



Letter from the President

Welcome to MassBay Community College.

At MassBay, we are committed to helping our students advance their lives by providing outstanding teaching in small classes that fosters academic success. Whether you plan to transfer into a four-year institution, gain the skills and certification necessary to advance your career, or reawaken a long-held passion, MassBay has the courses, faculty and staff, and the support you need to help you achieve your goals.

Our college is filled with incredible people - from our richly diverse student population to our passionate and talented faculty - who live out our mission each day. In our classrooms, in student clubs and activities, through internships and industry partnerships, students are learning, growing, and becoming better informed citizens of the world. Nowhere is this more apparent than in our alumni, many of whom have moved on to earn their bachelor's and graduate degrees at some of the top higher education institutions and are now working in high-demand industries.

This catalog is not only a practical guide with the information you need to succeed at MassBay, but also a starting point for your future. Inside, you will find our mission and values, detailed information about our degree and certificate programs, course descriptions, and information about enrollment policies, financial aid, and scholarships.

As you plan your next steps at MassBay, always know that your academic advisor, our student development team, your professors and our staff are here to support you in your journey here.

MassBay is a catalyst for change, for advancement. Welcome to our community!

A handwritten signature in black ink, appearing to read 'D. Podell', with a stylized, cursive script.

David Podell, Ph.D.
President

THE COLLEGE

Massachusetts Public Higher Education

Massachusetts Public Higher Education is a system with a distinguished past, recognized as having one of the nation's most outstanding array of institutions. It is comprised of 15 community colleges, nine state universities, and the five campuses of the University of Massachusetts. The system exists to provide accessible, affordable, relevant and rigorous programs that adapt to meet changing individual and societal needs for education and employment. The public system is committed to continuous improvement and accountability in all aspects of teaching and learning. The Board of Higher Education, together with each respective Board of Trustees, expects all students, faculty, and staff to be held to exacting standards in the performance of their roles and responsibilities.

Massachusetts Community Colleges Mission Statement

Massachusetts Bay Community College (MassBay) is one of the 15 community colleges within the Commonwealth's public higher education system, a system that offers open access to high quality, affordable academic programs, including associate degree and certificate programs. Massachusetts' community colleges are committed to excellence in teaching and learning, and provide academic preparation for transfer to four-year institutions, career preparation for entry into high-demand occupational fields, developmental coursework, and lifelong learning opportunities.

Community colleges have a special responsibility for workforce development, and through partnerships with business and industry, provide job training, retraining, certification, and skills improvement. In addition, they assume primary responsibility within the public system for offering developmental courses, programs and other educational services for individuals who seek to develop the skills needed to pursue college-level study or to enter the workforce.

Rooted in their communities, the colleges serve as community leaders, identifying opportunities and solutions to community problems and contributing to the region's intellectual, cultural and economic development. They collaborate with elementary and secondary education and work to ensure a smooth transition from secondary to post-secondary education. Through partnerships with baccalaureate institutions, they help to promote an efficient system of public higher education.

The community colleges offer an environment where the ideas and contributions of all students are respected. Academic, personal and financial support services are provided to ensure that all students have an opportunity to achieve academic and career success. No eligible student shall be deprived of the opportunity for a community college education in Massachusetts because of an inability to pay tuition and fees.

MassBay Overview

MassBay is a comprehensive, open-access community college, offering over 70 associate degree and certificate programs. The College is dedicated to providing rigorous programs of study and unified support services that promote student retention, graduation, transfer, and employment. MassBay provides its diverse student body with a dynamic learning environment that encourages innovation, incorporates current technology, and fosters a learner-centered student experience. The College partners with high schools, four year colleges and universities, and business and industry to provide clear educational and career pathways for students.

The MassBay Mission

Start here. Go anywhere.

MassBay Community College fosters educational excellence and student success, prepares students for local and global citizenship, anticipates and responds to the needs of surrounding communities, and contributes to evolving regional economic development.

MassBay proudly serves 27 MetroWest communities: Ashland, Bellingham, Belmont, Brookline, Dedham, Dover, Framingham, Franklin, Holliston, Hopkinton, Medfield, Medway, Millis, Needham, Natick, Newton, Norfolk, Norwood, Sherborn, Sudbury, Waltham, Watertown, Wayland, Wellesley, Weston, Westwood, and Wrentham.

The MassBay Vision

MassBay Community College aspires to be a catalyst for transformation - calling for the best in students, preparing them as engaged citizens, and enabling them to realize their dreams.

The Massbay Values

Accessibility and Affordability

MassBay is an affordable, open-access public institution, which meets the immediate and long-term needs of diverse students and communities that the College serves.

Communication

MassBay is committed to a culture of open communication and transparency.

Diversity

MassBay values and pursues diversity, and teaches students the importance of inclusion and collaboration in a global context.

Professional Development

MassBay invests in professional development for faculty and staff to ensure the excellence of its programs and services.

Respect

MassBay promotes mutual respect and creates a forum for vigorous questioning and debate among faculty, staff and students.

MassBay in the Community

MassBay cares about the communities it serves, and the College strives to instill in its students, staff, and faculty the importance of the arts and culture, civic pride and volunteerism. Through alliances with various organizations, MassBay supports the diversity of its communities and offers students involvement and leadership opportunities in a wide range of rewarding activities. MassBay is proud to be the home of several artists in-residence, including the Wellesley Symphony Orchestra, All About Us Performing Arts, MassBay Players, MetroWest Youth Symphony Orchestra, and Newton Country Players. Events are normally free to the MassBay community and open to the public.

Visit <http://www.massbay.edu/eventsatmassbay/> for updated information about upcoming events and activities in the community. Content is subject to change.

Accreditation

MassBay is accredited by the New England Association of Schools and Colleges, Inc. (NEASC), a non-governmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering post-graduate instruction. Accreditation of an institution by NEASC indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer-group review process.

An accredited school or college is one that has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future.

Institutional integrity is also addressed through accreditation. Accreditation by NEASC is not partial but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, nor the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution. Inquiries regarding the status of an institution's accreditation by NEASC should be directed to the administrative staff of the school or college. Individuals may also contact the Association:

Commission on Institutions of Higher Education

New England Association of Schools & Colleges

3 Burlington Woods Drive, Suite 100

Burlington, MA 01803-4531

855-886-3272

<https://cihe.neasc.org/>

Many of MassBay's individual academic programs are approved by external professional accrediting organizations and/ or by state regulatory agencies:

Automotive Technology

Automotive Technicians Education Foundation(NATEF)

101 Blue Seal Drive, S.E., Suite 101

Leesburg, Virginia 20175

703-669-6125

www.natef.org

Criminal Justice

The Criminal Justice program is approved as a Police Career Incentive Program by the Massachusetts Board of Higher Education.

Early Childhood Education

National Association for the Education of Young Children (NAEYC)

1313 L Street, N.W., Suite 500

Washington, D.C. 20005

202-232-8777

www.naeyc.org

Emergency Medical Technician & Paramedicine

The Massachusetts Department of Public Health Office of Emergency Medical Services

99 Chauncy Street, 11th Floor

Boston, MA 02111

617-753-7300

www.mass.gov/dph/oems

Nurse Assistant Training

Massachusetts Department of Public Health Division of Health Quality

99 Chauncy Street, 11th Floor

Boston, MA 02111

617-753-8000

Nursing Associate Degree

Massachusetts Board of Registration in Nursing

239 Causeway Street, Suite 500, 5th Floor

Boston, MA 02114

800-414-0168; 617-973-0900

www.mass.gov/dph/boards/rn

Accreditation Commission for Education in Nursing (ACEN)

3343 Peachtree Road, N.E. Suite 850

Atlanta, Georgia 30326

404-975-5000

www.acenursing.org

Practical Nursing

Massachusetts Board of Registration in Nursing

239 Causeway Street, Suite 500, 5th Floor

Boston, MA 02114

800-414-0168; 617-973-0900

www.mass.gov/dph/boards/rn

Radiologic Technology

The Joint Review Committee on Education in Radiologic Technology (JRCERT)

20 N. Wacker Drive, Suite 2850

Chicago, IL 60606

312-704-5300

www.jrcert.org

Surgical Technology

Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA®)

6 W. Dry Creek Circle, Suite #110

Littleton, CO 80120

303-694-9262

www.arcstsa.org

Commission on Accreditation of Allied Health Education Programs (CAAHEP)

1361 Park Street

Clearwater, FL 33756

727-210-2350

www.caahep.org

**MassBay Community College
Academic Calendar
Day & Online – Fall 2018**

Labor Day (College Closed)
First Day of Classes
Add/Drop
Constitution Day Observed (Classes Held)
Professional Day (No DAY Classes)
Columbus Day Observed (College Closed)
Mid-Semester Exams
Application Deadline for December Graduation
Faculty Submit Mid-Semester Grades
Spring 2019 Course Registration/Advising Begins
Veterans' Day Observed (College Closed)
Thanksgiving Day (College Closed)
Thanksgiving Recess (No Classes)
Last Day to Withdraw from Classes
Last Day of Classes
Reading Day
Final Exams

September 3
September 4
September 4-10
September 17
September 21
October 8
October 15-19
November 1
November 2
November 5
November 12
November 22
November 23
November 23
December 13
December 14
December 17-21

FIRST 8-WEEK CLASSES

First Day of Classes
Add/Drop
Constitution Day Observed (Classes Held)
Professional Day (No DAY Classes)
Columbus Day Observed (College Closed)
Last Day to Withdraw
Last Day of Classes & Final Exams

September 4
September 4-10
September 17
September 21
October 8
October 12
October 22 – 28

SECOND 8-WEEK CLASSES

First Day of Classes
Add/Drop
Veterans' Day Observed (College Closed)
Thanksgiving Day (College Closed)
Friday+Saturday+Sunday Classes Held
Last Day to Withdraw
Last Day of Classes & Final Exams

October 29
October 29-November 2
November 12
November 22
November 23-25
December 7
December 17-23

Approved: _____

Ali Güvendiren, Registrar

4/27/2017

Date

Approved: _____

Dr. Lynn Hunter, Provost

5/18/17

Date

Approved: _____

Dr. David Podell, President

5/23/17

Date

**MassBay Community College
Academic Calendar
Evening – Fall 2018**

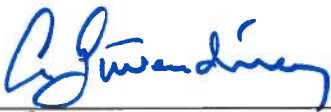
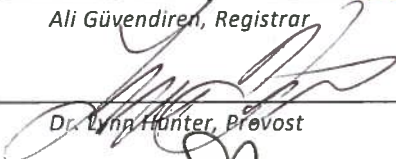
Labor Day (College Closed)	September 3
First Day of Classes	September 4
Add/Drop	September 4-17
Constitution Day Observed (Classes Held)	September 17
Professional Day (No DAY Classes)	September 21
Columbus Day Observed (College Closed)	October 8
Mid-Semester Exams	October 15-19
Application Deadline for December Graduation	November 1
Faculty Submit Mid-Semester Grades	November 2
Spring 2019 Course Registration/Advising Begins	November 5
Veterans' Day Observed (College Closed)	November 12
Thanksgiving Day (College Closed)	November 22
Friday+Saturday+Sunday Classes Held	November 23-25
Last Day to Withdraw from Classes	November 23
Last Day of Classes & Final Exams	December 17-23

FIRST 8-WEEK CLASSES

First Day of Classes	September 4
Add/Drop	September 4-10
Constitution Day Observed (Classes Held)	September 17
Professional Day (No DAY Classes)	September 21
Columbus Day Observed (College Closed)	October 8
Last Day to Withdraw	October 12
Last Day of Classes & Final Exams	October 22 – 28

SECOND 8-WEEK CLASSES

First Day of Classes	October 29
Add/Drop	October 29-November 2
Veterans' Day Observed (College Closed)	November 12
Thanksgiving Day (College Closed)	November 22
Friday+Saturday+Sunday Classes Held	November 23-25
Last Day to Withdraw	December 7
Last Day of Classes & Final Exams	December 17-23

Approved:	 Ali Güvendiren, Registrar	4/27/2017 Date
Approved:	 Dr. Lynn Hunter, Provost	5/18/17 Date
Approved:	 Dr. David Podell, President	5/23/17 Date

**MassBay Community College
Calendar
Day & Online – Spring 2019**

Martin Luther King Jr. Day Observed (College Closed)
First Day of Classes
Add/Drop
Professional Day (No Classes)
President's Day Observed (College Closed)
Mid-Semester Exams
Spring Recess (No Classes)
Faculty Submit Mid-Semester Grades
Application Deadline for May Graduation
Summer & Fall 2019 Course Registration Begins
Last Day to Withdraw from Classes
Patriot's Day Observed (College Closed)
Last Day of Classes
Final Exams
Commencement

January 21
January 22
January 22 - 28
February 8
February 18
March 11 - 15
March 18 - 22
March 29
April 1
April 8
April 12
April 15
May 3
May 6 - 10
May 23

FIRST 8-WEEK CLASSES

Classes Begin
Add/Drop
Professional Day (No Classes)
President's Day Observed (College Closed)
Last Day to Withdraw from Classes
Last Day of Classes & Final Exams

January 22
January 22 - 28
February 8
February 18
March 1
March 11 - 17

SECOND 8-WEEK CLASSES

Classes Begin
Add/Drop
Patriot's Day Observed (College Closed)
Last Day to Withdraw from Classes
Last Day of Classes & Final Exams

March 25
March 25 - 29
April 15
May 3
May 13 - 19

WINTER INTERSESSION 2019

First Day of Classes
Add/Drop
Last Day to Withdraw from Classes
Last Day of Classes & Final Exams

January 2
January 2-3
January 11
January 15

Approved:

Ali Gündiren, Registrar

Date _____

Approved:

Dr. Lynn Hunter, Vice President of Academic Affairs

Date _____

Approved:

Dr. David Podell, President

Date _____

3.21.2018

**MassBay Community College
Calendar
Evening – Spring 2019**

Martin Luther King Jr. Day Observed (College Closed)	January 21
First Day of Classes	January 22
Add/Drop	January 22 – February 4
Professional Day (No Classes)	February 8
President's Day Observed (College Closed)	February 18
Mid-Semester Exams	March 11 - 15
Spring Recess (No Classes)	March 18 - 22
Faculty Submit Mid-Semester Grades	March 29
Application Deadline for May Graduation	April 1
Summer & Fall 2019 Course Registration Begins	April 8
Last Day to Withdraw from Classes	April 12
Patriot's Day Observed (College Closed)	April 15
Easter (No Classes)	April 21
Last Day of Classes & Final Exams	May 4 - 10
Commencement	May 23

