/S

MAT 122 Statistics 3 credits
This course covers the essentials of statistics. Students learn descriptive and inferential statistics; charts (histograms, frequency polygons, ogives, and pie charts); measures of central tendency (mean, median, mode, and weighted mean); and measures of dispersion (range, variance, and standard deviation). Additional areas of study include discrete and continuous random variables; basic probability theory; the binomial distribution and its application in binomial experiments; standard and non-standard normal distributions; the Central Limit Theorem; confidence intervals for means, proportions, and variances; linear correlation and regression; and the one sample hypotheses test for mean (large and small sample), proportions, and variances.
Prerequisite: MAT 099 with a "C" or better on the MAT 099 department final exam or placement by the Computerized Placement Test. F/S/SU

MAT 123 College Mathematics I: Pre-Calculus 3 credits
This course focuses on the knowledge and skills necessary for advanced mathematics. Students expand binomial expressions using the binomial theorem; solve non-linear, and rational inequalities and write their solutions using interval notation; determine and write linear equations in several forms; explain the concept of function; graph functions using symmetry test; recognize and graph functions, including constant, linear, quadratic, polynomial, rational, exponential, and logarithmic functions; use function transformation techniques; perform composition and arithmetic operations on functions; find and graph inverses of functions; use properties of logarithms; and solve logarithmic and exponential equations.
Prerequisite: MAT 100 or appropriate placement score. F/S/SU

MAT 124 College Mathematics II: Trigonometry 3 credits
Students solve right and oblique triangles and related applications; perform vector computations and use vector concepts to solve applications; determine the values of trigonometric ratios of angles and the values of inverse trigonometric ratios of real numbers; work with angles measured in degrees-minutes-seconds or radians; solve uniform circular motion problems; learn the traditional trigonometric identities and use them to prove other identities; perform transformations of basic trigonometric graphs; write equations to describe specific instances of harmonic motion; and solve trigonometric equations.
Prerequisite: MAT 123. F/S/SU

MAT 125 Discrete Mathematics 3 credits
This course provides an introduction to the basic concepts in Discrete Mathematics. Topics include predicate and propositional calculus, sets, proof techniques, permutations and combinations, probability, relations, closure, partial order, functions, graph connectivity and shortest paths, and an introduction to languages, grammars and nondeterministic finite-state machines.
Prerequisite: MAT 123 Pre-Calculus or appropriate placement score. F

MAT 231 Applied Calculus 3 credits
This course begins with a review of the basic concepts of functions and function notation. After introducing the limit and continuity theorems on an intuitive basis, the study of differentiation begins. Typical derivative formulae are applied to polynomial, rational, implicit, exponential and logarithmic functions. Application topics include extreme, related rates, biochemical reaction, cost-benefit analysis, growth and decay, maximizing revenue, elasticity of demand, inflation, amortization, drug concentration, drug reaction, and continuous probability models. The basic rules of integration and the substitution method are introduced along with Riemann Sums and the Fundamental Theorem of Calculus. This course is designed for students considering a major in business, pharmaceutical, social, and life sciences.
Prerequisite: MAT 123 Pre-Calculus or appropriate placement score. F/S

MAT 233 Calculus I 4 credits
This course begins with a review of basic concepts of functions and functional notation. After introducing the limit and continuity theorems on an intuitive basis, the study of differentiation begins. Typical derivative formulae are applied to polynomial, rational, trigonometric, inverse trigonometric, implicit, exponential and logarithmic functions. Application topics include extrema, related rates, curve sketching, compound interest, growth and decay, velocity and acceleration. The basic rules of integration and the substitution method are introduced along with Riemann sums and the Fundamental Theorem of Calculus.
Prerequisite: MAT 124. F/S/SU

MAT 234 Calculus II 4 credits
This course focuses on expanded methods of integration and their application. Students learn to compute the customary antiderivatives of functions and to apply antidifferentiation to such areas as: volumes, work, fluid force, moments, centroids, arc lengths, and surfaces of revolution. The use of L'Hopital's Rule and the evaluation of improper integrals are examined. The convergence tests of infinite series as well as the Power, Taylor and Maclauren series are analyzed.
Prerequisite: MAT 233. F/S/SU

MAT 235 Calculus III 4 credits
This course covers conic sections, rotation of axis, plane curves, parametric equations, vectors; polar, cylindrical, and spherical coordinates and graphs; vector-valued functions, differentiation, and integration; functions of several variables, partial derivatives, gradients; applications of extrema of functions, Lagrange multipliers; multiple integrations; area, volume, center of mass, moment of inertia, change of variables, Jacobians; Green's divergence and Stokes' theorems. Students learn to use calculus to solve engineering and scientific problems. The course concludes with some elementary differential equations.
Prerequisite: MAT 234. F/S

MAT 237 Probability & Statistics for Engineers and Scientists 3 credits
This course focuses on statistics and engineering. It covers interpretation, description, and treatment of data; probability and probability distributions; binomial, geometric, and hypergeometric methods; poisson processes; gamma, beta, and weibull distribution; populations and samples; inferences, hypotheses, and significance tests; Bayesian estimates; curve fitting; the method of least squares; curvilinear regression, correlation, and experimental design. Students use calculators and statistical software to solve statistical problems.
Prerequisite: MAT 233. F/SU

MAT 238 Differential Equations 3 credits
This course covers definition of differential equations, solution of differential equations, separation of variables, homogeneous and nonhomogeneous solutions, Wronskian, second and higher order equations, solution of systems of linear differential equations, numerical methods, linear independence, the Laplace transform, transforms of derivatives, derivatives of transforms, the Gamma function, inverse transforms, and convolution theorem. Students use mathematical software to solve differential equations for numerical methods.
Prerequisite: MAT 235. S/SU

MAT 243 Linear Algebra 3 credits
This course covers systems of linear equations, matrices, reduced echelon forms, vectors in Rn, linear independence and transformations, matrix operations, inverse of a matrix, determinants, vector space, rank, subspaces, bases, eigen vectors and eigen values, the characteristic equations, diagonalization, complex eigen values, numerical methods for solving linear systems, and orthogonality. Students learn to use linear algebra to solve problems in differential equations, statistics, and engineering design. Students also use mathematical software to solve higher order systems of equations and matrices.
Corequisite: MAT 238. S/SU

MEDICAL SUPPORT SPECIALIST (MSS)

MSS 151 Clinical Procedures I 4 credits
This course covers introductory theory and techniques of medical assisting used to perform fundamental clinical assisting procedures. Topics include aseptic technique with infection control; measuring vital signs; preparing/maintaining treatment areas; interviewing techniques and recording of patient histories; preparing and assisting patients for procedures, electrocardiograms and monitoring test results.
Corequisite: ALH 151. F

MSS 211 Technical Writing for the Medical Environment 3 credits
This course provides theory and practice in the types of writing that students encounter in a medical office. Students perform assignments that provide practical experience in evaluating and reporting facts, understanding technical instruction, writing and assessing research documents, and designing effective proposals.
Prerequisite: ENG 101. S

MSS 251 Clinical Procedures II 4 credits
This course covers advanced theory and techniques of medical assisting skills including diagnostic testing procedures of hematology, blood chemistries, blood drawing (capillary and venous); emergency/first aid skills in the medical office; preparing for radiography; minor office surgery techniques and the physical agents that promote tissue healing.
Prerequisite: MSS 151. S

MSS 252 Principles of Pharmacology for Medical Assistants 2 credits
This course provides instruction in concepts and application of pharmacological principles. Focus of the course will be on drug classifications, principles and procedures of medication administration, mathematical systems and conversions, calculation of drug problems and medico-legal responsibilities of the medical assistant.
Prerequisite: MSS 151
Corequisite: MSS 251. S

MSS 299 Fieldwork Experience 4 credits
This is a 12-week, 180-hour unpaid externship at an appropriate, approved clinical site. Students participate in an integrated experience in which they apply the skills and knowledge learned in the medical assisting program.
Prerequisite: BIO 140, ENG 101, MSS 151
Corequisite: MSS 251, PSY 101. F/S

MUSIC (MUS)

MUS 103 The Fundamentals of Music 3 credits
This course covers music fundamentals, including notation, rhythm, scales, intervals, chords, basic harmonic progressions, melodic composition, and sight singing. F/S

MUS 115 Music of the Twentieth Century 3 credits
This course surveys major representative works by Mahler, R. Strauss, Debussy, Ravel, Stravinsky, Bartok, Schoenberg, Berg, and Webern, as well as principal American composers, emphasizing music appreciation and development of listening skills. S

MUS 121 Jazz in America 3 credits
This course introduces the various forms and styles of jazz (ragtime, Dixieland, swing, bebop, and modern) and the musicians and composers of each style, including Scott Joplin, Louis Armstrong, Duke Ellington, Charlie Parker, and George Shearing. Students develop a better understanding of the sources and roots of the various jazz styles and stylists. F/S/SU

MUS 123 Bach to Rock: Changing Styles in Music 3 credits
This course introduces students to music history and appreciation through an analysis of changing styles in music from the Baroque period to the 20th century. It is designed as an introduction to the language and art of listening to music. Students develop knowledge of the major forms, styles, and genres of music. F/S

MUS 203 Beyond the Fundamentals 3 credits
This course, a level 2 theory course, reviews briefly triads and 7th chord construction and continues with their inversions and application in four part voice leading. This course also covers figured bass realization, root movement, secondary dominants, modulation and modes.
Prerequisites: MUS 103. F

NURSE EDUCATION (NUR)

NUR 100 Paramedic to RN Bridge Course 1 credit
This one-credit course focuses on curriculum topics that are essential for graduates of the QCC Associate of Science Degree in Paramedic Technology Program who are seeking advanced placement into the QCC Associate of Science Degree in Nurse Education Program. Topics include the scope of nursing practice, holistic philosophy of nursing practice, ethical legal issues, grief/loss, activity and exercise, introduction to aging, skin integrity, nutrition and food, stress/coping and medication administration. The clinical lab component includes: Hygiene/bed bath/back massage/changing and occupied bed, principles of oral assessment/hygiene, transfers, range of joint motion, skin integrity and wound care (setting up a sterile field)/wound irrigation, catheterization and principles of medication administration. Successful completion of this on-credit course with a C or better enables students to enter NUR 101 a one-credit transition course.
Prerequisites: Graduate of the QCC Associate of Science Degree in Paramedic Technology Program with current proof of certification, has met admission requirements for the Associate Degree in Nurse Education Program, BIO 112, PSY 101. F/I

NUR 101 Advanced Placement Nursing I 1 credit
Nursing 101 Transition Course I is a one credit course designed for all qualified Licensed Practical Nurses seeking advanced placement into Nursing II (NUR 112) or Transition II (NUR 102). The course focuses on curriculum topics that are essential for the first semester Associate Degree nursing student. Topics include the philosophy and objectives of associate degree nursing education and of the Quinsigamond Community College Nurse Education Program; the nursing process, with emphasis on deriving nursing diagnoses, decision making, critical thinking and priority setting; Orem's Theory of Self care; and Erickson Theory of Human Development. The course also covers therapeutic communication techniques, multicultural factors affecting nursing practice, teaching/learning, informatics, health promotion and complementary alternative medicine. The clinical component includes practice and return demonstration of physical assessment techniques in the college nursing laboratory setting using fellow nursing students and Vital SIM technology.
Prerequisites: BIO 112, NUR 100 or admission to LPN to AND program, PSY 101.
Corequisites: NUR 103 (credentialed) and NUR 104 (credentialed).
Restriction: This course is restricted to those students who have met admission requirements for the Associate Degree in the Nursing program and hold a current Practical Nursing licensure from an approved program. I

NUR 102 Nursing Transition II 2 credits
The NUR 102 Transition Course is designed for the qualified Licensed Practice Nurse who has graduated form a Practical Nurse Education Program recognized by a formal articulation agreement. NUR 102 includes both theory and clinical lab practice, and will prepare the student for entry into NUR 211. Topics include the philosophy and objectives of associate degree education and of the Quinsigamond Community College Nurse Education Program; the nursing process, with emphasis on deriving nursing diagnoses as they related to selected health deviations including: fluid/electrolytes, perioperative care, shock, endocrine system healthcare deviations, cancer, immune system deviations and burns. Orem's Theory of Self Care is the guiding conceptual framework. Selected clinical experiences will include nursing process application from NUR 101 through nursing care plans, medication calculation review and IV therapy.
Prerequisites: Successful completion of NUR 101 with C or better or Special Approval
Corequisite: BIO 112, BIO 232, PSY 121.
Restriction: This course is restricted to those students who have met admission requirements for the Associate Degree in the Nursing program and hold a current Practical Nursing licensure and have graduated from an approved PN program that has an articulation agreement with QCC (graduated from QCC PN program or Assabet Valley within the past five years). S

NUR 103 Current Concepts in Nursing & Health Care I 1 credit
Current Concepts in Nursing and Health Care is the study of contemporary nursing in relation to historical development, social trends, and healthcare changes. The student discusses influences of the past on present day nursing, health care trends and legislation, challenges and issues for today's nurse, and future predictions for nursing.
Corequisites: BIO 112, PSY 101, and NUR 104. F/S

NUR 104 Fundamentals of Nursing 7 credits
This course provides an introduction to the role of the nurse in the health care system. Orem's Theory of Self-Care and Erickson Theory of Human Development are introduced and utilized as organizing frameworks. Students also learn the concept of therapeutic self-care demands. Students develop an understanding of and ability to use the nursing process as a method for assisting clients to meet self-care needs. Students develop basic communication skills in order to promote effective relationships with clients, families and members of the health team. Students participate in Nursing Practice Laboratory and planned clinical experiences to learn nursing skills.
Corequisites: BIO 112, NUR 103 and PSY 101. F/S

NUR 105 Medical Surgical Nursing I/Maternal Newborn 8 credits
The course focuses on content related to caring for perinatal clients and clients who have health care deviations that require specific nursing system interventions. Content will include health concerns related to the perioperative experience, cellular proliferation, nutrition, metabolic activity, cardiovascular disorders, substance abuse, reproductive issues, domestic violence and maternal-infant health. Students will use a developmental focus and a life span approach to concepts of health promotion, developmental needs, and health deviations. The course is based on Orem's Theory of Self Care, Erickson Theory of Human Development and the Nursing Process. Emphasis is placed upon meeting needs of clients whose therapeutic self-care demands exceed their capacity to engage in self-care activities. Selected learning experiences are provided in the care of perinatal clients and adult clients in the acute care, rehabilitation and community settings.
Prerequisites: NUR 101 or NUR 103 and NUR 104
Corequisites: BIO 232, PSY 121. F/S

NUR 111 Nursing I 7 credits
This course provides an introduction to the role of the nurse in the health care system. Orem's Theory of Self-Care and Erickson Theory of Human Development are introduced and utilized as organizing frameworks. Students also learn the concept of therapeutic self-care demands. Students develop an understanding of and ability to use the nursing process as a method for assisting clients to meet self-care needs. Students develop basic communication skills in order to promote effective relationships with clients, families, and members of the health care team. Students participate in Nursing Practice Laboratory and planned clinical experiences to learn nursing skills.
Corequisites: BIO 111, ENG 101, and PSY 101.

NUR 112 Nursing II 8 credits
This course focuses on caring for adult clients who have health care deviations that require specific nursing system interventions. Students learn to meet needs of clients whose therapeutic self-care demands exceed their capacity to engage in self-care activities. Topics include the perioperative experience, cellular proliferation, fluids and electrolytes, nutrition, metabolic activity, rest, and sexual needs. The course is based on Orem's Theory of Self Care, Erickson Theory of Human Development, and the nursing process. Students also participate in selected learning experiences in the care of adult clients in acute care and rehabilitation settings.
Prerequisites: BIO 111, ENG 101, NUR 111, PSY 101 or Credentialing of NUR 111.
Corequisites: BIO 112, BIO 232, PSY 121.

NUR 201 Medical Surgical Nursing II/Pediatric 10 credits
The course focuses on content related to caring for children and adult clients who have health care deviations that require specific nursing system interventions. . Topics include growth and development, respiratory and cardiac deviations, dermatologic conditions and burns, gastrointestinal system deviations, genito-urinary deviations, musculoskeletal deviations, specific neurological deviations and hematologic and immunologic deviations. The course is based on Orem's Theory of Self Care, Erickson Theory of Human Development and the Nursing Process. Selected learning experiences are provided in the care of adult and children in the acute care, rehabilitation settings and/or health care agencies.
Prerequisites: BIO 112, BIO 232, NUR 105, PSY121.
Corequisites: ENG 102, any HST, SOC 101 or 111. F/S

NUR 202 Advanced Medical Surgical Nursing III/Mental Health 10 credits
This course focuses on content related to mental health issues and the care of clients who experience health care deviations that require complex nursing interventions. Principles of pathophysiology, pharmacology, teaching, and management are incorporated into each unit. Specific topics include health care deviations related to oxygen, nutrition, elimination, protection from hazards, solitude and social interaction. The course is based upon Nursing Process, Orem's Theory of Self-Care and Erickson Human Development Theory. Students participate in clinical experiences with clients in acute, community, and psychiatric care settings. The clinical experience emphasizes application of nursing process, leadership, and management of complex clients.
Pre-requisites: ENG 102, any HST, NUR 201, SOC 101 or SOC 111.
Corequisites: NUR 203, Humanities Elective. F/S

NUR 203 Current Concepts in Nursing & Healthcare II 2 credits
Current Concepts in Nursing and Health Care is the study of contemporary nursing in relation to historical development, social trends, and health care changes and ethical issues. The student will discuss influences of the past on present day nursing, health care trends and legislation, challenges and issues for today's nurse. Management and delegation responsibilities of the professional practitioner will be included with theoretical content and application through vignettes and case study. As a result, the student will be able to describe the role and responsibilities of the Registered Nurse. The student will assess his/her career potential and future employment status. Student participation and presentation is required.
Prerequisite: NUR 201.
Corequisite: NUR 202. S

NUR 211 Nursing III 10 credits
This course is based upon Orem's Theory of Self-Care and Erickson Theory of Human Development. Students use a developmental focus and a life span approach to study concepts of health promotion, developmental needs, health deviations, and their interrelations. Topics include maternal-infant health, children's health, psychiatric/mental health nursing, using the nursing process to establish therapeutic self-care demands, common assessments, nursing diagnoses, and intervention strategies. Students participate in selected clinical experiences in the content areas at local hospitals and/or health care agencies.
Prerequisites: BIO 112, BIO 232, NUR 112, PSY 121 or Credentialing of NUR 111 and NUR 112.
Corequisites: ENG 102, any HST, SOC 101 OR SOC 111.

NUR 212 Nursing IV 10 credits
This course is based on Orem's Theory of Self-Care and Erickson Human Development Theory. It focuses on care of clients who experience health care deviations, who have self-care needs requiring partly compensatory, wholly compensatory, and supportive-educative nursing systems. Principles of rehabilitation, teaching, and management are incorporated in each unit. Specific topics include health care deviations related to oxygen, nutrition, elimination, and safety needs in adult patients. Students participate in clinical experiences with clients in acute and long-term care settings who are experiencing self-care deficits. The clinical experience emphasizes application of nursing process and beginning leadership skills.
Prerequisites: ENG 102, any HST, NUR 211, SOC 101 or SOC 111
Corequisites: NUR 221, Humanities Elective.

NUR 221 Current Concepts in Nursing & Health Care 3 credits
This course focuses on the study of contemporary nursing in relation to historical development, social trends, health care changes, and ethical issues. Students discuss influences of the past on present day nursing; health care trends; and legislation, challenges, and issues relevant to today's nurse. Other topics include management and delegation responsibilities of the professional practitioner, both in theory and in application. Students analyze the role and responsibilities of the registered nurse and prepare for entry into practice through assessment of their career potential and future employment goals.
Prerequisites: NUR 111, NUR 112, NUR 211
Corequisite: NUR 212. F/S

OCCUPATIONAL THERAPY (OTA)

OTA 101 Introduction to Occupational Therapy: Concepts & Interventions 3 credits
This course provides an introduction to the occupational therapy profession. Students study the history, philosophy, and ethics of the profession. Students develop an understanding of the concept of occupation, and how activity is used to provide treatment interventions. The course examines the different settings in which a Certified Occupational Therapy Assistant can work, and teaches the basic written and oral communication skills required by the healthcare profession. F

OTA 103 Group Process and Interventions 4 credits
This course describes group dynamics and processes and examines how groups are used to provide occupational therapy treatment. Students learn how to plan, lead, and facilitate educational and task groups. In the laboratory, students practice planning and leading a variety of therapeutic groups. The course includes 15 hours of Level I fieldwork leading groups in a community setting.
Prerequisite: OTA 101. S

OTA 105 Developing Professional Behaviors 3 credits
This course examines the professional behaviors that are required in a health care setting. Students learn the importance of ethical behavior, dependability, cooperation, empathy, and other behaviors that health care professionals must demonstrate. Students learn how to establish and maintain a therapeutic relationship, how to communicate clearly when speaking and writing, and how to pursue continuing education. This course also covers the development of a professional portfolio, resume writing, and interview skills to help graduates obtain employment.
Prerequisite: OTA 101. S

OTA 131 Occupational Therapy: Methods and Modalities I 3 credits
This course provides an introduction to the use of daily living tasks, group skills, and crafts as therapeutic tools. Students learn specific treatment techniques valuable to the occupational therapy profession and perform an in-depth study of several activities to determine their therapeutic value. Students assume the role of teacher to instruct others in various activities, and to explore how these activities can be used therapeutically with clients. The course consists of 2 hours of lecture and 3 hours of laboratory per week.
Corequisite: OTA 101. F

OTA 211 Occupational Therapy with the Older Adult 3 credits
This course examines the basic concepts of aging, including theories, trends, and policies. Students study the concepts of wellness and disease prevention, major developmental theories of aging, and how to apply these theories to occupational therapy practice with adults. Students write a research paper on one aspect of aging.
Prerequisites: OTA 101, PSY 121. F

OTA 215 Developmental Problems and Practice with Children 4 credits
This course examines the role of occupational therapy practitioner in medical and educational settings for children. Students study normal child development and how to provide services to children who have exceptional needs. Students learn to communicate with families, teachers, doctors, and other professionals on behalf of children and are introduced to the federal laws that apply to provision of services to children. The laboratory component includes a minimum of 15 hours Level I fieldwork, which consists of observation and supervised practice in an off-campus child-centered facility.
Prerequisites: OTA 101.
Corequisite: PSY 121. S

OTA 221 Concepts And Occupational Therapy In Mental Health 4 credits
This course examines a range of common psychiatric disorders and prepares OTA students to distinguish between normal and dysfunctional behavior. Students learn to develop observational skills and explore evaluation and treatment techniques. In the laboratory component, students practice evaluation and treatment activities. The laboratory includes a minimum of fifteen hours Level I fieldwork, which consists of observation and supervised practice in an off-campus mental health facility.
Prerequisites: OTA 101, OTA 103, PSY 101. F

OTA 223 Concepts And Occupational Therapy: Interventions with the Physically Challenged 4 credits
This course examines the characteristics of physical disabilities. Students study disabilities and the impact of these disabilities on the client's ability to perform routine activities. Students learn evaluation and treatment techniques that are used to help adults with physical disabilities to live independent and productive lives. The laboratory component includes a minimum of 15 hours Level I fieldwork, which consist of observation and supervised practice in an off-campus facility that treats adult physical disabilities.
Prerequisites: BIO 111, OTA 101. F