FIRST 8-WEEK CLASSES

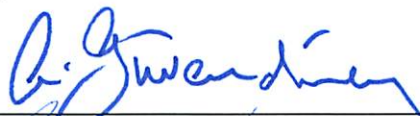
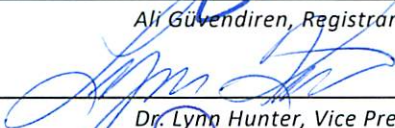
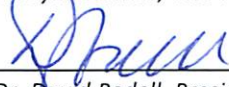
Classes Begin	January 22
Add/Drop	January 22 - 28
Professional Day (No Classes)	February 8
President's Day Observed (College Closed)	February 18
Last Day to Withdraw from Classes	March 1
Last Day of Classes & Final Exams	March 11 - 17

SECOND 8-WEEK CLASSES

Classes Begin	March 25
Add/Drop	March 25 - 29
Patriot's Day Observed (College Closed)	April 15
Last Day to Withdraw from Classes	May 3
Last Day of Classes & Final Exams	May 13 - 19

WINTER INTERSESSION 2019

First Day of Classes	January 2
Add/Drop	January 2-3
Last Day to Withdraw from Classes	January 11
Last Day of Classes & Final Exams	January 15

Approved: _____	 Ali Güvendiren, Registrar	3/28/2018 _____ Date
Approved: _____	 Dr. Lynn Hunter, Vice President of Academic Affairs	4/10/18 _____ Date
Approved: _____	 Dr. David Podell, President	4/19/18 _____ Date

MassBay Community College

Academic Calendar

Summer 2019

Session I – 6W1

First Day of Class
Add/Drop
Commencement (No classes)
Memorial Day (College Closed)
Last Day to withdraw from Classes
Final Exams & Last Day of Classes

May 20- June 28

May 20
May 20 - 24
May 23
May 27
June 14
June 24 – June 28

Session II – 10W

First Day of Class
Add/Drop
Commencement (No classes)
Memorial Day (College Closed)
Independence Day (College Closed)
Last Day to withdraw from Classes
Final Exams & Last Day of Classes

May 20 – July 26

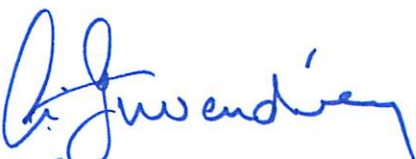
May 20
May 20 - 24
May 23
May 27
July 4
July 12
July 22 - 26

Session III – 6W2

First Day of Class
Add/Drop
Last Day to withdraw from Classes
Final Exams & Last Day of Classes

July 8 - August 16

July 8
July 8 - 12
August 2
August 12 – 16

Approved:		
	_____ <i>Ali Güvendir, Registrar</i>	_____ Date
Approved:		
	_____ <i>Dr. Lynn Hunter, Vice President of Academic Affairs</i>	_____ Date
Approved:		
	_____ <i>Dr. David Podell, President</i>	_____ Date

Admissions

Office of Admissions

Wellesley Hills Campus / Room 106 / 781-239-2500

Framingham Campus / Front Desk / 508-270-4059

General College Admission Requirements

MassBay maintains an open-door admissions policy as defined by the regulations of the Massachusetts Board of Higher Education, offering those who express a desire to pursue a college education the opportunity to enroll.

Students who have earned a high school diploma, a General Education Development Credential (GED), High School Equivalency (HiSET) certificate, or an associate degree or higher degree, are eligible for admission to MassBay.

Applicants are expected to perform college level work and conduct themselves in a manner appropriate for college students. In cases where placement tests or other indicators suggest the contrary, the College reserves the right to deny admission. All associate degree or certificate-seeking students are required to complete an application to MassBay and must be assessed in their reading, writing, and mathematics skills. MassBay offers placement testing throughout the year in multiple locations. Please refer to www.massbay.edu/placementtesting for more information and to schedule a placement test.

Admissions Application Instructions

Please review the admission requirements for your program of study. Some programs, such as Automotive Technology and several Allied Health programs, including Nursing are restricted. A restricted program has certain requirements that must be completed before you will be considered for admission.

Visit us at www.massbay.edu/enroll and complete your free online application.

If you do not have access to a computer or the Internet, you may complete and submit a paper application. Please submit your completed application to:

MassBay Community College
Office of Admissions
50 Oakland Street
Wellesley Hills, MA 02481-5307

Along with your application, please submit proof of high-school graduation or equivalency. The Office of Admissions will accept one of the following documents: an official final high school transcript, a copy of your high school diploma, a copy of a GED/HiSET certificate, or an official college transcript indicating an associate degree or higher degree. If you are not applying to a Nursing or Allied Health program, you may self-certify your education credentials if you received a high school diploma or college degree from a school accredited by New England Association of Schools and Colleges (NEASC), or if you received your GED/HiSET from Massachusetts or another New England state. Home-schooled students should consult the Home School Policy in this Catalog.

Students who have international documents must have these documents evaluated by an educational evaluation agency such as the Center for Educational Documentation, World Education Services, or Education Credential Evaluators. For more information, please contact the Office of Admissions at 781-239-2500.

If you have earned a college degree or college credits from other accredited colleges, please forward your official transcript(s) to the Admissions Office on the Wellesley Hills campus to be evaluated for transfer credit.

Once accepted into a program of study, you will be expected to follow the curriculum and course requirements in place at the time of your admission. If you are continuously enrolled (i.e., with no interruption of an academic program longer than four semesters), you will be expected to fulfill the requirements for the specific program of study listed in the Catalog that was current at the time of your admission to MassBay. If you are not continuously enrolled, you are expected to meet the requirements current at the time of your readmission to MassBay. If you change your major, you are expected to follow the program requirements in effect at the time your Change of Major form is filed and processed.

Open Houses and Information Sessions

MassBay hosts fall and spring Open House events. In addition, MassBay offers general information sessions, Nursing and Allied Health information sessions on the Framingham Campus, and Automotive Technology information sessions at the Ashland Technology Center on a regular basis.

Anyone interested in enrolling at MassBay is encouraged to attend an appropriate event to learn more about the programs and what MassBay has to offer. To review the calendar of information sessions and to make a reservation, please visit the MassBay website at www.massbay.edu/.

Campus Tours

Campus tours can be scheduled by contacting the Office of Admissions at 781-239-2500.

Fast Facts: How to Sign up for Classes

For new students applying for a degree program:

- Complete a general admissions application.
- Forward final high school transcript, copy of high school diploma, or GED certificate.
- Submit official college transcripts (if applicable).
- Apply for financial aid if necessary (Note: FAFSA deadlines are May 1st, and October 1st - dates may be subject to change).
- Satisfy our placement testing requirement (by taking the Accuplacer assessment, or to be considered for waiver from some or all of the Accuplacer, by submitting your transcript from an accredited U.S. high school documenting a cumulative GPA of 2.7 or higher; or by providing a college transcript documenting a completed Associate degree (or higher) or completion of college-level English and/or math.)
- Make payments or arrange for payment plan.
- If you are interested in a restricted (or "selective admissions") program, meet with an Admissions Counselor to review admissions requirements for the program of interest.

For currently enrolled students:

- Contact your advisor to schedule an appointment.
- Meet with your advisor and select your courses.
- Register for classes online via Bay Navigator.
- Make payments or arrange for payment plan.

For visiting students:

- Satisfy our placement testing requirement (by taking the Accuplacer assessment, or to be considered for waiver from some or all of the Accuplacer, by submitting your transcript from an accredited U.S. high school documenting a cumulative GPA of 2.7 or higher; or by providing a college transcript documenting a completed Associate degree (or higher) or completion of college-level English and/or math.)
- Search online listings and select courses.
- Register for classes.
- Make payments or arrange for payment plan.

Placement testing:

To register for placement testing, contact the Academic Achievement Center at 781-239-2620 or register online at www.massbay.edu/placementtesting. A MassBay student identification number is required to register for placement testing. To obtain an ID number, contact the Admissions Office at 781-239-2500.

Fast Facts: The Registration Process

Here are some points to remember to make your registration process smoother:

- A full-time course load is 12 or more credits. However, it is necessary to complete more than 12 credits per semester in order to finish a degree program in the recommended time. Students may register for a maximum of 20 credits with an advisor's signature. To register for courses that total more than 20 credits in a semester, the signature of the program's dean is required.
- Registration in math or English courses requires placement exam results unless the student has been waived from the placement test by the Advising Center.
- Students will not be allowed to register if they have an outstanding financial obligation with the College.
- Students may not register for a course that has a prerequisite unless they have either completed the prerequisite or are currently enrolled in it at MassBay. If the prerequisite was completed at another school, students must submit proof of completion to the Advising Center.
- Students accepted to a restricted program, such as many of the health sciences programs or automotive technology programs, must obtain their program advisor's signature to register for any courses.
- To obtain information on the semester schedule and class meeting times and places, please visit our website, www.massbay.edu/courses.

Learn more about MassBay by attending an information session.

Information Sessions are held throughout the year, so there is always one that fits your schedule.

To **RSVP visit:** www.massbay.edu

Writing Test Waiver

Students may be granted a waiver from the writing test requirement if they have successfully completed a college-level freshman composition course with a grade of "C-" or better. The course must have been taken at an accredited U.S. college or university and be equivalent to the MassBay course Freshman English I. Students may also be exempt if they have completed a higher-level course (equivalent to Freshman English II) with a grade of "C-" or better. Students who completed the equivalent of Freshman English I with a passing grade below "C-" at another institution will not be required to take the placement test but must successfully complete Freshman English I. The College does not accept credits for transfer from courses with a grade below "C-."

Math Test Waiver

Math test waivers are available to students who can provide proof of completion, with a grade of "C-" or better, of an appropriate college-level mathematics course taken at an accredited college or university.

New incoming, first-time students to MassBay who have graduated from an accredited US high school within 3 years of admissions application date may be eligible, based on high school cumulative GPA, to be placed directly into a college level math course without having to take the Math Accuplacer.

Eligible students must submit their high school transcripts to the Office of Admissions no later than 10 days prior to the start of the semester. Once transcripts are submitted they will be reviewed by the college staff for eligibility. Students who submit their transcripts after the dates listed above may not be eligible for the math placement waiver.

Students eligible for the Math Placement Waiver are still required to satisfy the English Placement requirement by the College as part of their enrollment process before attending new student orientation and registering for classes.

Determining Math Placement Waiver Eligibility:

1. Students whose overall cumulative high school GPA is 2.7 or higher may receive the Math Placement Waiver and register for an *entry college level math course, regardless of a developmental math placement with the Accuplacer. The student will be eligible to register for the College Level Math required for their program of study as specified on the curriculum sheet.
2. Students who earn below a 2.7 cumulative high school GPA are not eligible for the Math Placement Waiver option and will need to take the Math Accuplacer
3. High School GPAs will be considered from those who graduated from high school within 3 years of admissions application date.
4. The Accuplacer test can place students into a higher level of college math than the GPA placement.

5. If a student is a current high school senior, the submitted transcript must contain at least one quarter of senior grades to be reviewed for the Math Waiver.

*entry college level math course - for programs that require the first math course to be one which requires a lower college level math course as a pre-requisite, like Calculus, students using the Math Waiver will be able to enter directly into Pre-Calculus, not Calculus.

Student Orientation, Advising and Registration (SOAR)

Orientation will provide you with the tools you need to succeed at MassBay. No matter what your goal is at MassBay, all new students should attend an Orientation as part of the enrollment process. When you attend an Orientation, you are taking an important step in your academic journey. Starting off on the right track is the best way to ensure success as a MassBay student. We have three different options:

On Campus Orientation

Recommended for first time college students and/or students who are planning to complete an Associate Degree or Certificate Program at MassBay.

At the On Campus Orientation you will:

- Explore your academic, career, and transfer goals with MassBay Academic Advisors and faculty.
- Meet and socialize with fellow NEW MassBay students as well as current MassBay students, faculty, and staff.
- Plan your first semester schedule, register for courses, and get your MassBay student ID
- Learn hands-on about MassBay's technology, including your email, student account, and classroom tools. You will obtain your username and password and activate all of your online MassBay accounts.
- Learn about the extracurricular and leadership opportunities available to you.
- Be introduced to a wide range of support services and resources.

Online Orientation

Recommended for students who are taking prerequisite courses, or taking online only courses or non-credit courses.

Please keep in mind that you may still need to visit campus to meet with an Academic Advisor and register for your courses.

At the Online Orientation you will:

- Become familiar with MassBay's technology, including your email, student account, and classroom tools.
- Learn about the extracurricular and leadership opportunities available to you.
- Be introduced to a wide range of support services and resources.

Visit the Advising Center for Class Registration

Recommended for students who are a non-degree seeking student or are completing prerequisite courses for credit at another institution.

When you Visit the Advising Center you will:

- Review the courses selected.
- Plan your first semester schedule and register for courses.

** After you register for classes, be sure to contact the [help desk](#) to have your MassBay online accounts activated.

Visit www.massbay.edu/soar or email SOAR@massbay.edu or by calling 781-239-2721.

Enrollment

In State Residency Requirements

Massachusetts residency for in-state tuition is determined by the Office of Admissions as defined by the Department of Higher Education Residency Status for Tuition Classification Purposes Policy. A Massachusetts resident is currently defined as a U.S. citizen, permanent resident, or a lawful immigrant based on the policy. A resident must have proof of a minimum of six (6) consecutive months of permanent primary domicile in the Commonwealth of Massachusetts prior to the first day of the semester and present evidence of intent to live in Massachusetts indefinitely. Nonresidents may attend MassBay at the out-of state tuition rate. For more information, please contact the Office of Admissions at 781-239-2500.

International Students

Support services for international students are provided from acceptance to the College and continue throughout their academic experience. When submitting an International Student Application, students should include the following:

1. A completed MassBay application;
2. Documentation of English Language Proficiency, which may be demonstrated by any of these methods:
 - Test of English as a Foreign Language (TOEFL) scores of 62 or higher.
 - If you are currently in the USA, you may demonstrate English language proficiency by taking an English Language Placement Test (Accuplacer at MassBay Community College).
3. Proof of high school graduation or equivalency.

MassBay Community College requires that international applicants have their educational documents evaluated by an educational evaluation agency such as the Center for Educational Documentation, World Education Services, or Education Credential Evaluators, please contact the Office of Admissions at 781-239-2500 for more information.

Once the College receives all required documents, the Office of Admissions will notify students in writing of their admission status. Upon receiving an acceptance letter, students must submit the following forms to the Office of Admissions to receive their Certificate of Eligibility (I-20):

- I-20 Request Form;
- Completed immunization form;
- Notarized financial statement verifying that a student has at least \$22,150 in U.S. dollars that is available as their source of financial support for educational and living expenses while studying in the U.S. (Note, this amount is subject to change);
- If a student's sponsor is someone other than their parent or legal guardian, the sponsor must submit a letter to the Office of Admissions verifying that they will be assuming financial responsibility for the student;
- Copy of passport
- Transfer Request form (if applicable).

International students must maintain a minimum of twelve (12) credit hours per semester and twenty-four (24) credits per year. Based on these requirements, the following is an estimate of expenses for a full academic year:

**International Student
Tuition and All-College
Fee**

\$418.00 per credit (non-resident rate)	10,032.00
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Health Insurance	\$1,712.00
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**Estimated Living
Expenses (9 months)**

Books and Supplies	\$406
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Housing, food, transportation	\$10,000
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Total (Subject to Change)	\$22,150.00
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International students studying on an F1 Visa are required to pay the non-Massachusetts resident tuition and fees. International students are not eligible to apply for financial aid at MassBay.

Students seeking to transfer a Certificate of Eligibility I-20 from another U.S. SEVIS authorized institution should seek assistance with this process from the Office of Admissions at 781-239-2500. Students in the USA on a non-immigrant visa who want to change their status and obtain an F-1 student visa should consult with an immigration attorney. Please contact the Office of Admissions at 781-239-2500 for more information

MassBay is a commuter school, which means that our students take public transportation or drive to campus. We do not have dormitories, but our students are eligible to apply for housing at Framingham State University. Contact the Office of Student Development at 781-239-3142 for information. Apartment rentals, homestay companies, international student residences and furniture rentals are available in the Metro West and greater Boston area. The Office of Admissions provides a list of housing resources, but is not responsible for placement or details concerning all aspects of student housing.

Open Houses and Information Sessions

MassBay hosts fall and spring Open House events. In addition, MassBay offers general information sessions, Nursing and Allied Health information sessions on the Framingham Campus, and Automotive Technology information sessions at the Ashland Technology Center on a regular basis.

Anyone interested in enrolling at MassBay is encouraged to attend an appropriate event to learn more about the programs and what MassBay has to offer. To review the calendar of information sessions and to make a reservation, please visit the MassBay website at www.massbay.edu/.

Non-Degree Seeking Students

Students who intend to take a course or courses to transfer, and do not intend to obtain an associate degree or certificate from MassBay, may register for classes without submitting an application for admission. Students who are enrolling in a course(s) that requires a prerequisite must meet with an academic advisor. Please note, students in this category are considered "non-matriculated" or "non-degree" seeking students and are not eligible for financial aid.

Student Immunization

Massachusetts General Law requires all full-time students, international students and all students in a health science program who have contact with patients to obtain a physician's certificate that the student has received the following immunizations:

1. Two doses of live measles, mumps, and rubella vaccine given at least four weeks apart beginning or after 12 months of age;
2. A single dose of Tdap (tetanus, diphtheria and pertussis) vaccine received any time at or after 7 years of age. If it has been more than 10 years since Tdap was given, a dose of Td is recommended;
3. Three doses of hepatitis B vaccine;
4. Two doses of live varicella vaccine given at least four weeks apart; and
5. A single dose of MenACWY meningococcal vaccine for newly enrolled full-time students 21 years of age or younger received on or after the 16th birthday.

The requirements shall not apply where:

1. The student provides written documentation that he or she meets the standards for medical or religious exemption;
2. The student provides appropriate documentation, including a copy of a school immunization record, indicating receipt of the required immunizations; or
3. In the case of measles, mumps or rubella, hepatitis B, or varicella, the student presents laboratory evidence of immunity (titers).
4. For meningococcal, the student files a signed meningococcal vaccine waiver.

Students enrolled in a health science program shall also comply with immunization requirements outlined by the Division of Health Sciences.

Immunization records are to be submitted to Student Development. Please submit them as soon as possible as state law requires that the immunization forms be submitted within 30 days of the start of the semester. Please note immunization records are retained by the College for five (5) years. For more information, please contact Student Development.

Under-Aged Students

The College reserves the right to limit or deny enrollment in a course or program to any student under the age of 16. Admission to the College will be based on a case-by-case review of a variety of factors including but not limited to: the student's maturity, life experience, placement test scores, prior education, course content, instructional methodology, and potential risks associated with participation in a particular course or program.

New England Regional Student Program

Under the New England Regional Student Program, if a student claims residency in a New England state other than Massachusetts which does not have a comparable associate degree program, the student may be able to attend MassBay for 150% of the in-state tuition rate, which is less than the out-of-state tuition rate. If a student's residence is in a New England state other than Massachusetts, he or she should contact the Office of Admissions to see whether their major qualifies for the New England Regional Student Program.

Home Schooling Policy

All home-schooled students without a high school diploma or GED are eligible to apply for admission to a MassBay degree or certificate program provided they have successfully completed an approved home-school program in accordance with Massachusetts General Laws or the laws of their home state.

The College determines whether students have participated in an approved home-school program. Students shall submit with their application for admission evidence that the home-school program was approved by their school district superintendent or school committee: a letter from the student's school district superintendent or school committee is required. Once a student has provided a letter from the school district documenting that the student's 12 grade home-school program was approved, the student or student's family may certify completion of the approved program. Home-schooled students who have not completed an approved home-school program will not be eligible to enroll in a MassBay degree or certificate program until they have obtained a GED.

New England Regional Student Program

Under the New England Regional Student Program, if a student claims residency in a New England state other than Massachusetts which does not have a comparable associate degree program, the student may be able to attend MassBay for 150% of the in-state tuition rate, which is less than the out-of-state tuition rate. If a student's residence is in a New England state other than Massachusetts, he or she should contact the Office of Admissions to see whether their major qualifies for the New England Regional Student Program.

Dual Enrollment

The Dual Enrollment program at MassBay allows qualified high school and home-schooled students to enroll in college courses.

Participating students may receive both high school and college credit for their course work.

Dual Enrollment requirements:

- Current high school student or currently participating in an approved home-school program.
- Completion of the Dual Enrollment Agreement.
- Overall high school grade point average (GPA) of 2.5 out of 4.0 or higher.
- Placement into college-level math or English classes.

Admission into Specialized & Restricted/Criteria-Based Programs

Admission into some programs is restricted/criteria-based due to a limited number of openings. In addition to the general admission requirements, these programs have specific requirements. All applicants to restricted/criteria-based programs will initially be offered acceptance into the General Studies program. When admission requirements/criteria have been completed, a student will be considered for a restricted/criteria-based program.

Automotive Technology

Each of the automotive technology programs involve physical requirements (commonly called Technical Standards) that candidates must be able to perform in order to participate. The ability to perform these tasks and functions is considered essential to the automotive technology programs.

A checklist of the specific Technical Standards necessary for each program is available through the Office of Admissions. Candidates are encouraged to review the list. Candidates with doubts about their ability to perform any of the functions should consult with their health care provider. If candidates or their health care provider feel that some form of accommodation would allow candidates to meet the performance

requirements, they should contact the Office of Disability Resources. For additional information, contact the Office of Admissions at 781-239-2500.

The Automotive Technology program curriculum features a cooperative education (coop) component. Securing a dealer sponsorship commitment is strongly recommended prior to enrollment in a MassBay automotive technology program.

Health Sciences Programs

Students seeking admission to a health sciences program will be evaluated by grade point average (GPA) and pre-admissions requirements. Science courses must be repeated if they were taken more than five years before the time of matriculation/acceptance into a MassBay health sciences program. In some programs, sciences may only be repeated once.

Prospective applicants to health sciences programs are required to attend an information session as the first step in their application process. Sessions are regularly scheduled by the Office of Admissions. For a current schedule and to make a reservation, visit the MassBay website at www.massbay.edu/, or contact the Office of Admissions at 781-239-2500.

Applicants to fall health sciences programs must have all admission requirements completed and evaluated by the preceding February 1st for priority consideration for the fall semester. Applicants to the spring health sciences

programs must have all admission requirements completed and evaluated by the preceding June 1st for priority consideration for the spring semester.

CPR Requirements

Proof of CPR is required for most health sciences programs prior to the beginning of the first semester. The Basic Life Support Provider certification from the American Heart Association, the American Red Cross, or the equivalent through the Military Training Network meets this requirement.

Students who do not have this certification may enroll in a Basic Life Support Provider course through the MassBay Office of Corporate & Community Education (CCE).

For more information about the CCE, please visit <http://www.massbay.edu/cce>.

Health Sciences Policies

Students enrolled in MassBay health sciences programs must adhere to policies developed to meet the requirements of their accrediting and regulatory agencies. In addition to academic requirements, there are clinical and affective domain (behavioral) policies for each program. These policies are detailed in the Division of Health Sciences Student Handbook, which is available for viewing and downloading on the MassBay website. A hard copy of the handbook is provided to each student at as part of the orientation process the beginning of his or her program.

Health Sciences Readmission Policy

Students who have been dismissed or who have withdrawn from any program within the Division of Health Sciences (DHS) at MassBay will be considered only once for readmission to the same program. Students who have not been successful in one health science program can apply for admission to a different health program if they have an overall College GPA of 2.0 or better. Students who have been dismissed or withdrawn from a program for reasons of "clinically unsafe practice/behavior" as defined in the DHS Student Handbook and Policy Manual (see E.14.0) or who violate the College's Student Code of Conduct are not eligible for admission/readmission to any DHS program. See program addendums for specific requirements for admission/readmission.

An application for readmission must be made within 12 months of withdrawal or dismissal from the original program. Readmission application deadlines are February 1 for the fall semester and June 1 for the spring semester. Qualified candidates will be selected from a readmission pool and based on the seat availability for that course and/or program.

Based on specific course/program requirements and accreditation standards, students may be required to retake courses, or take competency exams or skill testing prior to readmission, even if courses have been completed successfully. Should a student not attain a passing grade on skill or competency testing, they will be required to retake a course(s) in its entirety. Also, the student may need to retake the HESI Admission A2 Exam if it has been more than two years since they took the exam.

Limited spaces are available for applicants for readmission. A student seeking readmission to any criteria-based health sciences program must contact the Office of Admissions. For more information, please contact the Office of Admissions at 781-239-2500.

Search of Records for Past Criminal or Sexual Offenses

Any MassBay health sciences program student whose course work or clinical placement activity requires direct access to children, elderly, patients, or disabled or other at-risk populations, must submit to a criminal history check. Acceptance or enrollment in a health sciences program does not guarantee a student will be allowed licensure. It is the student's responsibility to work with the appropriate state licensing board to determine eligibility to sit for a licensing examination. The purpose of the background check is to ensure public safety and avoid unacceptable risk to vulnerable populations.

There are three types of required background checks: CORI, SORI and Supplemental:

CORI and SORI -The student must complete the CORI (Criminal Offender Record Information) form to authorize a search of conviction and pending criminal case information under Standard Required Level I (Clinical student access to kids or patients) by the Massachusetts Department of Criminal Justice Information Services (803 CMR 2.05). As required, students must provide the last six digits of their social security number on the CORI form and present a valid government issued ID (such as a license or passport) to verifying staff. Students must also complete the SORI (Sex Offender Registry Information) form.

The CORI and SORI completion process occurs as part of the program orientation process prior to the beginning of health sciences programs, and may occur during the first or second week of each following semester. MassBay's Division of Health Sciences may conduct subsequent CORI checks within one year of the date the form was signed by a student. The Division of Health Sciences will first provide students with written notice of the check. Students may also be required to complete subsequent CORI and SORI request forms according to clinical facility requirements.

A National County Records search will be conducted within the health sciences student's account on www.castlebranch.com.

If a CORI and/or SORI Report or National County Background Check is returned with a finding(s), it may or may not prohibit progression in a health sciences program. CORI and/or SORI finding(s) will be forwarded to a College-wide Review Committee, and the student will be invited to the review session. The final decision regarding a student's progression in a health sciences program will be determined at that time.

Some health care facilities may require supplemental information and/or screening from students prior to clinical placement. These include, but are not limited to, submission of social security number, fingerprinting, drug-testing, CORI checks, and proof of immunizations. It is the policy of MassBay Community College to review these requirements prior to clinical placement to ensure that students' rights and privacy are protected in accordance with state and federal laws. Additional fees may also apply.

Health/Immunization Records

Health sciences students must have had a physical exam within one year prior to entry into a health program. Students must obtain their health care provider's documentation of a physical exam and verification that all required immunizations are current. Required immunizations include:

- Measles, Mumps, Rubella (MMR) 2-dose vaccine or Titer (laboratory evidence of immunity);
- Tetanus/Diphtheria/Pertussis (Td/TDAP) booster within the past 10 years;
- 2-Step Tuberculin Test within the last six months, QuantiFERON or T-Spot blood test, or chest x-ray with documentation of a negative symptom review check annually thereafter;
- Varicella 2-dose vaccine or Titer;
- Hepatitis B 3-dose vaccine series and a Titer 1 - 2 months following completion of the series, or a Titer if a previous Titer is more than five years old. This requirement must be completed prior to entry into a health sciences program. It takes six months to complete the Hepatitis B vaccination process;
- Seasonal influenza vaccine;
- Titers must be submitted on official laboratory reports. The TB test and seasonal influenza vaccine must be updated annually.

All immunization and CPR documentation will be managed by Castle Branch, a secure, web-based platform. Once enrolled in a health sciences program, students will receive instructions on how to create a personal profile on and upload their immunization and CPR documentation using www.castlebranch.com. Castle Branch will send email alerts to students when documentation is missing, incomplete, or in need of updating. Students are responsible for reading these email alerts. Health Sciences faculty will refer to Castle Branch data to determine whether students are cleared to attend clinical or field experience rotations.

Authorization for Release of Medical Information

The Physical Examination & Immunization Record form requires the student's signature authorizing the release of immunization information to clinical affiliated agencies. College policies regarding student rights will be maintained. The Federal Family Education Rights in Privacy Act of 1974 (FERPA) prevents unauthorized individuals from gaining access to educational records, health records, and disability information. Students must provide written permission to release or disclose such information. Students must grant permission for the sharing of any information between the College and clinical facility that is relevant to the success of the clinical experience.

Minimum Technical/Performance Standards

MassBay's health sciences programs have technical standards that candidates must be able to perform in order to successfully and safely complete the program. The categories of functions include muscular and skeletal, auditory visual, manual dexterity and fine motor skills, verbal, olfactory, and environmental.

A list of the technical standards for each program is available through the Division of Health Sciences, and students must sign the technical standards forms indicating their ability to perform. Prospective students are encouraged to review the list of physical requirements. Candidates with any concerns about their ability to perform any of the functions should consult with their health care provider. Should candidates or their health care provider feel that some form of accommodation would allow candidates to meet performance requirements, they should contact the Office of Disability Resources. For additional information, contact the Office of Admissions at 781-239-2500. Technical Standards form can also be found in the Division of Health Sciences Student Handbook and in the Office of Admissions.

Medical Leave Policy

Students who leave a course mid-semester with verified medical or family illness documentation will be withdrawn from the course but not from the restricted health science program. The withdrawal will not be counted against the student. Students who are granted a medical or family leave will be accommodated in the subsequent offering of that course on a space available basis, after first providing medical documentation approving their participation. Students seeking readmission must contact the Department Chair by the required date. Students will have 12 months to be reinstated in the withdrawn course for medical reasons. Students returning from medical leave will be required to pay tuition for all enrolled courses. Students are only eligible for medical leave during a semester. Medical leave will not be granted once the course is completed and/or grades have been issued.