OTA 231 Occupational Therapy: Methods and Modalities II 3 credits
This course assists advanced students to master occupational therapy treatment techniques. Students learn the application of occupational therapy techniques in simulated therapy situations; review and develop treatment plans, evaluations and documentation reports; and, practice written and verbal communication used in the practice of occupational therapy. The course consists of 2 hours of lecture and 3 hours of laboratory per week.
Prerequisites: OTA 101, OTA 131. F

OTA 241 Occupational Therapy Field Placement I 7 credits
This course is an experienced-based learning opportunity in which students put theory into practice. Students provide occupational therapy treatment and practice professional skills necessary to fulfill the role of an entry-level therapist in this field while working under the supervision of an experienced occupational therapist.
Prerequisites: All occupational therapy course work. S

OTA 242 Occupational Therapy Field Placement II 7 credits
This course is an experienced-based learning opportunity in which students put theory into practice. Students provide occupational therapy treatment and practice professional skills necessary to fulfill the role of an entry-level therapist in this field while working under the supervision of an experienced occupational therapist.
Prerequisite: All occupational therapy course work. S

ORIENTATION (ORT)

ORT 107 Strategies for College and Career: College Orientation 1 credit
This course is designed for first time college students who want to become familiar with college resources, procedures, and the overall college environment. Topics include understanding course syllabi, course schedules and college terminology; identifying and utilizing college resources; and strategies to become a successful college student. F

ORT 108 Strategies for College and Career: Learning & Study Skills 1 credit
This course will assist students in gaining the necessary study and learning skills to succeed in college. Topics include identifying learning styles and strategies; developing time management and organizational skills; improving note-taking, reading comprehension, and test-taking skills. F

ORT 109 Strategies for College and Career: Career & Academic Planning 1 credit
This course will assist the student in developing an individualized, web-based career and academic plan. Students will gain knowledge of career assessment results, career information, labor market trends, decision-making skills, and QCC programs of study. Students will formulate realistic short and long-term career and academic goals. F

ORT 110 Strategies for College and Career 3 credits
First time college students who want success and direction in their college experience gain practical skills that are directly applied to selection of a college major and future career paths. Students also gain effective learning strategies, and information on how to navigate and use college procedures and resources. Specific topics include promoting self knowledge through assessments, researching and obtaining career information, developing and practicing study and time management skills, and improving communication and decision making skills. Students integrate information about self, careers, and college through the final project in a Career/Life Plan (CAPS Plan). F/S/SU

PHILOSOPHY (PHI)

PHI 102 An Introduction to the Art of Wondering 3 credits
This course covers the nature and development of philosophy, with the problem of humans as a unifying theme. Students explore the major philosophies in each historical period and critically examine the significance of a philosophical question and major philosophical themes.
Corequisite: ENG 100 or appropriate placement score. S

PHI 104 Introduction to the Art of Loving 3 credits
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.
Corequisite: ENG 100 or appropriate placement score. F

PHI 121 World Religions 3 credits
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.
Corequisite: ENG 100 or appropriate placement score. SU

PHI 123 Native American Belief Systems 3 credits
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.
Corequisite: ENG 100 or appropriate placement score. S

PHI 131 Man And Morality: An Introduction to Ethics 3 credits
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?
Corequisite: ENG 100 or appropriate placement score. F/S/SU

PHI 143 Existentialism & the Human Situation 3 credits
This course examines existentialism in terms of it major themes, origins, effects on literature and psychology, and major personalities in the existential movement.
Corequisite: ENG 100 or appropriate placement score. S

PHI 201 Judaism, Christianity and Islam 3 credits
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.
Prerequisite: ENG 100. F/S

PHI 203 Philosophy of Technology 3 credits
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.
Prerequisite: ENG 101. S

PHI 250 Special Topics in Philosophy 3 credits
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.
Prerequisites: Two philosophy courses. S

PHYSICAL EDUCATION (PHE)

PHE 103 Standard First Aid and Personal Safety 3 credits
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 emergent situations. Upon successful completion, students earn a nationally recognized certification for First Aid and CPR and AED. F/S

PHYSICS (PHY)

PHY 101 Physics I 4 credits
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 Basic Engineering but may be recommended for students who have not yet completed calculus.
Corequisite: MAT 124. F

PHY 102 Physics II 4 credits
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.
Prerequisite: PHY 101. S

PHY 103 Physics for Respiratory Care 2 credits
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.
Prerequisite: MAT 095 with a "C" or better on the MAT 095 departmental final exam or placement by the Computerized Placement Test. S

PHY 105 General Physics I 4 credits
This course covers measurement, kinematics, vectors, dynamics, Newton's laws, circular motion, gravitation, work and energy, conservation of energy, linear momentum and collisions, rotational motion about a fixed axis, moments of inertia, and angular momentum and its conservation. Students perform related laboratory experiments.
Prerequisite: MAT 233. S/SU

PHY 106 General Physics II 4 credits
This course covers general rotation, static equilibrium, elasticity, stress and strain, fluids, density, pressure, oscillations, simple harmonic motion, wave motion, sound, temperature, ideal gas law, kinetic theory of gases, heat and the Laws of Thermodynamics, entropy, and the Carnot engine. Students perform related laboratory experiments.
Prerequisites: MAT 234, PHY 105. F/SU

PHY 205 General Physics III 4 credits
This course covers electric charge, electric field, Gauss' Law, electric potential, capacitance, dielectrics, electric currents, resistance, Ohm's Law, DC circuits, magnetism, sources of magnetic field, electromagnetic induction and Faraday's Law. Other topics include inductance, AC circuits, Maxwell's equations, light, lenses and optical instruments, wave nature of light, diffraction and polarization, special theory of relativity, and quantum theory and models of the atom. Students perform related laboratory experiments.
Prerequisites: MAT 235, PHY 106
Corequisite: MAT 238. S/SU

POLITICAL SCIENCE (PSC)

PSC 201 United States Government 3 credits
This course examines the structure and operation of the United States government as it has developed within the framework of the Constitution. Students explore topics such as civil liberties, political parties, the election process and contemporary problems in government and politics.
Prerequisite: ENG 100. F/S/SU

PSC 212 The United States Constitution 3 credits
This course examines the events and writings that influenced the framers of the United States Constitution. It studies the principles, philosophies, and reasoning on which it is based, and how historical events, court cases, amendments, and evolving interpretations have made it a "living" document for each generation of Americans. Students consider the intent of its framers and judge the extent to which it has realized their expectations.
Prerequisite: ENG 100.

PSC 221 State & Local Government 3 credits
This course examines the development, organization and function of state and local governments within the United States. Students analyze and compare functions of the governors, state legislatures and courts, as well as explore the relationships among local, state and federal governments.
Prerequisite: ENG 100. F/S/SU

PRACTICAL NURSING PROGRAM

PNP 101 Practical Nursing I 10 credits
This course examines contemporary basic nursing practice and the role of the practical nurse. Students study nursing theory and techniques of fundamental nursing skills concurrently in classroom, laboratory, and long-term and rehabilitation clinical practice settings. The course emphasizes health assessment, health maintenance, and adaptation to illness with the older adult. Nursing process is introduced as the framework for meeting the client's identified self-care needs. Students acquire a level of competency in basic skills.
Prerequisite: Acceptance to the PNP Program.
Corequisites: BIO 140. F

PNP 111 Introduction to Pharmacology 3 credits
This course examines fundamental pharmacological concepts, drug sources and forms, controlled substance schedules, pregnancy categories, and drug references. Students learn the ethical and legal responsibilities associated with medication administration; and, review basic math concepts, common systems of measurement, and calculation of drug dosages. The course focuses on nursing principles essential to safe administration of medication. Anti-infective and immunologic agent drugs serve as the model for discussion and demonstration.
Prerequisite: Acceptance to the PNP Program.
Corequisites: BIO 140. F

PNP 201 Practical Nursing II: Medical/Surgical Nursing of the Adult/Aged 10 credits
This course focuses on medical surgical health deviations affecting all body systems in the adult population. The nursing process is used as the basis for discussion of assisting clients in adapting to acute or chronic health deviations, and interventions that facilitate client movement to self-care. Health deviations are presented in a systematic approach by building upon knowledge of applied and social sciences. Students participate in learning experiences on selected clinical units in health care facilities in the Worcester County area.
Prerequisites: PNP 101, PNP 111
Corequisites: PNP 204, PNP 210, PNP 222, PNP 233. S

PNP 202 Practical Nursing III: Pediatric/Maternal/Newborn/ 8 credits
Leadership Management Nursing
This course focuses on the specialties of maternal-newborn, pediatric, and leadership nursing. Topics include growth, development, and physiologic needs of the client throughout pregnancy, labor, delivery, and during the post-partum period; and health problems common to children from infancy through adolescence. Students also study health maintenance, accident prevention, the emotional impact of hospitalization; and roles, responsibilities and typical job functions of the graduate practical nurse. Students participate in selected clinical experiences within affiliating acute, long-term care and community agencies.
Prerequisites: BIO140, PNP 101, PNP 204, PNP 111, PSY 101, PSY 121, PNP 201, PNP 210, PNP 222, PNP 233. SU

PNP 204 Concepts in Mental Health 1 credit
This course presents an overview of psychiatric illness and issues of altered mental health across the life span. Students begin to integrate basic nursing skills while recognizing the mental health needs of the client. Topics include psychopathology and common mental health disorders. Pharmacodynamics are discussed and integrated into the overall plan of care with emphasis on the effects on the client. Students learn about mental health agencies existing within the community.
Prerequisites: PNP 101, PNP 111, PSY 101, PSY 121.
Corequisites: PNP 201, PNP 210, PNP 222, PNP 233. S

PNP 210 Nutrition Concepts in Health and Illness 1 credit
This course focuses on concepts of normal nutrition, principles related to health maintenance, and nutritional modifications required during states of illness. Students correlate principles of normal nutrition with therapeutic diets needed to promote health in culturally diverse individuals experiencing health deviations. Students acquire knowledge of dietary management of clients with a variety of pathological conditions.
Prerequisites: BIO 140, PNP 101, PNP 111.
Corequisites: PNP 201, PNP 204, PNP 222, PNP 233. S

PNP 222 Clinical Pharmacology 2 credits
This course examines the actions, uses, common side effects, adverse reactions, contraindications, and average dosage of the most commonly prescribed drugs, utilizing the framework of the nursing process. Students study drug classifications and the effects of drugs on the body systems, with emphasis on techniques used for solving dosage problems. Students learn three systems of measurement associated with medication administration and dosage calculation.
Prerequisite: PNP 111
Corequisites: PNP 201, PNP 204, PNP 210, PNP 233. S

PNP 233 Trends in Practical Nursing 1 credit
This course focuses on topics that prepare students both personally and vocationally for entrance into the nursing profession. It expands on legal and ethical considerations discussed in PNP 101 Practical Nursing I and introduces students to expectations placed on the graduate practical nurse. Topics include social issues that impact the health care system such as domestic abuse and homelessness, and the role of social service agencies. Students explore skills necessary for entry into the nursing workforce, including job search skills, resume and cover letter development, interviewing skills, and legal and licensure considerations.
Prerequisites: PNP 101, PNP 111
Corequisites: PNP 201, PNP 204, PNP 210, PNP 222. S

PSYCHOLOGY (PSY)

PSY 101 Introduction to Psychology 3 credits
In this survey course, the student becomes aware of and appreciates the various influences upon behavior. The topics covered include, but are not limited to, the nervous system, sensation and perception, motivation, learning, emotion, and personality. Through an investigation of these areas, within a multiplicity of cultural contexts, the student understands the diversity of the human condition.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

PSY 115 Self Assessment and Career Planning 3 credits
This course emphasizes self-discovery, the workplace, life decisions, and career/future planning within a multicultural framework. Students explore psychological theories and apply those theories to their own personal situations to formulate career/life plans. Students identify their abilities and explore their values, interests, motives, motivations, behaviors, personalities, and interaction styles. Students acquire and develop skills for career planning, job searching, and understanding job satisfaction to develop a Career/Life Plan (CAPS Plan).
Prerequisite: ENG 091 and ENG 096 or appropriate placement score. F/S/SU

PSY 117 Human Relationships & the Family 3 credits
This course examines the factors that affect dating, courtship, commitment, marriage, and cohabitation in order to understand the dynamics of the family and human relationships. Topics include communication, intimacy, jealousy, abuse, termination of a relationship, differences of gender, race, religion, socio-economic level, and the effect of stereotypes.
Corequisite: ENG 100 or appropriate placement score. S

PSY 118 Psychology of Interpersonal Relations 3 credits
This course examines behavior in a variety of interpersonal situations including groups, family and the workplace. Students explore the dynamics of communication, group process, and other behavioral concepts. They share experiences in the classroom and participate in group projects that combine theory and practice. The course emphasizes varied and changing work environments. Students utilize a wide range of interpersonal skills to gain a more complete learning experience, greater personal satisfaction, and improved work efficiency in a variety of situations.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

PSY 119 Psychology of Personal Influence & Self-Improvement 3 credits
This course emphasizes the basics of operant and classical conditioning and how each can be used in practical ways. Students learn to relax and desensitize to certain conditioned stimuli; to identify behaviors clearly; and to define, measure and state criteria for reinforcement. They create graphs concerning measured behavior and analyze the graphs in order to determine the effectiveness or need for reinforcement of the behaviors. The course also covers research methods, the ethics of behavior modification, the influence of cultural differences upon the consequences of behavior and upon conditioned stimuli, and the impact of predispositions and past experiences.
Corequisite: ENG 100 or appropriate placement score. S

PSY 121 A Survey of Life Span Development: Conception to Death 3 credits
This course examines the span of human development from conception to death. Students explore the processes that occur throughout the life stages, the continuity of the life span, and general development and its surrounding issues and events. Students acquire accepted vocabulary for this area of study and relate course topics to their own lives.
Prerequisite: PSY 101
Corequisite: ENG 100 or appropriate placement score. F/S/SU

PSY 123 Human Development I: Conception to Adolescence 3 credits
This course surveys human development from conception through the middle years. Topics include the central issues of biological, psychological, sociological, and cognitive development. Students explore the theories of Freud, Erikson, Piaget, and others. Students examine both stage and behavioristic approaches of viewing human development; the interaction between physical and psychological growth; the relationships and differences between the developing child and societal settings; and cross-cultural research.
Prerequisite: PSY 101. F/S

PSY 124 Human Development II: Adolescence 3 credits
This course covers the adolescent years and stresses biological, psychological, sociological, and cognitive development. Topics include the adolescent in present-day society and important psychological and sociocultural factors and theories that explain adolescent development. Students examine several theories relating adolescent growth and development.
Prerequisite: PSY 101. F/S

PSY 142 Human Sexuality 3 credits
This course covers social, cultural, and psychological perspectives of human sexuality. Students explore differences related to gender role formation, sexual orientation, sexual attraction, premarital sex, teenage pregnancy, sexually-transmitted diseases, and other related topics within a context of multicultural diversity. Students study specific topics of human sexuality and the research and the professionals in that field. Students examine their own values, beliefs, and behaviors with respect to these topics, and establish ways of applying this information to their own sexuality.
Corequisite: ENG 100 or appropriate placement score. F/S

PSY 157 Psychology of Management 3 credits
This course covers a variety of management techniques, practices, and philosophies that are in use in today's work environment. Students learn effective time management, delegation, problem solving and decision-making, communication and listening techniques, and proven motivational and leadership behaviors. Additional topics include examining effective team building strategies and practices common in today's workplace that are used to accomplish business goals. The course utilizes a multicultural framework to reflect the global nature of business today.
Corequisite: ENG 100 or appropriate placement score. S

PSY 158 Human Relations in Organizations 3 credits
This course examines the nature of organizations to facilitate students' entry into, and success within, organizational settings. Topics include the factors that influence individual behavior in organizations and the interrelationships between psychological and other social sciences. Students learn how these sciences contribute to overall organizational experiences and self-development. They examine types of organizations, effective motivational techniques, communication essentials, team development, and leadership practices. Students also examine global and multicultural influences that contributing to the nature of organizations and organizational success.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

PSY 181 Social Psychology 3 credits
This course introduces students to the systematic study of human social behavior. Students consider how people perceive and react to others and how humans are affected by social situations. Students explore theoretical perspectives of social psychology, motivation, social cognition, the presenting self, persuasion, social influence, affiliation, friendship, love, prosocial behavior, aggression, prejudice, stereotyping and discrimination, groups and global social dilemmas. Upon completion of the course students demonstrate a comprehensive understanding of social psychology through appropriate assessment tools.
Corequisite: ENG 100 or appropriate placement score. S/SU

PSY 182 Psychology of Consumer Behavior 3 credits
This course explores psychological theories and research and consumer research techniques used in advertising and merchandising. Students explore motivation, perception, learning, personality, attitude formation, and communication as they relate to consumer purchasing practices. Course topics include the consumer behavior of specific reference groups, classes, cultures, subcultures, and cross-cultural groups.
Corequisite: ENG 100 or appropriate placement score. S

PSY 211 The Psychology of Group Dynamics 3 credits
This course examines behaviors and dynamics of groups. Students examine the theories and research findings used to make groups effective and learn skills to apply this knowledge to practical situations of small group interactions.
Prerequisite: PSY 101. F

PSY 231 Introduction to Counseling 3 credits
This course focuses on introductory issues in counseling and helps the beginning practitioner develop counseling skills. Topics include the role of the counselor as it relates to self-awareness, confidentiality, counseling ethics, basic counseling concepts including listening, giving feedback, and confrontation, and other relevant subjects. Students learn appropriate counseling skills and develop and appreciation of relevant issues in the counseling field.
Prerequisite: PSY 101. F/S/SU

PSY 235 Counseling Methods 3 credits
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.
Prerequisite: PSY 231. S

PSY 241 Psychology of Women 3 credits
This course uses a developmental perspective to explore critical milestones and significant life events experienced by most women. Students examine the social and psychological issues that effect women's development and women's roles in society.
Prerequisite: PSY 101. S

PSY 242 Psychology of Men 3 credits
This course covers male development from biological, intrapsychic, and social-learning perspectives. Topics include exploration of male relationships including father-son, mother-son, men-women, and men-men. Students examine aggression and war, gender differences, the Men's Movement, sports, and rites of passage. They learn how to understand masculinity in the context of personality theories and of diverse multicultural forces.
Prerequisite: PSY 101. F

PSY 261 Theories of Personality 3 credits
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.
Prerequisite: PSY 101. S

PSY 262 Abnormal Psychology 3 credits
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.
Prerequisite: PSY 101. F/S/SU

PSY 273 Chemical Dependency 3 credits
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.
Prerequisite: PSY 101. F/S/SU

PSY 277 Neurology of Behavior 3 credits
This course examines the physiological, biological, and molecular bases of a variety of human and animal activities. Students explore learning, memory, aging, pathology, sleep, dreaming, emotion, motivation, personality, sexuality, addiction, and aggression. Topics include genetics, neuroanatomy, neurophysiology, and neuropharmacology.
Prerequisite: PSY 101. S

PSY 280 Issues in the Profession of Psychology 3 credits
This course examines issues of psychology which require critical thinking, awareness of pertinent research, and importance of underlying assumptions. Students explore areas of standardized testing, diagnostic labeling, psychosurgery, and electroconvulsive therapy. Additional course topics include deception in research, the disease model, religious values in psychotherapy, genetic influences upon behavior, and issues that influence the future of the field. Students develop research skills by investigating issues of cultural diversity as well as students' own values and biases.
Prerequisites: PSY 101 and a second psychology course. S

PSY 281 Methods in Psychology 3 credits
This course focuses on short experiments and hands-on research projects. Topics include development, implementation, and evaluation of research designs; learning and memory; sensation; perception; social psychology; and other subjects covered in introductory-level psychology courses. Students explore topics first-hand to understand the methods used by psychologists to study behavior.
Prerequisite: PSY 101. S

RADIOLOGIC TECHNOLOGY (RDT)

RDT 102 Patient Care & Ethics in Radiology 3 credits
This course introduces students to the professional, ethical, and legal framework of current radiology and healthcare practices, including the role of the radiographer within this system. Students learn to solve problems of possible ethical and/or legal situations through course activities. Students learn basic patient care principles and skills needed for their initial clinical experiences including monitoring breathing, heart rate and blood pressures; recognizing changes in a patient's well-being; safe transport of patients; effective communication with various types of patients; and current information on infection disease control and basic medications as they pertain to radiology.
Prerequisite: Accepted to RT Program. F

RDT 104 Radiographic Medical Terminology 1 credit
This course covers basic medical, technical, and radiographic positioning terminology utilized in the profession of radiologic technology. Using the Damon systems approach to learning medical terminology, students acquire a vocabulary of 350 medical terms and 50 medical acronyms. Additionally, students learn and demonstrate positioning terminology specific to radiology and interpret medical information commonly found in patients' charts and on radiology exam requests.
Prerequisite: Accepted to RT Program. F

RDT 110 Fundamentals of Radiographic Equipment and Medical Imaging 5 credits
This course introduces the components of radiographic imaging equipment, the nature of x-rays and their production, the process of creating radiographic images (specifically the influence of exposure factors, beam restriction, and patient tissue factors), and basic radiation safety practices as needed in the clinical setting. Students gain hands-on experience in equipment operation through laboratory activities which demonstrate the principles discussed in class. Students learn to state properties of EME and x-rays; diagram interactions; employ the cardinal rules for radiation protection; calculate basic exposure factors; and effectively operate the radiographic unit to meet specified criteria.
Prerequisite: Accepted to RT Program. F

RDT 112 Medical Imaging II 3 credits
This course examines medical imaging principles with emphasis on image acquisition and processing, image receptors and accessory devices impacting overall image quality. The features of optimum image are thoroughly discussed. Image analysis methods are introduced and practiced to develop students' ability to recognize suboptimum images and determine appropriate corrective action(s). Lab activities allow students to implement the principles discussed in class and demonstrate the effects of correct and incorrect utilization of imaging equipment and techniques.
Prerequisite: RDT 110. S

RDT 121 Radiographic Positioning & Anatomy I 3 credits
This course provides initial information related to proper positioning of the human body for medical diagnostic imaging. Students study intricate anatomy and specific positioning procedures of the upper and lower extremities, chest, and abdomen. Students practice these skills through laboratory activities before performing them on live patients in their clinical assignments. Students learn the skeletal anatomy of specified body parts, identify specific structures within these anatomical regions, and simulate any exam procedure discussed during the course.
Corequisites: RDT 102, RDT 104. F

RDT 122 Radiographic Positioning & Anatomy II 3 credits
This course continues to develop students' positioning skills with focus on specific anatomy and positioning procedures of the pelvis, hip, bony thorax, lumbo-sacral, thoracic and cervical spine, GU and GI systems. Students practice these skills through laboratory activities before performing them on live patients in their clinical assignments. The course focuses on problem solving for atypical imaging conditions requiring modification to the usual positioning procedure. Students learn the skeletal anatomy of specified body parts, identify specific structures within these anatomical regions, and simulate any exam procedure discussed during the course.
Prerequisite: RDT 121. S

RDT 131 Medical Radiography Clinic I 2 credits
This course focuses on developing basic skills for the practice of radiography. Students learn proper methods to radiograph and care for patients with emphasis on equipment manipulation, patient care, darkroom procedure, and chest and abdomen radiography. Students develop these skills at a clinical site under direct supervision. They advance from observation and assisting with procedures, to performing the exam with indirect supervision. Students assess radiographic images for quality, accuracy, and to suggest options for improvement.
Corequisites: RDT 110, RDT 121. F