MassBay invites you to 'walk in' for service in Admissions, Academic Advising, Financial Aid, Student Accounts and Registration!

Financial Aid

Wellesley Hills Campus / Room 111 / 781-239-2600

Framingham Campus / Room 100 / 508-270-4010

Office of Financial Aid Mission

MassBay Community College is committed to providing access to higher education by reducing economic barriers. The role of the Financial Aid Office is to provide information about student aid programs and to assist eligible students in accessing these programs. Students are encouraged to apply for financial aid to help meet the expenses of attending college.

Financial Aid Eligibility Guidelines

In order to receive financial assistance from federal and state student aid programs, you must meet the following requirements:

- Be a citizen or eligible non-citizen of the U.S.
- Have a high school diploma, General Education Development (GED) certificate, or have completed a high school education in a home school setting that is recognized as a home school under state law.
- Enroll in an eligible program as a matriculated student seeking a degree or certificate. An admissions application must be completed and received by the Admissions Office.
- Be registered with the Selective Service, if required. Males age 18 through 25 are required to register.
- Meet satisfactory academic progress (SAP) standards.
- Certify that you are not in default on a federal loan or owe money on a federal grant.
- Certify that you will use federal student aid only for educational purposes.
- Certify that you have not been convicted for the possession or sale of illegal drugs for an offense that occurred while you were receiving federal student aid. For more information regarding your eligibility status related to this issue, please call the Federal Student Aid Information Center at 1-800-4-FED-AID (1-800-433-3243).

Financial Aid Application Process

To apply for financial aid, follow these two easy steps:

1. Create an FSA ID. The Federal Student Aid (FSA) ID, made up of a username and password, is used to access certain U.S. Department of Education websites. Your FSA ID is used to authenticate your identity when accessing your financial aid information. You can create an FSA ID at <https://fsaid.ed.gov> (NOTE: If you are a dependent student your parent must also create an FSA ID). Save your FSA ID to use again in future years.
2. Complete the 2016-2017 Free Application for Federal Student Aid (FAFSA) online at www.fafsa.ed.gov. The FAFSA is used to determine your eligibility for federal and state financial aid. List "Massachusetts Bay Community College" in the College Release Section; **our federal school code number is 002171**. Submit additional documents to the Office of Financial Aid if requested by MassBay.

The priority deadline for federal financial aid for the 2018-2019 academic year is May 1, 2018. Students who complete the application process by this date will have an award decision prior to the start of the fall semester. The priority deadline for those entering the College in January 2017 (i.e. spring semester) is October 1, 2018. If a student has not completed his or her file by the priority deadline, they may be responsible for settling their fall bill without the benefit of financial aid.

Changes in federal, state, and/or institutional policy could affect information contained in this Catalog.

The U.S. government places the primary financial responsibility of a college education on the student and the student's family. Financial aid is considered only a supplement to a student's personal resources.

To Receive Financial Aid

A student's financial aid award will be adjusted to reflect any change in the number of credits for which they are currently registered.

Please note:

- Full time = 12 or more credits
- 3/4 time = 9-11 credits
- 1/2 time = 6-8 credits
- Less than 1/2 time = 5 credits or fewer

Certain financial programs require specific credit loads. Please visit the Financial Aid Office for details. You may obtain a copy of the *Financial Aid Handbook*, which further explains the eligibility requirements for financial aid by visiting or calling the Financial Aid Office.

Sources of Financial Aid

Federal Work-Study (FWS)

Federal Work-Study (FWS) is a federally funded program that provides part-time jobs in nonprofit institutions on- and off-campus. FWS funds are awarded on a funds available basis. Eligibility is determined from the information provided on the FAFSA. If a student is awarded FWS, the amount shown on the financial aid award notification reflects the maximum amount he or she may earn during the *academic year*. FWS employees will receive a paycheck every two weeks based on the actual number of hours worked and the pay rate. FWS funds are not credited to a student's account. **Please be aware that a Federal Work-Study award does not guarantee a student a job.** If you are awarded FWS, please visit the Office of Financial Aid to view a listing of available positions and to complete any necessary paperwork.

Federal Pell Grants

The Federal Pell Grant is a need-based grant program from the federal government for undergraduate students with significant need. The maximum amount for the 2017 - 2018 Federal Pell Grant is \$5,920 for a full-time student. Maximum Pell Grant amount for 2018 - 2019 is currently \$5,920. In order to be eligible for a Pell Grant, a student must have a valid Expected Family Contribution (EFC), meet all of the general Title IV student eligibility requirements, and not have a prior bachelor's degree.

Federal Supplemental Educational Opportunity Grants (FSEOG)

The Federal Supplemental Educational Opportunity Grant is a need-based grant from the federal government for undergraduate students with significant financial need. FSEOG is awarded on a funds available basis, typically to students who are recipients of the Federal Pell Grant. The amount of a typical FSEOG is \$200.

William D. Ford Federal Direct Stafford Loan Program

Stafford loans were created by the U.S. Department of Education, enabling students to borrow to help pay educational expenses. MassBay is responsible for determining eligibility based on the results of the FAFSA and current federal regulations. The loan(s) are taken out in the student's name, and there is no credit check required to qualify for this program. The government sets a limit on the amount a student can borrow each year. First-year students are eligible to borrow up to a maximum of \$5,500, for sophomores \$6,500 (For independent students the loan limits for first-year students are \$9,500 and \$10,500 for sophomores). All recipients must complete federally mandated loan counseling and complete a master promissory note prior to the disbursement of funds. Exit counseling must be completed before graduation, at termination of enrollment, or if enrollment drops below six (6) credits in a semester. Students must be enrolled in at least six (6) credits in a semester to be eligible.

Subsidized Direct Stafford Loans are need-based and do not accrue interest while a student is enrolled at least half-time.

Unsubsidized Direct Stafford Loans are not need-based and accrue interest while a student is enrolled. Students may choose to defer the interest and pay it with the principal amount upon graduation or less than half-time enrollment, or pay the interest on a quarterly basis while still enrolled. Repayment for both Subsidized and Unsubsidized Federal Direct Stafford Loans begins six months after a student graduates, withdraws, or is attending school less than half-time (five credits or fewer).

For additional information regarding these federal loan programs including current interest rates, fees, and repayment options, please visit the Direct Loan website at <https://studentaid.ed.gov/sa/types/loans>.

Federal Parents' Loans for Undergraduate Students (PLUS)

The PLUS loan is a federal government loan borrowed through the College in the parent's name. PLUS loan applications and master promissory notes are accessible online at www.studentloans.gov/. The disbursement of PLUS funds is administered by MassBay. Parents are eligible to borrow up to the cost of attendance minus all other sources of financial aid. Repayment begins within 60 days after the second disbursement is applied to the student's account.

For additional information regarding these federal loan programs, including current interest rates, fees and repayment options, please visit the Direct Loan website at <https://studentaid.ed.gov/sa/types/loans>.

GI Education Benefits

MassBay is approved by the Department of Veterans Affairs to certify students eligible to receive Veterans Administration (V.A.) benefits. Veterans of the U.S. Armed Forces, reservists, and dependents of deceased veterans may be eligible for V.A. education benefits as a result of their service. Students may apply for educational benefits for full, three-quarter, or part-time enrollment. The V.A. Certifying Official provides the appropriate paperwork to apply for G.I. Bill benefits and is responsible for certifying enrollment status to the V.A., which results in the payment of benefits to a student. However, the V.A. Certifying Official does not determine eligibility for benefits.

Massachusetts residents who are members in good standing with the Massachusetts National Guard are eligible for a waiver of tuition and fees for day and evening credit classes. For information about eligibility requirements and application procedures, please see the Veterans Affairs Counselor located in the Office of Student Development, or visit www.massbay.edu/veterans.

MASSGrant

This grant is awarded to full-time (12 credits or more each semester) students who are Massachusetts residents and who do not have a prior bachelor's degree. A FAFSA must be filed by the May 1 priority deadline to be considered for this grant.

Massachusetts Part-Time Grant

This grant is awarded to Massachusetts residents who are enrolled in six to 11 credits each semester and do not have a prior bachelor's degree. The Massachusetts Part-Time Grant is awarded on a funds available basis.

Massachusetts Need-Based Tuition Waivers

This is funding provided to MassBay from the State of Massachusetts. This state-funded tuition waiver program (does not need to be repaid) is available to undergraduate students who are Massachusetts residents. Students must be a permanent legal resident of Massachusetts for at least one year prior to the opening of the academic year and be a U.S. citizen or a non-citizen eligible under Federal Title IV regulations. Students must not have a prior bachelor's degree. Eligibility is based on demonstrated financial need and actual tuition charged for state supported undergraduate degree or certificate program offered by the institution. These funds are limited and students with high financial need are given first priority. For additional information please visit the MA Office of Student Financial Assistance at www.osfa.mass.edu.

Massachusetts John & Abigail Adams Scholarship

This scholarship is a merit based, state supported undergraduate tuition waiver program. Merit is based on student scores on the 10th grade Massachusetts Comprehensive Assessment System (MCAS) test. Award amounts are based on actual tuition charged for state supported undergraduate degree programs (certificates programs are not eligible) offered by MassBay. Forward a copy of your eligibility letter from the Massachusetts Department of Education to the Financial Aid Office. If you have misplaced your letter, you may contact the Department of Elementary & Secondary Education at 781.338.3625 or 781.338.3640. You may also contact the Massachusetts Office of Student Financial Assistance at 617-391-6070. In order to receive this scholarship, eligible students must be enrolled full-time and annually complete the Free Application for Federal Student Aid (FAFSA). For additional information please visit the MA Office of Student Financial Assistance at www.osfa.mass.edu.

Massachusetts Cash Grant

This is funding provided to MassBay from the State of Massachusetts. This state-funded grant program (does not need to be repaid) is available to undergraduate students who are Massachusetts residents. Students must be a permanent legal resident of Massachusetts for at least one year prior to the opening of the academic year and be a U.S. citizen or a non-citizen eligible under Federal Title IV regulations. Students must not have a prior bachelor's degree. Eligibility is based on demonstrated financial need and actual tuition and fees charged for state supported undergraduate degree or certificate program offered by the institution. These funds are limited and students with high financial need are given first priority. For additional information please visit the MA Office of Student Financial Assistance at www.osfa.mass.edu.

Transfer Scholarships

Various scholarships are available to assist MassBay graduates seeking transfer to four-year institutions. Below is a sample list. For more information on requirements and application deadlines for these and other transfer scholarships, please contact the College's Transfer Counselor or the four-year institution directly.

- **Boston University**
Two (2) renewable scholarships for full tuition are available. Students must be a Boston public high school graduate, a U.S. citizen or permanent resident, have a 3.5 GPA, and have completed a minimum of 60 transferable credits
- **Boston University's Metropolitan College Community Scholars' Program**
Boston University's Metropolitan College provides the opportunity to complete a Bachelor's degree in their evening and weekend program. This scholarship will cover 50% of tuition costs for up to 12 credits per semester, through the completion of a student's Bachelor's degree. Students must be graduating from MassBay with an Associate degree and a minimum GPA of 3.0. This scholarship is awarded each fall and spring semester.
- **New England Transfer Association Scholarship**
Three \$1,000 awards are granted each year to students who have earned an associate degree or completed 60 college-level credits with a 3.5 GPA. Recipients must be transferring to a New England Transfer Association (NETA) affiliated 4-year institution. A NETA member must nominate a student for consideration, and an essay is required. This scholarship is awarded each spring.
- **The Osher Reentry Scholarship**
Awarded to newly entering UMass Boston students who are returning to college after an interruption in study of five years. This five year timeframe need not be consecutive. Osher Reentry Scholars will receive up to a \$5,000.00 per year scholarship. The scholarship is potentially renewable.
- **UMass-Community College Scholars Program**
This program awards up to \$10,000 per year for students transferring to any University of Massachusetts campus. Requirements include completion of an Associate degree, a minimum 3.75 GPA, Massachusetts residency, and full-time status upon transfer. The award may be renewable for up to two years and is awarded each fall and spring semester.
- **UMass-Amherst Community College Academic Honors Program**
To be eligible for this program, a student must have a minimum 3.5 GPA and at least 45 earned academic credits towards a MassBay degree at the time of application, be completing an associate degree, be a U.S. citizen or permanent resident, and plan to enroll in the day division. Awards of up to \$2,500 per year are possible. This scholarship is awarded each fall and spring semester.
- **UMass-Boston Foster Furcolo Scholarship**
This scholarship pays for two years' tuition and mandatory fees at UMass-Boston. To apply for this scholarship, a student must have completed or be completing an associate degree program at MassBay with a minimum 3.5 GPA. This scholarship is awarded each spring.
- **UMass-Boston Chancellor's Scholarship for Excellence**
This scholarship can provide full tuition and mandatory fees while a student attends UMass-Boston. To qualify for the scholarship, a student must demonstrate one of the following: academic excellence with a 3.5 transfer GPA, excellence in the arts, or excellence in unpaid public or community service. This scholarship is awarded each fall and spring semester.

- **UMass-Boston Student Enrollment LEADERS Program**
High-achieving, newly-entering students with a minimum 3.0 GPA who are interested in representing the University at key events are encouraged to apply to the Student Enrollment LEADERS Program. Applicants must plan to enroll full time. Recipients will receive approximately \$1,000 annually in scholarship funding. Additionally, they must work ten hours per week within one of the offices of the Division of Enrollment Services and University Communications. Enrollment LEADERS will also serve as tour guides and goodwill ambassadors at several admissions events throughout the year. NOTE: This program is open to out-of-state students.
- **UMass-Lowell Community College Transfer Scholarship**
To be eligible for this program, a student must have earned a minimum 3.7 GPA and at least 45 earned academic credits towards a MassBay degree at the time of application, be completing an associate degree, be a U.S. citizen or permanent resident, and plan to enroll in the day division. Awards of up to \$2,500 per year are possible. This scholarship is awarded each fall and spring semester.
- **New England Transfer Association Scholarship**
Three \$1,000 awards are granted each year to students who have earned an associate degree or completed 60 college-level credits with a 3.5 GPA. Recipients must be transferring to a New England Transfer Association (NETA) affiliated 4-year institution. A NETA member must nominate a student for consideration, and an essay is required. This scholarship is awarded each spring.

Senator Paul E. Tsongas Scholarship

The Paul Tsongas Scholarship Program seeks to recognize achievement and reward Massachusetts students who have graduated from high school within three years with a grade point average (G.P.A.) of 3.75 and highly competitive Scholastic Aptitude Test (S.A.T.) scores (or the American College Testing [A.C.T.] equivalent) and who also meet the one year residency requirement for tuition classification at state colleges or universities. Students who meet the above residency requirement for tuition classification and who have pursued other endeavors for a minimum of five years are eligible to apply to a state college or university for the Paul Tsongas Scholarship Program under the exceptional life experience category set forth in the guidelines. Eligible students receive a waiver of tuition and mandatory fees at a Massachusetts state college or university. For more information, visit <http://www.mass.edu/osfa/programs/tsongas.asp>.