RDT 132 Medical Radiography Clinic II 5credits
This course expands students' clinical skills through their participation in more varied and complex radiographic procedures with emphasis on imaging the upper/lower extremities, pelvis, spinal column and GU and GI systems. Students gradually advance to perform these procedures on more acute patients and under atypical conditions. Students continue to develop their ability to critique images of procedures learned during the previous and current semesters. This course extends beyond the spring semester to include the month of June (40 hours/week). During this period, students focus on fluoroscopy exams of the GI system and are introduced to mobile and surgical radiography procedures.
Corequisites: RDT 112, RDT 122, RDT 141. S

RDT 141 Radiation Science 2 credits
This course covers the properties of particulate and electromagnetic radiations, sources of exposure, the biological implications of irradiation, the medical uses of radiation, and dose limitation methods. Students learn how to answer patients' questions regarding exposure and how to provide appropriate protection for themselves, their patients, the clinical staff, and the general public.
Prerequisites: RDT 110. S

RDT 211 Medical Imaging III 2 credits
Students complete their study of imaging principles pertaining to radiography, fluoroscopy, mobile imaging and tomography with emphasis on developing their ability to analyze medical images and determine corrective actions through suggested modifications of exposure factors and/or imaging equipment. Methods of developing and adjusting exposure techniques and all factors influencing image quality are summarized. The principle of electronic imaging methods are further discussed and include methods of digital image management. Students begin to plan the development of a personal image portfolio due during the fourth semester of the program.
Prerequisite: RDT 112. F

RDT 221 Radiographic Positioning & Anatomy III 3 credits
This course focuses on the specific anatomy and common procedures used for imaging the cranio-facial region, the modifications necessary to performing imaging procedures at the patient's bedside or in surgery using mobile radiographic and C-arm equipment and methods for adapting imaging procedures to trauma and pediatric patients. An introduction to the sectional perspective of anatomical structures of the head, thorax, abdomen and pelvis is included. Students simulate the procedures presented and utilize critical thinking skills to solve positioning problems related to atypical, acute, and trauma patients in this course during separate laboratory activities.
Prerequisite: RDT 122. F

RDT 231 Medical Radiography Clinic III 5 credits
This course focuses on the development of students' clinical skills with emphasis on performing fluoroscopy, mobile, and surgical exams, as well as imaging the bony thorax, facial bones, and sinuses. Students expand their skills with trauma procedures; are introduced to pediatric imaging; assume independent care of stable and mildly acute patients; and closely assist with more severely acute patients. Students use problem solving and critical thinking skills in the management of non-typical imaging situations and the continued assessment of image quality.
Corequisites: RDT 211, RDT 221, RDT 245. F

RDT 232 Medical Radiography Clinic IV 5 credits
This course concentrates on refining students' skills in performing all mandatory and elective procedures required for graduation and eventual employment as an entry-level radiographer. Upon completion of this course, students are eligible for examination for certification by the American Registry of Radiologic Technologists. Students work independently, with indirect supervision, on all exams for which they have been evaluated as competent. Advanced imaging procedures are presented and include specialized cranio-facial imaging, basic special procedures, trauma, pediatric, and surgical exams. Students are encouraged to experience advanced modalities such as CT, MR, angiography, nuclear medicine, and sonography.
Corequisites: RDT 251, RDT 252. S

RDT 245 Medical Radiographic Equipment & Quality Assurance 4 credits
This course includes the principles of mechanics, electrostatics, electrodynamics, magnetism, electromagnetism, and circuitry. Students examine these concepts in detail and apply them to the design and operation of radiographic and fluoroscopic systems. Students also learn how radiologic quality assurance programs are developed and implemented. Laboratory sessions feature hands-on demonstrations of the principles discussed in lecture and allow students to perform quality control tests on the campus ionized radiographic unit and accessory equipment.
Prerequisite: RDT 112. F

RDT 251 Imaging Modalities 2 credits
This course presents the basic equipment and principles of the imaging modalities within the profession of Radiologic Sciences; inclusive of mammography, vascular imaging and computed tomography; at least two of the following modalities are also presented: nuclear medicine, radiation therapy, magnetic resonance imaging and sonography. The similarities of imaging principles between these modalities and radiography are about alternate imaging procedures and provide guidance for future career advancement. Guest speakers from the various modalities are invited to provide first hand perspectives and educational requirements. Students read related professional articles and create a personal imaging portfolio.
Prerequisite: RDT 211. S

RDT 252 Radiology Seminar 2 credits
This course presents a series of mini-courses designed to more thoroughly develop students' skills as health care providers. Topics include issues of medical ethics and cultural diversity related to healthcare delivery; care of trauma and pediatric patient in radiology; cardiovascular interventional procedures with review of cardiovascular anatomy & function; and oral presentations given by each student related to minor special imaging procedures.
Prerequisites: BIO 112, RDT 211, RDT 221, RDT 231. S

RDT 254 Medical Imaging Topics 3 credits
This course covers the basic concepts of health and illness. Topics include disease processes affecting various bodily systems with special emphasis on the radiographic appearance of pathologies; modalities employed in the differential diagnosis of disease; and the fundamentals of pharmacology in radiology. Basic principles of contrast media and medication administration will be reviewed and simulated. Students develop a better understanding of the methods physicians employ to diagnose illness, and the role of the radiographer in total patient care.
Prerequisites: BIO 112, RDT 211, RDT 221, RDT 231. S

RDT 262 Cross-Sectional Anatomy 3 credits
This course focuses on the appearance and relationships of anatomical structures in multiple projections. It emphasizes anatomy commonly examined through the imaging modalities of CT, MR and ultrasound. Course materials are presented in lecture form. Students will schematically draw organ relationships at various levels in the body and in various projections. Students develop a working knowledge of multiplanar anatomy, applicable for any imaging modality.
Prerequisites: BIO 112 or program coordinator's permission. Alternate Springs. S

RESPIRATORY CARE (RCP)

RCP 103 Fundamentals of Respiratory Care 2 credits
This course covers the theoretical knowledge base upon which entry-level clinical practice is founded. Topics include physical principles relevant to respiratory care, including gas and fluid dynamics; medical gas regulation, delivery, and basic therapeutics; aerosol and humidity delivery and basic therapeutics; and principles of infection control and sterilization. A student-directed medical terminology course is also included.
Corequisite: RCP 121. F

RCP 104 Fundamentals of Respiratory Care II 2 credits
This course introduces theoretical concepts, which are the basis for select therapeutic modalities employed in respiratory care. Students learn medical gas therapy (hyperbaric, nitric, helium and carbon dioxide therapy); chest physical therapy; airway clearance techniques; monitoring of gas exchange and lung expansion therapy. The concept of Mechanical Ventilation is introduced and explored.
Prerequisites: RCP 103, RCP 121.
Corequisite: RCP 122. S

RCP 111 Medical Lectures I 3 credits
This course covers normal pulmonary and cardiovascular anatomy and physiology, ventilation, oxygen transport, carbon dioxide transport, and oxygen saturation. An introduction to the pathophysiology associated with oxygen deficiency will also be included. F

RCP 112 Medical Lectures II 3 credits
This course provides an introduction to acid-base physiology and blood gas interpretation. Topics covered in the course include: oxygenation and external respiration; oxygen transport and internal respiration; blood gas classification; the assessment/treatment of hypoxemia and shunting; the assessment and treatment of hypoxia, acid-base homeostasis; the regulation of acids, bases and electrolytes; the differential diagnosis of acid-base disturbances; recognition of mixed acid-base disturbances and their treatment; and introduction to non-invasive blood gas monitoring. Clinical case studies relevant to the topic(s) under discussion will be reviewed.
Prerequisite: RCP 111. S

RCP 113 Medical Lectures III 3 credits
This course is designed to familiarize students with the following areas of medical assessment: physical examination (both chest and general), laboratory (including arterial blood gases), electrolytes, chemistry, hematology, chest radiography, preoperative, neurological and cardiovascular assessment.
Prerequisites: BIO 112, RCP 112. F

RCP 114 Medical Lectures IV 3 credits
This course explores the etiology, clinical presentation, pathologic features, diagnostics and treatment of pathologies commonly encountered in Respiratory Care practice. The focus is upon cardiopulmonary and other systems disorders as these present in the adult client. Case studies/independent research/writing and physician lectures are utilized to help promote the student's understanding and to develop the student's critical thinking skills.
Prerequisites: BIO 112, RCP 113. S

RCP 121 Clinical I 3 credits
This course introduces students to the basic principles involved in the administration of respiratory care. Topics include routine patient care, medical gas therapy, oxygen administration devices, infection control, emergency procedures, and chemical disinfection and sterilization. In the lab component, students review and apply relevant theory, assemble/disassemble and troubleshoot equipment, and practice client care skills in a clinical simulation environment.
Corequisite: RCP 103. F

RCP 122 Clinical II 3 credits
This is a supervised clinical rotation in an affiliating hospital. Students continue to build on competencies acquired during the first semester while acquiring additional experience in chest physical therapy, arterial blood gases, lung inflation techniques, tracheobronchial aspiration, and airway clearance the emphasis is on day-to-day therapeutic respiratory procedures. The laboratory component provides a clinical simulation environment and covers equipment and procedural skills related to the lecture materials in RCP 104 Fundamental of Respiratory Care II. Students review, demonstrate, and apply relevant theory, assemble/disassemble and troubleshoot equipment, and practice client care skills related to course topics. Skills checklists are completed.
Prerequisites: RCP 103, RCP 121, RCP 141
Corequisite: RCP 104. S

RCP 131 Cardiopulmonary Technology 2 credits
This course covers pulmonary function testing, invasive and non-invasive diagnostic procedures, and techniques utilized to assess patients with pulmonary or cardiovascular diseases and sleep disorders.
Prerequisites: BIO 112. F

RCP 141 Pharmacology 3 credits
This course covers basic principles of general pharmacology and is designed to meet the needs of the Respiratory Care practitioner. Topics covered in this course include: basic principles of pharmacology, specific modes of drug action, and indications, contraindications, potential side effects and dosages of drugs commonly utilized in the treatment of respiratory, cardiovascular and critical care patients.
Corequisite: RCP 111. F

RCP 221 Clinical III 5 credits
This course is an advanced supervised clinical experience in intensive medical, surgical, pediatric, and neonatal intensive care units. Students develop practical skills in all aspects of ventilatory management, monitoring, arterial blood gases, and all other therapeutic modalities provided in intensive care.
Prerequisites: BIO 112, RCP 122. F

RCP 222 Clinical IV 5 credits
This course is an advanced supervised clinical experience. Students acquire practical skills in critical care, pulmonary rehabilitation, neonatal, pediatrics, and other specialty areas. Students correlate theoretical principles to practical applications.
Prerequisites: BIO 112, RCP 221. S

RCP 230 Critical Care I Laboratory 1 credit
The course provides a laboratory environment in which students will learn the theoretical foundations and practical skills necessary to provide Respiratory Care to an adult client in a critical care setting. Topics to be covered include: the initiation, maintenance and discontinuation of mechanical ventilatory support, airway care, and monitoring. Additional topics may be added as time permits.
Prerequisite: BIO 112. SU

RCP 231 Critical Care II 3 credits
This course covers a variety of topics relevant to critical Respiratory Care practice as it pertains to adults. Topics include: a review of techniques/protocols used in the initiation, monitoring and discontinuance of mechanical ventilatory support; monitoring of the adult patient in the ICU (includes hemodynamic, neurological, renal, hepatic and nutritional monitoring); a review of acid-base disturbances and clinical acid-base states; pulmonary artery blood gases (physiologic significance); hyperbaric therapy; nitric oxide and helium therapy; interpretation/significance of ventilatory waveforms; calculations and formulas relevant to practice and to credentialing examinations; chest tubes and pleural drainage systems; and, if time permits, discussion of less frequently encountered techniques and procedures such as ECMO, IAB counterpulsation, liquid ventilation, and others.
Prerequisite: RCP 230. F

RCP 243 Neonatal and Pediatric Respiratory Care 3 credits
This course covers the normal and pathophysiological events that affect the cardiopulmonary status of the fetus, infant, and child. Students study fetal development, the nature and physiology of neonatal and pediatric pathology, and the application of this information in the clinical setting. Other topics include neonatal resuscitation and advanced life support.
Prerequisites: BIO 112. S

RCP 245 Respiratory Care Seminar 2 credits
This course is intended to strengthen student skills and knowledge in the processes of Respiratory Care and to build proficiency, professionalism and community spirit. It is specifically designed to prepare the Respiratory Care student to take the N.B.R.C. credentialing examinations. Preparation for the clinical simulation component of the registry examination is provided through academic software. Students will complete a Senior Project meant to encourage student involvement in the Respiratory Care profession while promoting the importance of community service.
Prerequisite: BIO 112
Pre/Corequisite: RCP 222. S

SCIENCE (SCI)

SCI 103 Earth Science 3 credits
This course is an introduction to the science of Earth. Students apply fundamental physics and chemistry to the study of Earth's composition, origin and development. Topics include geology, oceanography, hydrology, earthquakes, volcanoes and other natural hazards.
Prerequisites: MAT 095 with a "C" or better in MAT 095 on departmental final exam or appropriate placement score and ENG 100 or appropriate placement score. F/SU

SCI 104 Climate and Weather: Causes and Effects 3 credits
The focus of this course is the science related to weather and climate, how humans affect weather and climate, and weather and climate's effect on humans. Students use basic laws and theories of physics and chemistry to describe and explain the composition, structure, and energy distribution of Earth's atmosphere plus atmospheric phenomena, such as global warming/cooling, the greenhouse effect, ozone depletion, air pollution, severe storms, rainbows, auroras, weather, and climate. Students examine climate change and techniques to measure climate change and compare Earth's atmosphere to that of other planets.
Prerequisite: MAT 095 with a "C" or better in MAT 095 on departmental exam or appropriate placement score and ENG 100 or appropriate placement score: ENG 100 or equivalent. S/SU

SCI 105: Integrated Science: Earth and Space 4 credits
This course focuses on the basic concepts of astronomy and earth science. Students apply fundamental physics and chemistry to the study of the physical world they live in, and, through the laboratory component, gain an understanding of the methods and applications of science. The course is designed for but not limited to students in Elementary and Early Childhood Education Programs.
Prerequisite: ENG 100, MAT 095 with a "C" or better in MAT 095 on departmental exam or appropriate placement score. F/S/SU

SCI 106: Integrated Science: The Living World 4 credits
The course covers the basic concepts of life science and examines the interactions of living organisms with the physical world they inhabit. Students apply fundamental physics and chemistry to various topics in biology and environmental science, and, through the laboratory component, gain an understanding of the methods and applications of science. This course is designed for but not limited to students in Elementary and Early Childhood Education programs.
Prerequisite: ENG 100, MAT 095 with a "C" or better in MAT 095 on departmental exam or appropriate placement score. F/S/SU

SCI 107: Science of Technology: Vision and Light 4 credits
This course provides an introduction to the way that science, through technology, enhances human life. This course has a particular emphasis on innovations that impact vision and allow humans to extend a person's natural ability to visually explore the world and exchange ideas. Students learn scientific principles that underlie many technological devices that enhance human ability, as well as the complimentary roles of the Scientific Method and the Engineering Design Process. Students gain an understanding of methodologies used in scientific investigations through the laboratory portion of the course.
Prerequisite: ENG 100, MAT 095 with a "C" or better in MAT 095 on departmental exam or appropriate placement score. F

SCI 108: Science of Technology: Hearing and Sound 4 credits
This course provides an introduction to the way that science, through technology, enhances human life. This course has a particular emphasis on innovations that impact hearing and allow humans to extend a person's natural ability to explore the world and exchange ideas through sound. Students learn scientific principles that underlie many technological devices that enhance human ability, as well as the complimentary roles of the Scientific Method and the Engineering Design Process. Students gain an understanding of methodologies used in scientific investigations through the laboratory portion of the course.
Prerequisite: ENG 100, MAT 095 with a "C" or better in MAT 095 on departmental exam or appropriate placement score. S

SCI 109 Environmental Science: Biological Topics 4 credits
This course covers selected biological topics of environmental science. Students learn about the interactions between humans and the environment and gain the ability to connect the issues to a framework of ideas and values that allow them to become part of the solution to environmental problems. Topics include the themes of environmental science, the definition, functioning and changing of ecosystems, human population, wild species and biodiversity and pests and their control. Lab exercises are designed to reinforce and expand on topics covered in lecture. Students are required to participate in off-campus field work for some of the class/laboratory activities.
Prerequisite: ENG 100 and "C" or better in MAT 095 on the departmental exam or appropriate placement score. S

SCI 110 Sustaining Earth's Environment 4 credits
This course focuses on the basic concepts of environmental science. Students apply fundamental physics and chemistry to the study of the physical world they live in, and, through the laboratory component, gain an understanding of the methods and applications of science. Topics include consumption and conservation of Earth's natural resources, the impact of the humans on the environment, waste management and renewable energy sources.
Prerequisite: ENG 100 and "C" or better in MAT 095 on the departmental exam or appropriate placement score

SCI 135 Introduction to Astronomy 3 credits
This course consists of a survey of historical knowledge about astronomy, as well as recent developments in the field. Topics include constellations, coordinates, light, Solar System planets, the sun, stars, galaxies, and conditions for life on other planets. Students perform out-of-class projects including observational aspects of astronomy, such as the night sky, moon phases, and the seasons.
Prerequisites: MAT 090 with a "C" or better in MAT 090 on departmental exam or appropriate placement score; ENG 101 or equivalent placement scores

SCI 140 Astronomy I: Close to Home 4 credits
This course emphasizes the scientific basis of introductory astronomy concepts, using labs and algebra to demonstrate the processes. Students learn physics concepts essential to continued study of astronomy, including Newtonian gravity, planetary motion, the electromagnetic spectrum, optics, and theories of the solar System and its contents. Labs are a mixture of daytime astronomy and physics related topics, and required night-time on-campus observational astronomy sessions. Students are required to observe on campus at night a minimum of (1) time during the semester; a choice of dates will be provided.
Prerequisites: ENG 100 or equivalent placement score; MAT 099 or equivalent placement score. F

SOCIAL SCIENCE (SOS)

SOS 090 People in Society 3 credits
This course examines how economic, social, and political systems affect human life. Students explore how to apply this knowledge to improve their everyday life. The course emphasizes building skills for coping with life experiences and prepares students for college-level courses in the social sciences. S

SOS 131 Personal Health and Wellness: A Social Science Perspective 3 credits
This course explores methods for making informed lifestyle choices. Students examine issues that affect their health, family lives, and social networks and activities by using psychology, sociology, and other sources and materials. Topics include an overview of contemporary issues including lifestyle and health, self-esteem, stress, family, and issues related to life stages and aging.
Corequisite: ENG 100 or appropriate placement score. S

SOS 211 Death & Dying 3 credits
This course examines the death and dying process within personal and professional frameworks. Students learn differences in cultural attitudes toward death and dying; the origins of death anxiety; the processes involved in dying, grieving, and mourning; and the community resources available to address these processes. Topics include cultural attitudes, models of dying and grieving, children and death, suicide, and euthanasia.
Corequisite: ENG 100 or appropriate placement score. F/S

SOCIOLOGY (SOC)

SOC 101 Introductory Sociology (Principles) 3 credits
This course introduces basic theories and vocabulary of sociology including its historical origins and research process. It examines the major principles that govern the structure and function of society, its institutions, groups, and processes. Students learn people in society decide to meet the social, psychological, economic and everyday needs of its members. The course emphasizes making connections between students' personal lives and the social change occurring around them.
Corequisite: ENG 100 or appropriate placement score. F/S

SOC 106 The Sociology of Difference and Inequality 3 credits
This course examines the social construction of categories of difference, such as race, class, sexual orientation, and gender, and how those categories are transformed into systems of inequality from a sociological perspective. Special attention is paid to the role of social institutions, such as family, education, and mass media in the creation and maintenance of difference-based inequalities. Students critically examine their own experiences within the broader social context and explore strategies for individual and social change.
Corequisite: ENG 100 or appropriate placement score.

SOC 111 Social Problems & Social Change 3 credits
This course examines how social change in the United States produces social problems such as prejudice and poverty, and how these problems affect families and the quality of life in a multicultural society. Students learn to recognize and understand the relationship between on-going social change and the problems that accompany change. Students examine major problems facing society today, separate myth from fact, and analyze these problems and their solutions objectively.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

SOC 115 Sociology of Sex and Gender 3 credits
This course explores peoples' gender experiences in society from a sociological perspective. A sociological perspective is particularly important to gender studies because it situates individual experience within the context of social institutions. This course addresses how the varied experiences of women and men are constructed within social institutions and, therefore, can be transformed through institutional change. Students develop critical and analytical skills through reading and writing assignments. Students learn actively to incorporate aspects of social stratification and the differences it engenders in women's and men's experiences.
Corequisite: ENG 100 or appropriate placement score. F/S

SOC 131 Films in Social Psychology 3 credits
This course presents various topics in social psychology via films and full-length movies. The topics vary from semester to semester and include child rearing practices, divorce, human relations, nuclear proliferation, economics, sex role stereotyping, sexuality, aggression, and social norms. Students gain an understanding of these topic areas as well as how the popular media portrays them.
Corequisite: ENG 100 or appropriate placement score. SU

SOC 211 The Dynamics of Racial & Ethnic Relations 3 credits
This course examines racial and ethnic relations and the major sociological theories used to analyze them, and provides an overview of assimilation and melting pot theory. It emphasizes multiculturalism and focuses on sociological explanations of dominant group/minority group encounters within the contexts of power, poverty, and segregation. Students study contemporary and historical examples of institutional discrimination, and discuss policies and issues related to improving race relations in the United States.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

SOC 212 Juvenile Delinquency & the Juvenile Justice System 3 credits
This course explores the underlying causes of youth crime as they relate to contemporary methods of social control of delinquency. Students examine biological, psychological, and sociological factors affecting deviant behavior as a broad framework for understanding the response of the juvenile justice system to that behavior.
Corequisite: ENG 100 or appropriate placement score. F/S/SU

SOC 220 American Deaf Culture 3 credits
This course provides a historical and contemporary perspective of American deaf culture using a socio-cultural model. Students examine deaf culture and make comparisons and contrasts with other cultures. Topics include communication, language, cultural identity and values, group norms, traditions and the world view of deaf people
Prerequisite: SOC 101. F

SOC 221 The Family 3 credits
This course examines ideas about the nature and structure of the family and how they have changed over time. Students debate whether or not the family is dying as an institution, and how best to restore the family to its place in society. Students explore how economic and social forces affect families; and examine personal and social values about dating, mating, and family life.
Corequisite: ENG 100 or appropriate placement score. F/SU

SPANISH (SPN)

SPN 111 Beginning Spanish I 3 credits
This course introduces the fundamentals of the Spanish language. Students examine brief readings on the everyday aspects of the contemporary Spanish-speaking world. Students use common conversation, tell time, make comparisons, discuss the weather, and recognize and use basic tenses for common verbs. Previous knowledge of Spanish is not necessary. F/S

SPN 112 Beginning Spanish II 3 credits
This course is a continuation of SPN 111 Beginning Spanish I. Students continue to progress in the fundamentals of understanding, speaking, reading, and writing the Spanish language. The course emphasizes the development of reading skills through the study of enjoyable, short, and timely articles on contemporary life and culture in the Spanish-speaking world. The course covers more complex verb and pronoun forms.
Prerequisite: SPN 111. F/S

SPN 211 Intermediate Spanish I 3 credits
This course is a continuation of SPN 112 Beginning Spanish II. It reviews the fundamentals of the language and emphasizes conversational Spanish. Students study the culture of the Spanish-speaking world and current events through the use of newspaper and magazine articles edited for student use. Students form and use more complex verbs. They also summarize a ten-minute talk given by the instructor, participate in a variety of situational conversations, answer questions about readings, and write an in-class composition about a topic studied during the semester.
Prerequisite: SPN 112. F/S