To be eligible for a Paul Tsongas Scholarship, a student must:

- Meet eligibility criteria established by the state college or university and approved by the Massachusetts Board of Higher Education.
- Be a permanent resident of Massachusetts for at least one year prior to the opening of the academic year.
- Be a United States citizen or eligible noncitizen.
- Be in compliance with applicable Selective Service Registration Laws.
- Not be in default of any federal or state loan or owe a refund on any previously received financial aid.
- Maintain a G.P.A. of 3.3 for continued eligibility for the waiver for four years of study.

MassBay Community College Scholarship Opportunities

The MassBay Foundation provides scholarships to support our students achieve their academic goals. Students are encouraged to apply. For additional information or assistance, please visit us in the Scholarship Office in Room 222 on the Wellesley Hills campus, contact us by email at foundation@massbay.edu or call us at 781 239-3126. We are happy to hear from you.

New, Incoming Students

MassBay scholarships for new, Incoming students require that an application be submitted to the MassBay Office of Admissions. Scholarship criteria and applications are available on the MassBay website.

Dual Enrollment Scholarship

This scholarship was established to support a junior or senior that is either home schooled or enrolled in a high school in MassBay's service area. Cities and towns include: Ashland, Bellingham, Belmont, Brookline, Dedham, Dover, Franklin, Framingham, Holliston, Hopkinton, Medway, Medfield, Millis, Natick, Needham, Newton, Norfolk, Norwood, Sherborn, Sudbury, Waltham, Watertown, Wayland, Wellesley, Weston, Westwood, and Wrentham. A scholarship is awarded for the fall or spring semester to a high school junior or senior enrolled in the MassBay Dual Enrollment Program.

John F. McKenzie Scholarship

John F. McKenzie was the founding President of MassBay Community College in 1961, and served as President until his retirement in 1983. This scholarship was established to support a graduating senior from a public high school in MassBay's service area. Cities and towns include: Ashland, Bellingham, Belmont, Brookline, Dedham, Dover, Franklin, Framingham, Holliston, Hopkinton, Medway, Medfield, Millis, Natick, Needham, Newton, Norfolk, Norwood, Sherborn, Sudbury, Waltham, Watertown, Wayland, Wellesley, Weston, Westwood, and Wrentham. A scholarship is awarded for the fall semester to one graduating high school senior from each city and town in MassBay's service area.

Robert and Rosemary Murphy Scholarship

This scholarship was established in the memory of Robert and Rosemary Murphy, life-long residents of Needham, Massachusetts to support a MassBay Community College student who is a resident of Needham or graduate of Needham High School. This scholarship is intended to encourage an individual who may have not done as well as he or she should have in high school and would like an opportunity to start again. A scholarship is awarded for two consecutive semesters.

President's Scholars Scholarship

This scholarship recognizes academically superior graduating high school students entering MassBay Community College. The purpose of this scholarship is to attract and retain local academic scholars to MassBay. The scholarship is awarded for two (2) academic years for four (4) consecutive semesters at MassBay, a \$2500 scholarship for each semester.

Automotive Technology Scholarship

This scholarship opportunity was established to assist students enrolled in any of the MassBay Automotive Technology Programs with tuition, mandatory fees, tools and/or books. Scholarship(s) are awarded for the fall semester.

Nurse Assistant Program Scholarship

This scholarship was established to support students pursuing a career in Health Sciences who need financial assistance during the Nurse Assistant Training Program. It is designed to assist individuals to start or re-start their education to reach higher levels of employability. Scholarship awards vary depending on funding.

Current MassBay Students

If you are currently enrolled at the College, you may apply for scholarships through ACADEMICWORKS <http://massbay.academicworks.com/> by using your MassBay username and password to login. We begin accepting scholarship applications on the first day of course registration for each semester. You must be registered in the current semester for your scholarship to be considered. After completing the general scholarship application, you will be able to view and apply for particular scholarships. Each scholarship has unique criteria and requirements.

Below is a listing of our scholarship opportunities. Scholarship criteria, award amount, and the semester a scholarship is awarded can be viewed in AcademicWorks.

50th Reunion Scholarship

The 50th Reunion Scholarship was created and is supported through gifts from the Alumni of MassBay Community College 50th reunion classes.

Alumni Nursing Scholarship

The Alumni Nursing Scholarship was established by nursing graduates of MassBay Community College to assist current MassBay nursing students.

Alumni Scholarship

This scholarship was created and is supported through gifts from the Alumni of MassBay Community College.

Angelina Grimaldi Cioffari Scholarship

Angelina Grimaldi Cioffari was a professor of French, Spanish, and Italian at MassBay Community College from 1964-1980. Her son, Vincent, established the Angelina Grimaldi Cioffari scholarship in her memory to support a student who demonstrates high academic success in a foreign language.

Automotive Technology Scholarship

The Automotive Technology Scholarship was established to assist students with tuition, tools and/or books who are enrolled in any of the MassBay Automotive Technology Programs.

Boston Marathon Scholarship

The Boston Marathon Scholarship was established leading up to the 2017 Boston Marathon, spearheaded by Susan Maggioni, Ph.D., J.D., Dean of Business & Professional Studies, to support students pursuing an associate degree at MassBay Community College.

Communications Studies Scholarship

The Communications Study Scholarship was established by Professor Deborah London and Theodore Sturman to support students pursuing a Liberal Arts Communication Associate Degree at MassBay Community College.

Cyber Security Scholarship (full-time student)

The Cyber Security Scholarship is funded by the generous sponsors of the Information Security Summit established by Towerwall and MassBay Community College. Sponsors include: Alien Vault, BROCADE, CDW-G, SOPHOS, TREND, VARIOS, VORMETRIC, WAVE, Gigamon, GovConnection Inc., HB Communications, Inc., HTS, McAfee, TCG Network Services, TIBCO LogLogic, and WatchGuard. This scholarship supports

Cyber Security Scholarship (part-time student)

The Cyber Security Scholarship was created and is funded by the generous sponsors of the Information Security Summit established by Towerwall and MassBay Community College. Sponsors include: Alien Vault, BROCADE, CDW-G, SOPHOS, TREND, VARIOS, VORMETRIC, WAVE, Gigamon, GovConnection Inc., HB Communications, Inc., HTS, McAfee, TCG Network Services, TIBCO LogLogic, and WatchGuard. This scholarship supports a part-time student enrolled in the Cyber Security associate degree or certificate Program.

Debi Prasad Sodhani International Student Scholarship

The Debi Prasad Sodhani International Student Scholarship was established to support MassBay Community College International students in good academic standing at the College, who have completed 6 or more credits at MassBay.

Division Award

The Division Award recognizes the achievements of one student in each Division:

- Health Sciences
- Humanities & Social Sciences
- Business & Professional Studies
- Science, Technology, Engineering & Mathematics. Applicants are chosen by the Dean of each respective Division.

Dr. Bruce Jackson Endowed Scholarship

This scholarship was established with gifts from the friends of the late Dr. Bruce Jackson to support MassBay students pursuing an associate degree or certificate in STEM fields.

Dr. Yves Salomon-Fernandez Scholarship

This scholarship was established by the MassBay Community College Foundation Board to honor Dr. Salomon-Fernandez for her commitment to MassBay Community College and its students. This scholarship was established to support MassBay students pursuing an associate degree or certificate.

Ferris Family Scholarship

This scholarship was established by Howard Ferris, former Dean of the Automotive Technology Program, to assist new or returning, full-time or part-time Auto-Tech students with tuition, tools and/or books who are enrolled in the MassBay Automotive Technology Program.

General Scholarship

This scholarship was established to support MassBay Community College students who are in good academic standing at the College. \$500 scholarships

Growth and Generosity Scholarship

The Growth and Generosity Scholarship was established to support a student who can demonstrate, through an essay, his/her own growth and generosity and/or why they believe growth and generosity is important. The donor of the scholarship believes that the key to life is growth and generosity.

Health Sciences One Semester Certificate Program Scholarships

The Health Sciences One Semester Scholarship was established to support students enrolled in one of the MassBay Health Sciences one semester certificate programs: **Central Processing, EMT, or Phlebotomy**. It was designed to assist individuals start or restart their education to reach higher-levels of employability.

Health Sciences Scholarship

The Health Sciences Scholarship was established to support students pursuing a career in Health Sciences at MassBay complete a degree or certificate program. It was designed to assist individuals to start or restart their education to reach higher-levels of employability. Scholarship awards vary depending on the Health Science program.

Information Security Summit (Cyber Security) Scholarship

This scholarship was created and is funded by the generous sponsors of the Information Security Summit established by Towerwall and MassBay Community College. This scholarship supports full-time and part-time students enrolled in the Cyber Security Certificate Program. \$1000 scholarships

Krystle Campbell Scholarship

Krystle Campbell graduated from MassBay with an Associate Degree in Business Administration in 2005 and transferred to the University of Massachusetts, Boston to pursue her bachelor degree. She tragically lost her life at the age of 29 in the Boston Marathon bombings on April 15, 2013. MassBay Community College created the Krystle Campbell Scholarship in her memory to support a business major pursuing an associate degree at MassBay Community College.

Leonce Cadet Berotte Scholarship

The Leonce Cadet Berotte Scholarship was established in honor of Leonce Cadet Berotte, father of Dr. Carole Berotte Joseph, President of MassBay Community College 2005-2011. A \$2000 scholarship is awarded annually to one student who is a deserving international/immigrant dream chaser attending MassBay Community College.

Louise Mayer Scholarship

The Louise Mayer Scholarship was established by Ted and Denise Mayer to honor Louise Mayer, R.N. by supporting students pursuing a career in the Health Care industry.

MassBay Community College Foundation Board Scholarship

The MassBay Community College Foundation Board Scholarship was established by the MassBay Community College Foundation Board to support MassBay students pursuing an associate degree or certificate. The Foundation Board members give annually to this scholarship fund.

MassBay S-POWER Engineering Scholarship

The MassBay S-POWER Engineering Scholarship supports a student pursuing an associate degree in Engineering, Electrical & Computer Engineering, or Mechanical Engineering who plans on continuing their education in an energy field at a four-year institution. Energy fields include but are not limited to renewable and energy generation, electrical distribution and storage, energy efficiency and infrastructure, materials for energy. The National Science Foundation (NSF) Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) program addresses the need for a high quality STEM workforce in STEM disciplines supported by the program and for the increased success of low-income academically talented students with demonstrated financial need who are pursuing an associate degree.

Maxine Elmont Endowed Scholarship

The Maxine Elmont Endowed Scholarship was named in honor of Maxine Elmont, Professor of Human Services at MassBay Community College. It was established to support a student 25 years or older re-entering college and majoring in Human Services at MassBay.

Re-entry Student Scholarship

The Re-entry Student Scholarship was established to support a student who is 25 years or older and returning to College.

Richard P. Carbone Scholarship

The Richard P. Carbone Scholarship was established to support students who are interested in pursuing a college education and have completed a minimum of 9 credits at MassBay Community College. Richard P. Carbone was a Wellesley Assistant Principal from 1968 until he retired in 1985. His wife, Toria, recalls, "He was most proud that he never gave up on a kid."

Robert and Rosemary Murphy Scholarship

The Robert and Rosemary Murphy Scholarship was established in memory of Robert and Rosemary Murphy, life-long residents of Needham, Massachusetts to support a MassBay Community College student who is either a Needham resident **OR** a graduate from Needham High School.

Salomon-Fernandez Scholarship

MassBay Community College Interim President Yves Salomon-Fernandez, Ph.D. (2015-2016), a firm believer public education, established the Salomon-Fernandez Scholarship. This scholarship was established to support international and immigrant students who are pursuing a College education.

Single Parent Scholarship

The Single Parent Scholarship was established to support a student who is a single parent with full/joint custody of minor child/children pursuing a college education.

Summer Session Scholarships

Two Summer Session Scholarships are available.

- Scholarships are awarded to support students enrolled in less than 6 credits in a summer session at MassBay Community College.
- Scholarships are awarded to support students enrolled in 6 credits or more in a summer session at MassBay Community College.

The Felix and Nellie Juliani Scholarship

This Felix and Nellie Juliani Scholarship was established in memory of Felix and Nellie Juliani who were passionate about education and the importance of community service and family values in one's life.

Virginia F. Sapienza Scholarship

The Virginia F. Sapienza Scholarship was established to support a student pursuing the arts (visual arts, music, writing, photography) at MassBay Community College. Virginia F. Sapienza was a long-time dedicated music professor at MassBay Community College.

MassBay Merit Scholarships

MassBay awards Merit Scholarships to students each semester. Students qualifying for these scholarships will be contacted by the MassBay Foundation Office at the end of each semester.

4.0 Scholarship

This scholarship was established to recognize students who have declared a major, completed 12 college-level credits with a GPA of 4.0 in a semester at MassBay Community College.

Scholar-Athlete Scholarship

This scholarship was established to recognize student-athletes who have a declared major, are a member of a MassBay sports team, and completed 12 college-level credits with a minimum GPA of 3.0 in a semester at MassBay Community College.

Most Improved Scholarship

This scholarship was established to support students who have significantly improved their grade point average from the previous semester, completing 12 college-level credits each semester.

Tuition & Fees

Student Accounts

Wellesley Hills Campus / Room 114 / 781-239-2540

Framingham Campus / Front Desk / 781-239-2540

The Student Accounts Office collects all student tuition and fee monies and is also responsible for disbursement of funds owed to students. Tuition and fees are subject to change without notice. It is ultimately the student's responsibility to satisfy his or her financial obligations. Once a student registers, he or she is responsible for paying in full all tuition and fees by the posted due date. Checks or money orders for tuition and fees should be made payable to MassBay Community College. Visa, MasterCard, and Discover are also acceptable forms of payment. Payments may be made online at www.massbay.edu, in person, or by mail. In order to adjust or eliminate tuition and fee charges, a student must officially withdraw in writing within the appropriate timeline from the course(s) and/or the College. Lack of attendance or course abandonment does not constitute course withdrawal. If a student does not withdraw in accordance with College procedures, he or she will be subject to full payment of tuition and fees.

Outstanding Financial Obligations

Students will be allowed to register for the next semester when outstanding balances from all prior semesters have been paid in full. MassBay reserves the right to remove any student from their class schedule for non-payment if financial clearance is not given by the tuition due date.

Students with outstanding financial obligations will not receive grade reports, attendance reports, transcripts of grades, or diplomas without the final approval of the Office of Student Accounts. An overdue student account is sufficient cause for administrative withdrawal from the College and/or other administrative penalties by the College. Unpaid accounts will be referred for collection, and students will bear all costs and charges incurred in collection and/or litigation. MassBay is responsible for making diligent efforts to collect amounts due the Commonwealth. Diligent efforts shall include written billing, subsequent collection, intercept notification, and/or litigation. If a student disputes any charges applied to his or her account, it is the student's responsibility to inform the College.

Federal/State Refund Policy / Return of Title IV Funds

If a recipient of Title IV financial aid funds withdraws or stops attending courses (including academic dismissal or expulsion) after beginning attendance for any reason he/she may no longer be eligible for the full amount of Title IV Funds. A proration calculation is used to determine the amount of federal and state funds the student has earned based on the number of days in the enrollment period and the number of days the student actually attended. If a student completes 60% or more of the semester, he/she is considered to have earned all of their federal aid and will not be required to return any funds.

The withdrawal date is either the day a student begins the withdrawal process prescribed by the school; the date a student otherwise provided the school with official notification of the intent to withdraw; or for the student who does not begin the school's withdrawal process or notify the school of his/her intent to withdraw, the last known date of an academically related activity.

Tuition Payment Plan

To help you meet your educational expenses, MassBay offers Nelnet Business Solutions (NBS, FACTS) as a convenient budget plan. This is not a loan program - there are no interest or finance charges assessed, and there is no credit check. There is a nominal, non-refundable enrollment fee administered per semester to establish your interest-free monthly payment plan. You may budget your tuition and fees via an automatic bank payment or by credit card.

Liability Insurance

All health sciences students in good standing are covered by the College's approved professional liability insurance.

Tuition and Fees

All fees, tuition charges, refunds, and academic requirements are effective for the Academic Year 2016-2017 and are subject to change without notice by the College and/or the Board of Higher Education. Check www.massbay.edu for current information.

DAY RESIDENT

Tuition	\$24
All College Fee	\$161
Technology Fee	\$28
Total per credit	\$212

All College Fee	\$161
Technology Fee	\$27
Course/Lab Fee	\$70
Total per credit	\$488

DAY NON-RESIDENT

Tuition	\$230
All College Fee	\$161
Technology Fee	\$27
Total per credit	\$418

DAY LPN RESIDENT

Tuition	\$24
All College Fee	\$161
Technology Fee	\$27
Course/Lab Fee	\$70
Total per credit	\$282

EW & Summer RESIDENT*

Tuition	\$24
All College Fee	\$161
Technology Fee	\$27
Total per credit	\$212

DAY LPN NON-RESIDENT

Tuition	\$230
All College Fee	\$161
Technology Fee	\$27
Course/Lab Fee	\$70
Total per credit	\$488

EW & Summer NON-RESIDENT*

Tuition	\$230
All College Fee	\$161
Technology Fee	\$27
Total per credit	\$418

EW NURSING RES/NON-RESIDENT*

Tuition	\$128
All College Fee	\$161
Technology Fee	\$27
Course/Lab Fee	\$70
Total per credit	\$386

DAY NURSING RESIDENT

Tuition	\$24
All College Fee	\$161
Technology Fee	\$27
Course/Lab Fee	\$70
Total per credit	\$282

EW LPN RESIDENT/NON-RESIDENT*

Tuition	\$100
All College Fee	\$161
Technology Fee	\$27
Course/Lab Fee	\$70
Total per credit	\$358

DAY NURSING NON-RESIDENT

Tuition	\$230
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*EW- EVENING AND WEEKEND PROGRAMMING

Additional Required Fees: Course, Lab & College Fees

COURSE/LAB FEES per credit

AR	Art	\$20.00
AB	Auto-BMW	\$50.00
AS	Auto-GM	\$50.00
AT	Auto-Toyota	\$50.00
AY	Auto-Chrysler	\$50.00
BI	Biology w/4 credits	\$30.00
BT	Biotechnology	\$50.00
CH	Chemistry w/4 credits	\$30.00
CS	Computer Science	\$30.00
CY	Central Processing	\$50.00
EE	Electrical Engineering	\$20.00
EL	Electronics	\$20.00
EM	EMT	\$50.00
EV	Environmental Sciences	\$30.00
HL	Health Science	\$30.00
MM	Materials Management	\$50.00
MN	Engineer CAD	\$30.00
MO	Medical Coding	\$30.00
MR	Medical Records	\$30.00
MX	Maxillofacial	\$60.00
NU	RN-Nursing	\$70.00
PB	Phlebotomy	\$60.00
PM	Paramedicine	\$60.00
PN	LPN-Nursing	\$70.00
PO	Photography	\$20.00
PY	Physics	\$30.00
RT	Radiology Tech	\$60.00
SX	Surgical Technology	\$60.00
WR	College Writing	\$20.00

COURSE/LAB FEES per course

EN 090	Intro to Language	\$80.00
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College Fees

Textbook Fund	(waivable) \$5.00 per semester
MASSPIRG	(waivable) \$9.00 per semester
Health Insurance	(waivable) \$1,712.00 full year coverage beginning with fall semester (September 2017- August 2018)
Health Insurance	(waivable) \$1,143.00 half year coverage beginning with Spring Semester (January 2018 - August 2018)
Transcript Fee	\$10.00 on demand

Tuition and Fees are subject to change without notice.

College Refund Policy

Students who withdraw from any course(s) or from MassBay may be granted a reduction of tuition and fees. Lack of attendance, course abandonment, etc., does not constitute an official withdrawal. Note that students will be subject to full payment of tuition and fees if they do not withdraw from MassBay in accordance with College procedures.

REFUNDS ARE MADE ACCORDING TO THE FOLLOWING SCHEDULE:

TUITION

Before the first day of classes	100%
During the first week of scheduled college classes	100%
During the second week of scheduled college classes	50%
During the third week of scheduled college classes	25%
Thereafter	0%

FEES

Before the first day of classes	100%
After the add/drop period	0%

REFUND SCHEDULE FOR OFFICIAL WITHDRAWAL FROM EVENING AND WEEKEND PROGRAMMING CREDIT COURSES:

TUITION

Before the second class meeting	100%
Before the third class meeting	50%
Before the fourth class meeting	25%
Thereafter	0%

FEES

Before the second class meeting	100%
Thereafter	0%

MASSPIRG

MASSPIRG (Massachusetts Student Public Interest Research Group) is a statewide, student-directed, non-partisan organization that conducts research, advocacy, public education and service on issues such as environmental protection, clean and safe energy, consumer protection, and hunger relief. MASSPIRG chapters across the state pool resources and hire a staff of professionals to work with students on issues that concern us as citizens. MASSPIRG started at MassBay in 1985 when students first voted to form and fund a chapter on campus.

MASSPIRG is directed solely by students. Day students are automatically assessed a \$9.00 per semester voluntary contribution to the MASSPIRG organization. Students may waive this fee by using their self-service account in Bay Navigator.

Student Health Insurance

Massachusetts state law requires health insurance for all students carrying nine (9) or more credit hours. Coverage may be waived if a student provides written documentation that they are covered by a comparable health insurance policy, and if he or she completes the appropriate MassBay forms. The Commonwealth of Massachusetts, Executive Office of Health and Human Services requirements of 114.6 CMR3.00 define comparable coverage as follows: services covered under the health benefit plan are reasonably accessible to the student in the area where the student attends school. Programs that fall under the Uncompensated Care Pool, commonly known as "free care," are not health insurance and do not qualify as a health benefit program of comparable coverage. Health insurance is mandatory for students in health sciences programs regardless of the number of credits being taken. There are additional insurance fees specific to students in nursing and other allied health programs. Contact the Office of Student Accounts for more information.

Senior Citizens' Tuition Waivers

Any citizen age 60 or older may enroll in day, state-supported credit courses tuition-free, or evening credit courses at 50% tuition, on a space-available basis the last day of registration. Please contact the Office of the Registrar for course availability and enrollment procedures. Students must provide written proof of age each semester to qualify. Senior citizens are responsible for payment of all fees associated with a course for which they register. Workshops or non-credit courses are not eligible for tuition waivers; registrants are responsible for all associated tuition and fees.

Student Textbook Fund

The Student Government Association and the MassBay Foundation established this fund to help students defray the costs of educational items such as textbooks and other materials. This fee will be applied to both full- and part-time student bills. For more information, including how to apply, please contact the Office of Student Development at 781-239-3142. Students may waive this fee by using their self-service account in Bay Navigator.

Academic Information

Corporate & Community Education (CCE), "YOUR WORKFORCE CONNECTION"

The office of Corporate and Community Education (CCE) is a comprehensive educational training resource serving MetroWest employers, individuals, and community agencies. New courses, trainings, certifications, and programs are continually developed and offered to meet the needs of our current and future students. Additionally, some of our programs end with certification or lead to enhanced preparation for national certification exams.

CCE offers a wide variety of corporate and community education courses, programs, trainings, seminars, and workshops. Our staff specializes in designing customized programs to meet the specific training needs of area employers and residents. We are mobile and can train off-campus, as well as at any MassBay Community College locations in Ashland, Framingham, or Wellesley Hills. The CCE is dedicated to creating strong partnerships that lead to individual and employer success, and we welcome the opportunity to contribute to the growth and development of our MetroWest service area.

CCE also helps individuals meet their professional development goals and needs. For individuals seeking to take their career to the next level, or in a different direction, we offer a wide variety of courses and programs for individual, professional advancement. We are excited to help people succeed and are highly responsive to the needs of our current and potential students.

CCE has partnered with Ed2Go to offer online and hybrid courses, programs, and certifications. The number of courses offered in an online format is extensive. If your schedule does not allow time to train with us in person, you can now learn from the comfort of your own home or office.

For more information about CCE, please contact us by email at cce@massbay.edu or call 508-270-4100 to speak with one of our friendly and knowledgeable staff members.

Learning Opportunities

Internships

Internships are a form of experiential learning that integrate knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Internships give students the opportunity to gain valuable applied experience and make connections in the professional fields they are considering for career paths; and give employers the opportunity to guide and evaluate talent (National Association of Colleges and Employers, 2011, p.2).

MassBay students have the opportunity to participate in credit (number of credit varies)/non-credit and required/elective internships. In order to participate in an internship, students must have completed at least 12 credits in their major and have a Grade Point Average of 2.0 or above. The Office of Career Services collaborates with MassBay faculty in guiding students through the process of finding and securing internships in their field of interest. For more information, contact the Office of Career Services at 781-239-3142.

Directed Study

Under certain circumstances, courses that are not on the course schedule may be available through directed study. Students and their instructor develop a contract for an individualized course of instruction for a directed study course.

Learning Communities

Learning communities link two or more courses with a common cohort of students, and often use integrated readings and assignments to explore a central theme. Students participating in learning communities have a stronger sense of belonging, increased engagement in their studies, and often achieve noteworthy academic success. MassBay has select opportunities for students to participate in a learning community, connecting students with different academic disciplines and to each other.

Service Learning Courses & Activities

Service learning encourages students to validate course concepts through engagement in activities that address community needs. Students gain practical experience while applying lessons learned in the classroom to real life situations. Students at MassBay can also participate in our Study Abroad Program to Costa Rica, which involves civic engagement by volunteer involvement in a specific project. In a service learning class, students deepen their understanding of classroom lessons by participating in a real-world project and reflecting on it in relation to the academic content of the course.

Study Abroad

MassBay provides select opportunities for MassBay students who are interested in travel, study, and exchange programs abroad. The College works with interested faculty and staff to facilitate and establish these programs while ensuring compliance with the policies and guidelines of the College, the Commonwealth of Massachusetts and the U.S. Department of Homeland Security

Honors Courses

Students are admitted to MassBay's Honors courses based on academic achievement. Honors courses may include enhanced traditional courses, a seminar in advanced writing, independent study, or specially designed Honors Seminars. These courses enable students to study in small groups and to work independently with selected professors on intellectually challenging topics and projects while pursuing their degree or certificate.

Honor Societies

Alpha Beta Gamma, the National Business Honor Society, was established in 1970 to recognize and encourage scholarship among two-year-college students in business programs. *Alpha Beta Gamma* provides leadership opportunities and forums for the exchange of ideas, and promotes academic excellence. MassBay's chapter of the Society is *Kappa Epsilon*. To be eligible, students must be enrolled in a business division program, have completed at least 15 credits, and have a cumulative GPA of 3.0.

Alpha Kappa Lambda, MassBay's chapter of the international honor society of two-year colleges, *Phi Theta Kappa (PTK)*, was chartered at MassBay in 1984. The Society recognizes and encourages scholarship in the community and on campus by providing leadership opportunities and service experiences, and by offering an intellectual climate where members can exchange ideas and ideals, participate in a lively fellowship among scholars, and find encouragement for continuing academic excellence. In order to be inducted into *PTK*, students must have earned a GPA of 3.75 for 15-29 credits, or a GPA of 3.5 with 30 or more credits earned at MassBay.

MassBay sponsors a chapter of *Psi Beta*, the National Psychology Honor Society. Students must have completed at least 12 semester hours, taken a minimum of three courses in psychology, have earned a grade of "B+" or better in each course, and have attained an overall grade point average of 3.5 to be eligible for membership.

Laboratories

Biotechnology

The biotechnology laboratory at MassBay's Wellesley Hills campus are considered by industry and the National Science Foundation to be one of the most sophisticated undergraduate research facilities in the United States. It houses three A.S. degree programs: Biotechnology, Marine Biotechnology, and the only degree program in forensic DNA science in the world. The Biotechnology facility contains over \$4.5 million of state-of-the-art equipment in which students, under the guidance of program faculty, train in cutting-edge research including analysis of gene regulation, DNA sequencing, genetic engineering, real-time polymerase chain reaction (RT-PCR), fluorescence microscopy, enzyme-linked immunosorbent assay (ELISA), bioreactor production of cellular molecules, mammalian cell culture and tissue engineering. Students in the Forensic DNA Science program are trained by their direct participation in actual criminal-, anthropological- and cold cases conducted with law enforcement or defense attorneys and use the most advanced mitochondrial DNA and allele analysis methodologies in the solving of these cases. The independent research projects conducted by students are global in nature and involve collaborations with academic and industry scientist worldwide.

CAD Lab/Engineering

MassBay operates a state-of-the-art CAD laboratory equipped with industry standard software including: AutoCAD, Autodesk Revit Architecture, Pro/ENGINEER/Creo, SolidWorks, and MasterCAM, products. The CAD lab houses Rapid Prototyping and 3D Scanning Technology (uPrint/Dimension Printer and Next Engine Laser Scanner) and a professional-grade plotter.

The engineering lab includes state-of-the-art instrumentation and measurement software such as Matlab to enable students to design, develop, program, and test novel engineering applications. The engineering lab also includes industry standard strength of materials testing equipment such as a Universal Testing Machine (UTM) and a torsion testing machine.

The Electronics lab houses electronics industry standard software such as Cadence OrCAD and Matlab as well as electronic parts and tools that students use to experiment and create novel designs.