SPN 212 Intermediate Spanish II 3 credits
This course is a continuation of SPN 211 Intermediate Spanish I. The course reviews key points of the language and emphasizes conversational fluency. Students engage in intensive oral practice through the reading and discussion of well-edited texts in Spanish. Students summarize a twenty-minute talk given by a native speaker, read and answer questions on a magazine article, present a five-minute talk on a chosen topic, and write a summary of the talk in Spanish.
Prerequisite: SPN 211. F/S

SPEECH (SPH)

SPH 101 Speech Communication Skills 3 credits
This course covers organization and delivery skills, and the development of confidence necessary for effective oral communication. Students organize speeches for both specific and general audiences; and prepare and present extemporaneous and impromptu speeches on a variety on contemporary issues. Students implement principles and practices of public communication through evaluated classroom activities including the use of PowerPoint® presentations.
Pre/Corequisite: ENG 101. F/S/SU

SURGICAL TECHNOLOGY (SUR)

SUR 101 Perioperative Issues 5 credits
This course provides knowledge in the areas of patient care directly associated with the surgical experience. Included are an in-depth overview of the hospital, the operating room and its equipment, and the individual roles of the surgical team; principles of patient safety: identification, transportation, and positioning; medical terminology, and, surgical pharmacology.
Prerequisites: BIO 140. F

SUR 111 Operating Room Techniques 4 credits
This course introduces techniques and procedures utilized during the surgical experience. Topics covered include scrubbing, gowning, and gloving; and the establishment of the sterile field with its armamentarium of sutures, instruments, and supplies. The laboratory component allows the student to observe and demonstrate the principles and procedures taught in the classroom in a non-patient contact environment.
Corequisites: SUR 101, SUR 115. F

SUR 115 Asepsis 2 credits
This course covers the principles and practices of surgical asepsis that must be maintained in the clinical setting. Included are the study of microscopic life forms, the relationship of microbes to disease and illness, the principles and techniques of disinfection, sterilization, antisepsis, and the development of the "surgical conscience".
Corequisites: SUR 101, SUR 111. F

SUR 121 Surgical Procedures I: General, Obstetrics/ Gynecology and Orthopedic 3 credits
This course explores the diagnostic and surgical interventions of general, OB/GYN, and minor orthopedic surgery. Ethical, legal, and moral values relating to the individual patient as well as the operating room procedures are included.
Prerequisites: BIO 140. F

SUR 199 Clinical Externship I 4 credits
Students are assigned to surgical settings within the greater Worcester area. Clinical experience provides students with supervised applications of the theory, principles, and procedures taught in the classroom. Students experience patient contact as a member of the operating room team. This experience takes place in selected area hospitals and clinics and focuses on minimally complex surgical cases.
Prerequisites: BIO 140. F

SUR 221 Surgical Procedures II: Ophthalmology, Ear/Nose/Throat, Dental/Oral/Maxillofacial, Plastic/Reconstructive & Genito-Urinary 3 credits
This course explores the more complex diagnostic and surgical interventions of ophthalmology, ear, nose, and throat, dental/oral/maxillofacial, plastic/reconstructive and genito-urinary surgery. This course is scheduled for the second half of the first semester.
Corequisite: SUR 121. F

SUR 225 Advanced Surgical Procedures: Thoracic, Neurosurgery, Peripheral & Cardiovascular 3 credits
This course explores the diagnostic and surgical interventions of specialized surgeries including thoracic, neurosurgery, peripheral, and cardiovascular surgeries. Because of the nature of the surgical procedures, this course requires unique scheduling during the second half of the second semester.
Prerequisite: SUR 221
Corequisite: SUR 299. S

SUR 230 Ethics 1 credit
This course introduces the student to ethical issues which relate to patient care in a hospital surgical setting. Legal issues and moral values relating to patient rights and operating room procedures will be discussed. Cultural, ethnic, and age issues will be considered as appropriate. F

SUR 290 Clinical Externship II 6 credits
This course involves the practical application of the skills, knowledge, and abilities developed in SUR 221 with a specific focus on moderately complex surgical cases, including if possible but not limited to opthamology, ears/nose/throat, dental/oral/ maxillofacial, plastic/reconstructive and genito-urinary. This clinical experience requires appropriate case scheduling.
Corequisite: SUR 221. S

SUR 299 Advanced Clinical Externship 6 credits
This course involves the practical application of the skills, knowledge, and abilities taught in the classroom via patient contact as a member of the operating room team. This clinical experience focuses on the more complex surgical procedures..
Prerequisite: SUR 221
Corequisite: SUR 225. S

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Dan Daly, Assistant Registrar; Dan de la Torre, Coordinator of Transfer; Kathy Frederickson, Coordinator, English Department, Marilyn Martin, Coordinator, General Studies; Susan McPherson, Coordinator, Honors Program; Carol Murphy, Associate Professor, Accounting; Nancy Schoenfeld, Dean of Human Services and Science; Betsy Zuegg, Associate Professor, English; Gaelan Benway, Professor, Sociology; Bonnie Coleman, Lead Advisor for Phi Theta Kappa; Sandra England, Professor, Psychology; Dale Labonte, Coordinator, Library Serials and Electronic Resources; Rachel Calado, QCC Honors Student.

HOTEL AND RESTAURANT MANAGEMENT

Chip Dufault, Chair; Mark Wexler, Beechwood Hotel; Patrick Lynch, D.W.; Paul MacKinnon, Front Office Training Systems; Francis Zentraf, Keefe Vocational School; Heather Carneiro, Mass Restaurant Association; Anita Thomas, Neet Events; John Lawrence, Peppers Fine Foods; Rod Warnick, University of MA, Amherst; Patty Hainsworth, Worcester Senior Center; Peter Crafts, Worcester Technical High School; Mary Signorino, Mohegan Sun; Donna McCabe, Central MA Convention & Visitors Bureau.

HUMAN SERVICES

Susan Brown, Elder Services; Kristen Chiavaras QCC Graduate; Leonard Cooper, MRC; Elizabeth Coughlan, RN; Cathy Fellenz; Gordon Hargrove, Friendly House; Tatyanna Gorodetsky, AHEC; Frank Mangon QCC Graduate; Brenda Safford, QCC; Chuck Stuart, Assumption College; Maureen Valois, Spectrum House; Patricia Vanasse, Umass Memorial; Kathy Veroude, QCC Graduate; Meredith Weiss, QCC.

LIBERAL ARTS

Kenneth Amidon, Blue Cod Technologies, Director of Sales and Marketing; Prof. Caroline Chiccarelli, Worcester State College, Dept. of Education; Margarita Delgado, North High School, Worcester Director of Guidance; Maureen Duffy, Houghton Mifflin Company, Sr. Sales Representative; Prof. Janette Greenwood, Clark University, Dept of History; Prof. Arthur Heinricher, Worcester Polytechnic Institute, Dept. of Mathematics; Rayanne LaPierre, Worcester State College; Janet Richardson, INF Financial Advisors, Sr. Client Manager; Professor Suzanne Zhang-Gonschang, Depts. of Anthropology and Asian Studies; Dan de la Torre, OCC, Transfer and Articulation Coordinator; Nicole Currier, QCC, Dean of Humanities; Kenneth Wong, QCC, Liberal Arts Program Coordinator.

MANUFACTURING TECHNOLOGY

Jim Alicata, Ed. D., Chair and Associate Professor Industrial Technology Department, Fitchburg State College; Steve and Cathy Phillips, Phillips Precision, Inc.; Thaddeus Bauer, Manager of Workforce Development Programs, Massachusetts Manufacturing Extension Partnership; Robert Boulay, Manager Manufacturing Engineering, Metso Automation; Carol King, Project Director, Massachusetts Technician Education Collaborative.

MEDICAL ASSISTING

Dr. George Abraham, Program Physician Advisor; Pamela Fleming, Program Coordinator QCC; Julia McCoskery, Adjunct Faculty; Barbara Tully, Adjunct Faculty; Tammy Wessels, Past Graduate.

NURSE EDUCATION

Patricia Creelman; Jane June; Carol Bosworth: Meg Yoder; Junea Hutchins; Linda McInerny; Richard Kataza; Debbie Bush; Paul MacKinnan; Mary Kay Alexander; Cathy Jewell; Rose Veith; Karen Laganelli; Dorothy McCabe (Chair); Janet Hale; Jean Nicholas (Fall); Donna LeCave; Cindy Stewart; Annie Parker; Carol DiGiovanni; Pamela McIntosh.

OCCUPATIONAL THERAPY ASSISTANT

Charlotte Boutillette, OTR/L, Adjunct faculty; Nancy Brace, MS OTR/L Adjunct faculty & Worcester State Hospital; Sherlyn Fenton, MS OTR/L, CWCE; Joanne Gallagher, ED. D., ORT/L, Chair, Occupational Therapy Department Worcester State College; Christine Gilbert, OTR/L, Worcester State Hospital; Siiri Jonasch, OTR/L Southern Worcester County Rehabilitation; Dean Jane June, RN, MSN QCC; Eileen Melican, ORT/L, Director of Rehab, Worcester State Hospital; Karen McCarthy, COTA/L, Adjunct faculty; Bill Shea, OTR/L Fairlawn Rehabilitation Hospital; Audrey Weston, OTR/L Harrington Memorial Hospital; Gina Iadorola, COTA/L; Henry Ritter, Interim Coordinator, Heath Careers Center QCC; and Representatives of Freshman and Senior Classes.

PARAMEDIC TECHNOLOGY

Cathy Jewell, MCCM-Memorial; Jane June QCC; Dr. Stephen Kapion, MCCM – Memorial; John Lynch, University of MA Medical Center; Edward McNamara, CMEMSC; Robert Palmer; Cheryl Finn QCC; Richard Nydam QCC; Mark Restuceia, Medical Director.

RADIOLOGIC TECHNOLOGY

Michael Popik, M.D.–Medical Advisor, Health Alliance-Leominster; Edward Kilcoyne RT(R), GE Health Care Technologies; Kathleen Giemza, RT(R)(M), Marlborough Hospital; Deborah O'Brien, RT(R), St. Vincent Hospital, Marcia Amaral, RT(R), UMMMC-Memorial; David Woodford, RT(R), Heywood Hospital; Fran Trifone, RT(R), UMMMC – University Campus; Student Representative(s); Academic Dean of Health Care, QCC Program Faculty.

RESPIRATORY CARE

Scott Leonard & Joyce Rossignol, UMass-Memorial; Scott Maclean, Kindred Hospital Parkview of Central MA; William Ozga & Richard Rosiello, MD, St Vincent Hospital at Worcester Medical Center; Elaine Cooney-Triola, Dennis Lafreniere, North Atlantic Medical; Jane June, Dean of Health Care, QCC, Freshman/Sophomore Student Representatives, Respiratory Care Program, QCC; QCC Respiratory Care program faculty.

SURGICAL TECHNOLOGY

Nancy Diccico, UMass-Memorial; Colleen LeBlanc, Student Representative; Elizabeth Lederman, St Vincent Hospital; Thomas Cook, Milford Regional Medical Center; Deborah Coleman, QCC; Jane June, QCC; Trudy Cahill, QCC; Lucy Pendell, QCC; Noemi Feliciano, UMass Medical; Mohan Korgaonkar, UMass Medical; Donna Farmer, Spencer Housing Authority; Mary Cammosse, UMass-Memorial.

Directions to the College

BY CAR

TO THE MAIN CAMPUS
670 West Boylston Street
Worcester, MA

From Boston or East of Rt. 495:
Massachusetts Turnpike to Rt.495 North to Rt. 290 West to Rt. 190 North to Exit 1 West Boylston Street – North 1 mile to campus (on Right).