Computing Labs/Virtual Labs

The virtualized laboratory provides virtual access to multiple operating systems and network environments. The configuration of this lab allows running multiple courses in one semester, where each course requires different application and network resources in addition to a range of student administrative access to operating systems such as Windows and Linux. An additional dedicated laboratory currently features a dual-boot configuration so that both Windows and Linux operating systems are available. Dedicated laboratory rooms support the multimedia software required by our web-related and digital-imaging courses.

General Science Laboratories

MassBay Community College's laboratories provide a comprehensive, hands-on learning environment for science students. MassBay labs feature a total of six 24-station general science laboratories dedicated to the study of biology, chemistry, anatomy, physiology, environmental sciences, and microbiology. Labs are well stocked with modern equipment and new digital technology to accommodate the learning needs of today's students.

Students seeking a degree within a science discipline or taking science courses as an elective will learn the fundamentals of chemistry and biosciences utilizing hands-on investigations, data visualization tools, and lifelike anatomical models. These tools help students deepen their understanding of scientific concepts, and inspire them to develop professional scientific skills.

MassBay also offers students looking to further build on their laboratory experience a variety of higher-level science courses. Interested students may choose Organic Chemistry I & II, where they practice how to detect the presence of specific impurities and identify the presence of certain functional groups in a molecule using a state-of-the-art Fourier Transform Infrared (FTIR) system. Also offered is Molecular Biology, where students study the properties of organic and inorganic substances using the phenomena of fluorescence and phosphorescence with the aid of epi-fluorescent microscopes. MassBay also offers biochemistry and immunology courses that are enhanced by advanced laboratory components.

Environmental Sciences & Safety

This lab is housed on the fifth floor of the Wellesley Hills campus and is equipped with many sophisticated tools such as Gas Chromatography, UV/Visible Spectrophotometers, a DNA sequencer, advanced water and soil analysis systems, and many other microbiology-based pieces of equipment. The lab is used for teaching and for research and was used to discover a new, previously-undescribed bacterium, *Bacillus samanii*.

Nursing & Practical Nursing

The Nursing Lab on the Framingham campus for both associate degree and practical nursing students provides a state-of-the-art learning environment where students acquire psychomotor and physical skills necessary for direct patient care. Under the supervision of trained faculty and staff, students practice with human simulators, mannequins and health care equipment in a mock clinical setting.

Nursing Simulation

The Nursing Simulation Lab on the Framingham campus contains multi-functional human patient simulation equipment. The Human Patient Simulator, a programmable mannequin, can simulate hundreds of medical conditions, exhibit all physiologic functions, and respond in real-time to treatment and medication.

Paramedic and Emergency Medical Technician (EMT)

The lab on the Framingham campus contains state-of-the-art equipment, a mock ambulance training center, the latest in monitoring and defibrillation equipment, ECG machines, a ratio of 2:1 intravenous practice mannequins, 3:1 ratio of intubation mannequins, and many other devices offering the latest technology to enhance student training.

Photography Imaging

The Photography Imaging Laboratory on the Wellesley Hills campus houses digital and chemical darkroom facilities including enlargers for 35mm and 4"x5" film, a digital scanner, a printer and a personal computer.

Radiologic Technology

The Radiologic Lab on the Framingham campus is equipped with Radiologic Technology patient simulation, Computed Radiography (CR) equipment and a variety of both energized and non-energized x-ray equipment. This state-of-the-art laboratory provides an excellent learning environment to prepare for the actual clinical experiences provided in the program.

Surgical Technology

The Surgical Technology Lab on the Framingham campus is a state-of-the-art operating room (OR) with OR tables, positioning equipment, an anesthesia machine, automated and manual blood pressure monitors and accessories. Many other devices, including mannequins and sterilizers, provide students with the technology and lab practice they require. The lab is also available to Central Processing Technology students.

Libraries

Wellesley Hills Campus / Second Floor / 781-239-2610
Framingham Campus / Third Floor / 508-270-4210

The MassBay libraries provide resources and services crucial for student success, including information literacy instruction, quality library materials, and an academic learning environment. The libraries deliver library services to students and faculty both on and off campus with an online catalog and subject guides that link to a host of electronic and print resources. The libraries have books, newspapers, journals and other resources. These are augmented by resources available through the library's participation in the Minuteman Library Network, the Massachusetts Library System, and other national library organizations

Academic Achievement Center

Wellesley Hills Campus / Second Floor / 781-239-2632
Framingham Campus / Third Floor / 508-270-4213

MassBay's Academic Achievement Center (AAC) employs professional learning specialists and peer tutors across subjects. The AAC helps students with reading and study skills, writing for any class, and all levels of math and science. It also offers a range of services for students with disabilities.

The Academic Achievement Center includes Disability Resources, Testing Services, Peer Tutoring, Online Tutoring, the Reading and Writing Center, and the Math and Science Center. The AAC is a warm and friendly environment where all MassBay students can receive assistance in achieving their academic goals.

Disability Resources

Wellesley Hills Campus / Room 216 / 781-239-2234
Framingham Campus / Room 306 / 508-270-4267

MassBay provides equal access for each student who self-discloses a disability and requests accommodations for learning, testing, and other areas of need. Students can:

- Make an appointment with a disability specialist;
- Provide appropriate documentation of the disability; and
- Request accommodations that will facilitate academic success.

Disability specialists collaborate with faculty, providing guidance to students in the areas of:

- Self-advocacy;
- Applying learning strategies for academic success;
- Advising during course enrollment; and
- Finding mentoring and support opportunities.

Disability Resources welcomes each student by providing an open academic environment that facilitates academic excellence.

Transitional Scholars Program

Offers students with intellectual disabilities, typically between 18-22 years of age, who may still be receiving special education services from their districts, the opportunity to participate in inclusive college courses (credit or non-credit) to increase their school and work success.

Students in the program develop:

- Career-planning and employment skills.
- Self-advocacy skills.
- New life skills that will assist students in their post-secondary interests and activities.
- Ability to function independently on the college campus.
- Self-determination skills in adult settings.
- Knowledge to request accommodations and other services at the college.

Testing Services

Wellesley Hills Campus / Room 210 / 781-239-2632
Framingham Campus / Room 307 / 508-270-4213

Make-Up Exams

The AAC provides testing services for make-up exams. Faculty members may arrange for a student who misses an exam for an approved reason to take a make-up test. Photo identification is required for all exams.

Placement Testing

All students new to MassBay and seeking a degree or certificate are required by the Massachusetts Board of Higher Education to complete placement testing soon after being accepted to the College. Placement tests determine the English and math classes in which students will begin their academic careers. Photo identification is required for all exams.

Placement Test Workshops

The AAC offers a workshop series to help students prepare for the Accuplacer placement tests. These free, one-to-two hour workshops help students refresh their skills in arithmetic, algebra, reading, and writing. Please visit www.massbay.edu/placementworkshops for a list of upcoming workshops.

Peer Tutoring

Wellesley Hills Campus / Room 206 / 781-239-2620
Framingham Campus / Room 307 / 508-270-4213

The Peer Tutoring program offers free, student-based assistance in a wide range of subjects. Peer tutors excel in their areas of study and enjoy helping fellow students achieve academic success. Tutors' goal is to help students become active, independent learners. Tutors use a variety of teaching techniques including questioning, modeling, listening, and demonstration.

Online Tutoring

MassBay students can utilize a free online tutoring service, SMARTHINKING, from the MassBay Blackboard site. SMARTHINKING is available 24/7 and is used for many subjects.

Reading and Writing Center

Wellesley Hills Campus / Room 215 / 781-239-2633

Framingham Campus / Room 303 / 508-270-4285

In the Reading and Writing Center, professional learning specialists support and engage MassBay students from every program in developing as readers and writers. Learning specialists hold individual conferences with students. They focus on specific coursework and improvement of drafts at every stage of the writing process—from getting started with an assignment to revising a paper. Students often focus on improving the following skills:

- Setting challenging, achievable academic goals;
- Understanding a reading/writing assignment for any class;
- Separating an assignment into clear and manageable steps;
- Organizing and outlining ideas;
- Using ideas and notes to plan/revise an essay;
- Examining sources and evidence to establish credibility and authority;
- Revising a paper for improved grammar, punctuation, or word choice;
- Developing effective reading and study skills;
- Becoming a more fluent writer as a non-native English speaker; and
- Citing sources in MLA or APA format.

Both walk-ins and appointments are welcomed.

Math and Science Center

Wellesley Hills Campus / Room 214 / 781-239-2774

Framingham Campus / Room 308 / 508-270-4211

In the Math and Science Center, professional learning specialists work with students on their individual learning goals. They hold individual and small-group conferences with students who are working on math or science for any MassBay class. The Math and Science Center offers:

- Individual and group instruction in scientific, nursing, and mathematical course content;
- Opportunities for study groups and homework help with fellow students;
- Consultations for general study skills and subject-specific strategies;
- Workshops in math and science content areas
- Resources for self-paced learning, review, and self-testing; and
- Online learning tools.

No required appointments. Walk-ins only.

Math Study Center

Wellesley Hills Campus/Room 153/781-239-2634

The Math Study Center is where students receive learning assistance, develop their skills in mathematics working with Learning specialists and peer tutors with course content. In the center, professional learning specialists and peer tutors aim to:

- Offer support to students with their classroom work;
- Cultivate independent learners by teaching pedagogical strategies such as:
 - Organizational strategies and time management;
 - Helping students understand both the immediate problem and the larger concept;
 - Assisting students in relating concepts and ideas to each other;
 - Teaching principles, applications, and how to build on skills toward future use;
 - Helping students identify other resources, including both online and print, as well as how to look questions up when learning specialists and instructors are not present.
- Connect students with individuals and resources on campus beyond their immediate faculty.

Academic and Transfer Advising

Wellesley Hills Campus / Room 113 / 781-239-2775
Framingham Campus / Room 104B / 781-239-2775

Academic and Transfer Advising Center

The Academic and Transfer Advising Center is committed to assisting students in the development of meaningful academic plans that are compatible with their professional and life goals. Academic Advisors guide students from their first contact with the College through graduation and beyond. We introduce incoming students to the opportunities and resources of the College, inform new and returning students of the requirements of academic programs, assist students with the selection of a major and the appropriate courses to ensure academic success, and counsel students regarding transfer opportunities. All registered degree/certificate seeking students are assigned an academic advisor who may be a member of the faculty, professional staff or an academic advisor in the Academic and Transfer Advising Center. The name and contact information for one's advisor is available on the Student Center page of Bay Navigator. Advisor assignments are generally made after the add/drop period in the fall and spring semesters.

Other services provided by the Academic and Transfer Advising Center include:

- Assistance with course registration, adding and dropping classes and course withdrawals
- Transfer Credit Evaluation
- Information on Challenge Exams and CLEP exams
- Change of Advisor
- Change of Major
- MassTransfer and Transfer Counseling
- Permission to take courses at other institutions
- Graduation Reviews
- Referrals to other campus resources

Transfer Credit Information & Policies

MassBay Community College adopted the standards set forth in the Common Transfer Policy drafted by the Department of Higher Education. The purpose of this policy is to ease and clarify the process of transferring earned credit from one college to another, while providing common guidelines for institutions to adhere to. To view the Common Transfer Policy in its entirety, view the Department of Higher Education website at www.mass.edu.

Acceptance of Transfer Credit from Other Colleges

I. General Conditions

- A. For credit to transfer, the courses must have been taken at an institution accredited by one of the six regional accreditation agencies in the United States. Credit from institutions with national accreditation, recognized by the Council for Higher Education Accreditation (CHEA) may be used for specific career oriented programs.
- B. Credit earned at international institutions not accredited by one of the six regional United States accreditation agencies may transfer. Foreign documents must be translated and evaluated by a credible agency, such as the Center Educational Documentation (www.cedevaluations.com) or World Evaluation Services (www.wes.org)
- C. MassBay Community College requires official transcripts from the institutions where credit was earned in order to transfer.
- D. Students must be accepted by MassBay Community College and declared their program of study for credit to be transferred and applied accordingly.
- E. At minimum credit will be granted for courses that apply to students' current programs of study.

- F. Once credit is transferred it becomes part of students' permanent records.
- G. Only credit for course work deemed college-level upon evaluation will transfer.
- H. Credit for pre-college-level or developmental coursework does not transfer.
- I. MassBay Community College does not use external developmental coursework for student placement purposes.
- J. Grades do not transfer; only credit transfers. Therefore, transfer credit grades are not used in calculating grade or quality point averages.
- K. Transfer credit is designated on transcripts with the designation of "T". The "T" grade is defined as transfer credit from an external institution.
- L. Credit will transfer as (1) the course equivalent (if it exists), (2) as an elective equivalent within a comparable department, or (3) with an appropriate transfer code and number, when neither the course equivalent, nor a comparable department, exists.
- M. Credits earned in a quarter-hour system will be converted to semester-hour equivalents.
- N. Audited coursework does not transfer.
- O. Credit will not be granted for duplicate coursework or for two courses that cover the same or similar content.

II. **Minimum Grades**

- A. MassBay requires a minimum grade of C- (1.70 on a 4.00 scale) or higher for courses and credits to transfer. Restricted programs in addition to specific academic programs and courses may require a grade higher than C- for grade to transfer. Review curriculum sheets and course descriptions for this information.
- B. Grades of D, D+, C- and CD (1.00 to 1.99 on a 4.00 scale) may transfer if they are for courses that are part of the 34-credit MassTransfer Block and students have completed the Block with a cumulative grade or quality point average of 2.00 or higher. This notation must clearly be indicated on the official transcript from the sending institution.
- C. Grades higher than C- (2.00) may be required for admission or transfer into certain programs, for use as pre-requisite courses and for application of credit to certain program requirements.
- D. Grades of Pass (P), Satisfactory (S) or similar grades will transfer only when official transcripts indicate that such grades are equivalent to a grade of C- or higher.

III. **Residency Requirement/Maximum Transfer Credit Allowed**

MassBay requires students to complete at least one quarter (25%) of the credits of the first associate degree or certificate in order to graduate (referred to as the residency requirement). Transfer of up to the remaining three-quarters of the credits will depend upon the program's requirements and elective options. Students must complete 15 separate academic credits to obtain a second associate degree at the college.

IV. **Alternative Sources of Credit**

- A. Credit will be granted for satisfactory scores on select Advanced Placement (AP) examinations. MassBay also accepts UExcel, Dantes and other exams for credit. For a list of approved examinations, visit www.massbay.edu/cpl
- B. Credit will be granted for satisfactory scores on select College-Level Examination Program (CLEP) examinations. MassBay also accepts UExcel, Dantes and other exams for credit. For a list of approved examinations, visit www.massbay.edu/cpl
- C. Official score reports from the College Board (or other entities) are required in order to receive credit for AP and CLEP.
- D. Credit will be granted for satisfactory scores on challenge or credit examinations only if satisfactory is defined as C- or higher on official transcripts or official score reports.
- E. Credit may be granted for formal courses or examinations offered by various organizations, including businesses, unions, government and military based on the recommendations of the American Council on Education (ACE) as found in its *National Guide to College Credit for Workforce Training*, a resource of its College Credit Recommendation Service (CREDIT).
- F. Credit also may be granted for learning from experience at work, volunteering in the community, military service, job training, independent reading, open source courseware study, and hobbies based on the Prior Learning Assessment (PLA) standards of the Council for Adult and Experiential Learning (CAEL).