From Springfield or West
Massachusetts Turnpike to Rt. 290 East to Rt. 190 North ½ mile to Exit 1 West Boylston Street – North 1 mile to campus (on Right).

From Lowell or North
Rt. 495 to Rt. 2 West to Rt. 190 South to Exit 4 West Boylston Street, South 1½miles to campus.

TO QCC AT CITY SQUARE
100 Front Street
Worcester, MA
(Students are responsible for parking costs)
Within City Square we are located on the second level, which can be reached from Level 5 of the Yellow Parking Garage.
From Rt. 290 East or West, take Exit 16. At the traffic light next to the Post Office, turn Left. Drive to the Rotary. Take a Right, drive along the garage up to a set of lights, take a Left onto Commercial Street. Enter the Yellow Parking Garage.

TO QCC SOUTHBRIDGE
5 Optical Drive
Southbridge, MA

From Worcester
- Take I-290 W toward Auburn
- Take exit 8 toward RT-12 S/Webster
- Turn Left onto Oxford St N
- Turn Right onto Southbridge St/MA-12
- Turn slight Right onto US-20/Southbridge Rd.
- Turn Left onto US-20/Southbridge Rd.
- Turn Left onto MA-169/Southbridge Rd.
- Follow approx. 5 miles into Southbridge
- Turn Left onto Mechanic St.
- Continue through one stop light, the entrance to QCC is on your Left

From Springfield
- Take I-291 E. ramp toward US-20 E/Mass Pike/Boston
- Merge onto I-291 N
- Merge onto I-90 E/Mass Pike via exit 7
- Merge onto I-84 W/Wilbur Cross Hwy via exit 9 toward Sturbridge/Hartford
- After toll, merge onto I-84 West
- Take First Right Exit 3B onto Rte. 20 West
- Turn Left at First Stoplight onto Route 131
- Follow Rte. 131 for approx. 4 miles into Southbridge
- Continue to rotary halfway around onto Mechanic Street
- The entrance to QCC is on your Right

From Providence
- Take RI-146 N
- Take the US-20 Exit toward Auburn/Northboro/I-90/Boston/Springfield
- Take the US-20 W ramp toward Auburn
- Turn Left onto MA-169/Southbridge Rd.
- Follow approx. 5 miles into Southbridge
- Turn Left onto Mechanic St.
- Continue through one stop light, the entrance to QCC is on your Left

From Hartford
- Start out going East on Schoephoester Rd. toward Postal Rd.
- Turn Right onto CT-75/Turnpike Rd.
- Merge onto CT-20 E toward I-91/Hartford/Springfield
- Merge onto I-91 S toward Hartford
- Merge onto I-291 E via exit 35A toward Manchester
- Merge onto I-84 E
- Take exit 3B onto Rte. 20 West
- Take first Right Exit 3B onto Rte. 20 West
- Turn Left at first stoplight onto Rte. 131
- Follow Rte. 131 for approx. 4 miles into Southbridge
- Continue to rotary halfway around onto Mechanic Street
- The entrance to QCC is on your Right

TO QCC AT THE SENIOR CENTER
128 Providence Street
Worcester, MA

From Rt. 290 West:
Take Exit 13, Kelley Square, turn Left at the end of the exit (Vernon St.). At the fork in the road, take the Right (Vernon St.) and then a Left on Spurr St. The Senior Center is the big brick building on your Right.

From the South, West and East:
Rt. 290 East. Take Exit 13 Kelley Square, turn Right at the end of the exit (VernonSt.) and go up Vernon St. At the fork in the road, take the Right (Vernon St.) and then a Left on Spurr St. The senior center is the big brick building on your Right.

TO QCC AT BLACKSTONE VALLEY REGIONAL VOCATIONAL TECHNICAL HIGH SCHOOL
65 Pleasant Street
Upton, MA

From the North:
Rt. 495 South to exit 21 B. Bear Right onto Hopkinton Road. Follow to end, approximately 5 miles, to set of lights at Rt. 140 intersection. Cross over Rt. 140 to Maple Avenue. Continue to end and turn Left onto Pleasant Street.

From the South:
Rt. 495 North to exit 21B. Bear Right onto Hopkinton Road. Follow to end, approximately 5 miles, to set of lights at Rt. 140 to Maple Avenue. Continue to end and turn Left onto Pleasant Street.

TO QCC AT NOTRE DAME LONG TERM CARE CENTER
555 Plantation Street
Worcester MA 01605

From Quinsigamond Community College
Turn Left onto West Boylston St. heading south. Merge onto I-190S via the ramp on the Left toward I-290 Auburn. Merge onto I-290E via the exit on the Left toward Shrewsbury/Marlboro. Take the Plantation Street exit-Exit21 toward Worcester. Turn slight Right onto Plantation Street.

TO QCC AT WORCESTER TECHNICAL HIGH SCHOOL
1 Skyline Drive
Worcester, MA 01605

From I-290 West
- Take Exit 19 for Rt. 9/Lincoln Street
- At the light take a Right
- At the next light, bear Left for Rt. 9
- At next light turn Left onto Rt. 9 East
- Follow Rt. 9 to top of hill past pond
- At first light past pond take a Left onto Skyline Drive
- School Entrance is first open gate on the Right

From I-290 East
- Take Exit 17 for Rt. 9
- At the light take a Right
- Follow Rt. 9 to top of hill past pond
- At first light past pond take a Left onto Skyline Drive
- School Entrance is first open gate on the Right

TO QCC AT SEVEN HILLS FOUNDATION
81 Hope Avenue
Worcester, MA 01603

From the North
- Take I-190 S toward Worcester
- Merge onto I-290 W
- Take exit 10, Rt. 12/Hope Ave
- Turn slight Right onto Hope Ave
- Proceed to 81 Hope Ave

From the South
- Take I-395 N toward Worcester
- I-395 N becomes I-290E
- Take exit 11 toward College Sq/Federal Sq
- Turn Left onto College Street
- Merge onto I-290 W toward Auburn
- Take exit 10, Rt. 12/Hope Ave
- Turn slight Right onto Hope Ave
- Proceed to 81 Hope Ave

TO QCC AT THE WORCESTER FIRE DEPARTMENT TRAINING FACILITY
141 Grove Street
Worcester, MA
From I-290 East, take exit 17 for Rt. 9 toward Ware/Framingham. Turn Left at Belmont Street. Turn Right at Salisbury Street. Continue to Grove Street.

TO QCC AT NATIONAL GRID MILLBURY TRAINING CENTER
449 Southwest Cutoff
Worcester MA 01604

From Quinsigamond Community College
Take Rte. 12 South to I-190 toward Auburn. Take Exit 12 for Rte. 146 toward Millbury/Providence. Turn left onto Harding Street, then left onto Quinsigamond Avenue, then right onto Millbury Street (Rte. 146). Follow Rte. 146 for approximately 2 miles. Turn left onto Cliff Street, then right onto Granite Street, then left onto Southwest Cutoff (Rte. 20).

TO QCC AT THE CENTER FOR STEM CELL AND REGENERATIVE MEDICINE
222 Maple Avenue
Shrewsbury MA 01545

From Quinsigamond Community College
Turn Left onto West Boylston St. heading south. Merge onto I-290 East towards Shrewsbury/Marlboro. Take the exit toward Main Street. Take a slight right at Main Street. Turn right at Gage Lane. Turn right at Maple Avenue. Turn right into 222 Maple Avenue.

BY PUBLIC TRANSPORTATION

Public transportation is available within the City of Worcester.
Students can travel to campus using either the West Boylston Street or Burncoat Street routes.

1. Entrance
2. Student Parking
3. Faculty & Staff Parking
4. Handicapped Parking
5. Visitor Parking
6. Administration Building (A)

Lower Level

Academic Advising & Assessment Testing	61A
Bookstore	Lower Level - A
Cafeteria	Lower Level - A
Payment Center	65A
Transfer Office	58A

First Floor

Alumni Affairs	129A
Counseling	162A
Dean of Students	169A
Dental Hygiene Clinic	126A
Financial Aid	165A
GED	102A
President's Office	132A
Registrar	152A
VP of Academic Affairs	103A
VP of Enrollment & Student Services	147A

Second Floor

Affirmative Action & Minority Affairs	227A
Business Office	220A
Career Placement Services	272A
Cooperative Education	272A
Disability Services	246A
Human Resources	223A

Third Floor

Academic Computing Ctr	379A
Harrington Computer Lab	372 A

7. Public Safety (AC) (Campus Police)
8. Surprenant Building (S)

Campus Ministry	105S
Computer Systems Technology Lab	213S
Hebert Auditorium	

9. Ahlfors Building (ALF)
10. Athletic Center (AC)
Fitness Center
Gymnasium
11. Athletic Field & Track
12. Chupka Baseball Field
13. Child Study Center (CSC)
14. Fuller Student Center
Student Life
Open Door Newspaper
Student Senate
15. Harrington Learning Center (HLC)

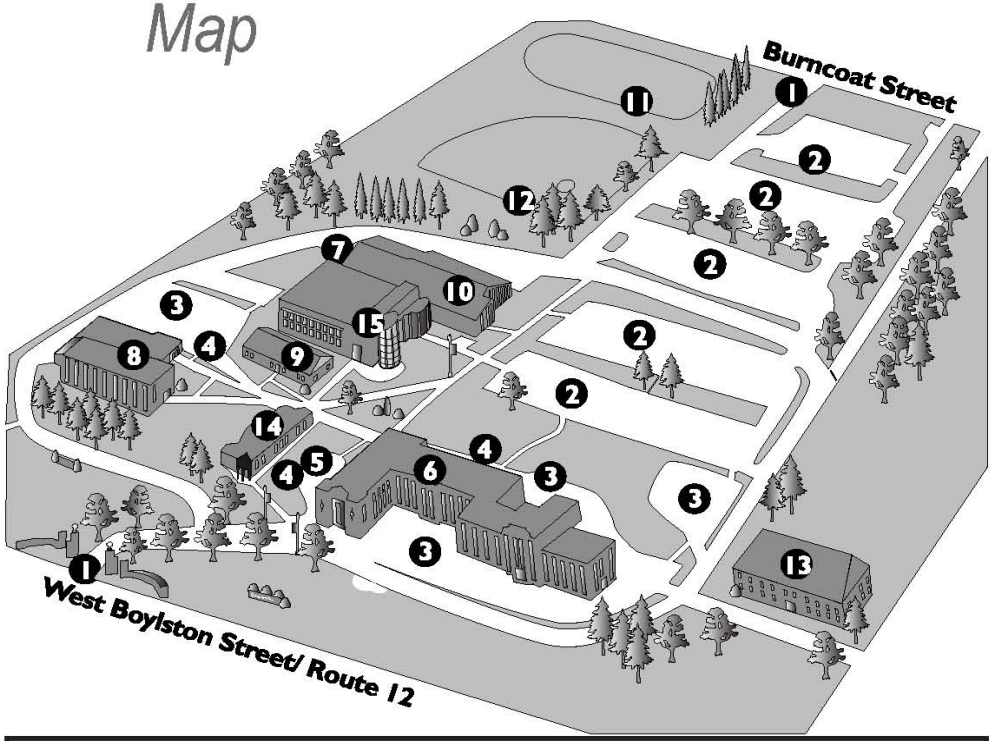
Second Floor

Admissions Welcome Center
Communication Skills Center
Individualized Learning Center
Math Center
Transition Center

Third Floor

Alden Library

Campus Map



Class Locations

A	- Administration Building	HLC	- Harrington Learning Center
ALF	- Ahlfors Building	SRCT	- Senior Center *(Off Campus)*
AC	- Athletic Center	S	- Surprenant Building
CSC	- Child Study Center	QSB	- Southbridge Campus
D	- City Square *(Off Campus Downtown)*		

Please Note: SABES and the Training & Education Center are located at QCC City Square.

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QUINSIGAMOND
Community College

670 West Boylston Street • Worcester, MA 01606

www.QCC.edu