- G. Members of the Servicemembers Opportunity Colleges (SOC) Consortium adhere to the Consortium's Academic Residency Requirements for service members at their institutions.
- H. Academic credits earned through the evaluation of military occupation, training, experience and coursework are transferable within the Massachusetts public higher education system in accordance with the Mass Transfer agreement.
- I. Credit granted by one institution from alternative sources other than that included by item H above may not transfer to another institution.

V. **Time Limits**

- A. Credit will be transferred without time limits in most cases. MassBay reserves the right to refuse recognition of courses completed more than ten years prior to the date a student applies for transfer. Science and Computer courses must have been taken within the last 5 years in order to transfer into MassBay.
- B. Certain programs, courses or admission standards may require courses to be taken within a specified time period.

VI. **Student Appeals**

- A. MassBay will maintain and publish a process for students to appeal decisions made about transfer credit. This process is listed below:

Transfer In

A student wishing to challenge course credits accepted by MassBay from another institution must complete a Transfer Credit Appeal Form located in the Academic and Transfer Advising Center. The transcript will be reevaluated by a separate Academic Advisor who will consult with pertinent Faculty, Department Chairs, and/or Academic Deans. Students should provide additional documentation including course descriptions and/or course syllabi with their appeal form. The student will be notified via letter to the address on file with the College of the results of the appeal.

Transfer Out

Final decisions regarding the awarding of transfer credit from MassBay are made by the receiving institution. Students are encouraged to bring their concerns regarding the awarding of credit to the receiving institution. Students may consult with MassBay's Coordinator of Transfer Affairs & Articulation regarding their concerns, and the Coordinator may contact the receiving institution on the student's behalf for further clarification when applicable. MassBay's Transfer Advisor will assist the student by reviewing the appeal and meeting with the student. The Transfer Counselor may contact the receiving institution on the student's behalf for further clarification.

- B. MassBay will designate and publish the contact information of an ombudsperson that ensures institutional compliance with transfer policies and procedures.

Ombudsmen

Transfer In:

Director of Academic Advising
AdvisingCenter@MassBay.edu

Transfer Out:

Coordinator of Transfer Affairs & Articulation
Transfer@MassBay.edu

VII. **Review and Amendment**

- A. MassBay will periodically review this policy and propose amendments with the consideration of the Department of Higher Education.
- B. The Department of Higher Education Common Transfer Policy may be amended with the unanimous consent of the community colleges.

VIII. **Contact**

Questions and comments regarding the Common Transfer Policy may be sent to the Department of Higher Education. For contact information visit : www.mass.edu.

Questions regarding the transfer of credit into MassBay Community College should be directed to Academic and Transfer Advising Center. (AdvisingCenter@MassBay.edu)

Transcript Evaluation for Transfer Credit

- Students must be accepted to the college and have a declared major (degree or certificate program).
- Request an official (in a sealed envelope) transcript from the registrars of all institutions, or the military, that a student previously attended for which they wish to transfer credit.
- Submit the official transcript(s) to MassBay for Transfer Credit Evaluation. Students may have transcripts mailed to:

MassBay Community College
Office of the Registrar
50 Oakland Street
Wellesley Hills, MA 02481-5307

Or, students may deliver transcripts in the sealed envelope to either the Wellesley Hills or Framingham campus at the Office of the Registrar.

- Students should submit official transcript(s) at least six (6) weeks prior to the time that they wish to register for upcoming classes to ensure credit is evaluated and posted prior to registration.
- Once courses have been officially approved and transferred, they will appear on a student's MassBay transcript. Students will also receive a letter from the Advising Center informing them as to which of their courses transferred in.

MassBay's VALOR Act Academic Credit Policy

In accordance with the VALOR Act, Massachusetts Bay Community College evaluates credit earned for military education, training, experience, or coursework using the same standards as those applied to coursework from accredited colleges and universities. MassBay reviews all military transcripts and discharge documents (DD214), including SMART, ACE, and AARTS, as well as CLEP and DANTES Subject Standardized Tests in accordance with college policies for transferability of credit to the student's intended major or program of study. Such evaluation shall be in accordance with existing Mass Transfer agreement policies. Students shall receive accurate and complete academic counseling from the Veterans' Coordinator in collaboration with the Academic Advising Center.

Transfer Advising

(www.massbay.edu/transfer)

MassBay Community College is committed to assisting students in furthering their education beyond the Associate Degree. Transfer Advising (located in the Office of Academic Advising) has resources to assist students in making informed choices about their academic plan in order to make a smooth transition to a 4-year institution.

Transfer Workshops

Transfer Workshops are held throughout the year on the Wellesley Hills and Framingham campuses. These workshops present an overview of the transfer process and provide students an opportunity to meet the transfer coordinator. These workshops are designed to answer some of the 'big picture' questions about transferring into a four-year institution. All students interested in transferring to another school should attend a Transfer Workshop early in their academic career at MassBay.

Transfer Fairs

There is a Transfer Fair in both the fall and spring semesters of each academic year. Over 35 colleges and universities are invited to attend the transfer fairs each semester. At the fair, students have the opportunity to meet with admissions representatives about the requirements for transferring into the school. The transfer fair is also a great time to learn more about the institutions that you are interested in applying to after your time at MassBay.

Transfer Advising Appointments

The transfer coordinator is available by appointment to meet with students who have already attended a Transfer Workshop. The transfer coordinator assists students in navigating the transfer process and other academic planning needs.

MassTransfer Program

(www.mass.edu/masstransfer)

MassTransfer is a statewide transfer program that has replaced the old Joint Admissions Program. MassTransfer links community college students with Massachusetts public universities and the University of Massachusetts through a multitude of programs:

- MassTransfer Block
- MassTransfer Associate Degrees
 - MassTransfer
 - MassTransfer ATA (Alternative Transfer Agreements)
 - MassTransfer Education Compacts

MassTransfer Block

Every four-year public institution (state universities and UMass campuses) has a different set of general education requirements. The MassTransfer Block refers to a set of general education, core, or distribution requirements, consisting of 34 college-level credits. These credits, when completed together with a 2.0 or higher GPA, fully transfer to any Massachusetts public higher education institution...even if you don't have your associate degree. These credits also satisfy general education/distribution/core requirements at any other Massachusetts public higher education institution, with the receiving institution being able to add no more than six additional credits/two courses.

Those requirements include the following:

English Composition/Writing (6 credits)
EN 101 and EN 102

Behavioral & Social Sciences (9 credits)
Anthropology (AN), Economics (EC),
Geography (GG), Government (GV), History
(HS), Law (LA), Psychology (PS), Sociology
(SO).

Humanities & Fine Arts (9 credits)
Art (AR), Communication (CO), Critical
Thinking (CT), French (FR), Humanities (HU),
Literature (LI), Music (MU), Philosophy (PH),

Photography (PO), Speech/Theater/Film (SF),
(SL), Spanish (SP).

Natural & Physical Sciences (7 credits)
Biology (BI), Chemistry (CH), Environmental
Sciences & Safety (EV), Physics (PY), Science
(SC), Nutrition (NS).

Mathematics (3 credits)
MA100-level math or higher
(MAC 100 & MAC 101 not eligible)

Total: 34 college-level credits

MassTransfer Associate Degrees

Associate degrees approved in MassTransfer include the MassTransfer Block. The remaining credits in the program have been reviewed by four-year public institutions to ensure transferability.

Students that graduate from these programs will receive the following benefits based on their final GPA at graduation:

- 2.0 GPA
 - o No admission fee or essay.
 - o Transfer of 60 credits applied to the bachelor's degree.
 - o Automatic satisfaction of the general education requirements at the receiving institution.
- 2.5 GPA
 - o All of the above benefits, plus guaranteed admission.
- 3.0 GPA
 - o All of the above benefits, plus a 33% tuition waiver. Select institutions replace with All of the above benefits, plus a 100% tuition waiver (some exclusions apply).

MassTransfer ATA (Alternative Transfer Agreement)

Not all programs at community colleges will qualify for MassTransfer since many programs don't have the appropriate courses to satisfy the MassTransfer Block requirement.

To address these concerns the MassTransfer ATA agreement has been created. Programs approved through the MassTransfer ATA program still receive all of the benefits listed above in the traditional MassTransfer program, however, students will not receive the general education waiver.

Four-year public institutions will only approve programs through MassTransfer ATA when a student transfers 60 or more credits.

MassTransfer Education Compact

The Education Compact has been moved under the MassTransfer Program. This compact is specifically for Elementary Education and Early Childhood Education majors at MassBay. The compact ensures that students are completing Massachusetts Department of Education course requirements to teach in their selected fields.

Students must take and pass the MTEL licensure exam before transferring. Students will receive all of the benefits listed in the traditional MassTransfer program.

Academic Policy

Registrar's Office

Wellesley Hills Campus / Enrollment Center, 1st Floor / 781-239-2550
Framingham Campus / Enrollment Center, 1st Floor / 508-270-4050

Students may register for classes on campus or online. To register on campus, students should meet with their academic advisor to select appropriate courses and fill out a registration form. This form, signed by an academic advisor, should be submitted to the Registrar's Office on either campus. Barring any conflicts with restricted or full courses, registration staff will enroll students in the selected courses. To register online, it is important to speak with an academic advisor prior to registering.

The academic year consists of a fall and spring semester, each approximately 16 weeks. Summer term consists of two accelerated sessions beginning in late May and mid-July and one 10-week session. Winter session is held in early January and provides an opportunity for accelerated study. MassBay programs lead to an associate in arts degree, an associate in science degree, or a certificate. Completion time will vary depending upon the requirements of the degree program/certificate and the number of courses completed each semester.

MassBay recognizes federal regulatory language, defining a credit hour as an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutional established equivalency that reasonably approximates not less than: (1) One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately 15 weeks for one semester or trimester hour of credit, or ten to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) At least an equivalent amount of work as required in section (1) of this definition for other academic activities as established by the institution including laboratory or studio work, internships, practica, and other academic work leading to the award of credit hours.

Grading System and Grade Point Average

Qualitative Letter Grade	Approximate % Equivalent	Honors Points Per Credit Hour
A	4.000	94-100
A-	3.700	90-93
B+	3.300	87-89
B	3.000	83-86
B-	2.700	80-82
C+	2.300	77-79
C	2.000	73-76
C-	1.700	70-72
D+	1.300	67-69
D	1.000	63-66
F	0.000	Failing

Student Status

Full-Time Status

A full-time student is defined as one who is officially registered in twelve (12) credit hours or more in any academic semester.

Part-Time Status

A part-time student is defined as one who is officially registered in eleven (11) credit hours or fewer in any academic semester.

Audit Status

When students audit a course, they are expected to attend class regularly but do not receive college credit. The course instructor will decide the extent to which students will participate in class assignments. To audit a course, students must designate an audit status at the time of registration. A record of the audit shall be entered on a student's transcript as "AU" at the time of registration. It cannot be converted to a letter grade. Audited courses require full course payment.

Change of Major

Students seeking to change from one academic program to another must meet with an advisor and complete a Change of Major form, available in the Registrar's Office or the Advising Center. Once a student's change of program request is approved, he or she will matriculate and follow the curriculum and course requirements in place for that program at the time of their change in major. In some instances, students' science and/or computer science courses may not apply to their new degree depending on the time of completion of these courses.

Course Add/Drop

Students may add or drop a course without penalty until the end of add/drop period in each semester. Generally, the add/drop period extends through the first week of classes, but evening, weekend, and off-cycle classes may have different add/drop periods. For the add/drop dates in a given semester, consult the official academic calendar for that semester, or the Office of the Registrar.

Official Withdrawal from a Course

Students may officially withdraw from a course after the add/drop period has ended. The last date students may withdraw from a course is published in the official academic calendar each semester. Students who wish to withdraw from a course must do so online or complete the withdrawal section of the College's Add/Drop/Withdrawal form, available at www.massbay.edu/registrar or in the Registrar's Office. Students who withdraw from a class will receive a grade of "W" on their transcript, which is not counted in the GPA calculation. Lack of attendance or course abandonment does not constitute automatic or official course withdrawal. Students who do not officially withdraw in accordance with College procedures are subject to full payment of tuition and fees, and may receive the failing grade of 'F' for the course. The official withdrawal date is the date all forms are completed and turned into the proper office, or the system date if the official withdrawal is conducted online. Frequent withdrawal from courses may affect a student's academic standing and financial aid status, among other ramifications.

Repeating a Course

Students may repeat a course at any time, although MassBay reserves the right to limit the number of times students may repeat the same course. When a course is repeated, the new letter grade, whether higher or lower than the original grade, is used to calculate the GPA and is listed on the permanent record. The original grade will be retained on the permanent record but is removed from the GPA calculation.

Science and Computer Science Courses

Science and computer science courses completed at MassBay, or granted as transfer credit within five years of enrollment, may fulfill graduation requirements regardless of a change of program as long as the student has not had an interruption of enrollment of two years or four semesters. If students interrupt their MassBay studies for longer than two years or four semesters, and their science and/or computer science courses are five years or older upon readmission to the College, those science and computer science courses will not be accepted toward graduation.

Transcripts

The permanent academic record of students listing all courses taken and grades achieved is documented on a transcript. An official transcript (one bearing the seal of the College and signature of the Registrar), can be mailed directly to the institution or persons considering the applicant for admission or employment, only upon receiving a written request from the student. No transcript or record will be released without the signature of the student to whom the record belongs. A Request for Transcript form is available in the Registrar's Office or online: www.massbay.edu/registrar. Students may obtain an unofficial transcript (an academic record without the College seal and signature of the Registrar) via Bay Navigator.

Grading Policies and Requirements

Credit Hours

The number of hours per week that courses meet are counted as equivalent credits for financial aid and used to determine a student's status as a full or part-time student. Credit hours are units earned for successfully completing a course during a given semester. The number of credit hours associated with each course is listed in this Catalog in the course descriptions section. At the end of each academic term, students receive a grade in every credit course in which they were enrolled. A letter grade is assigned for each credit course completed. Each letter grade carries an honor point value. These grades represent levels of accomplishment and carry the number of honor points per credit hour attempted, as indicated in the letter grade chart. This honor point value is multiplied by the number of credits earned for a particular course. Each semester you receive a semester Grade Point Average (GPA) based on the classes you took that semester, and a cumulative GPA which accounts for all of the college level courses you have taken up to the current date. The GPA is calculated by dividing the total number of points earned by the total number of college-level credits attempted. The GPA affects a student's academic progress with regard to graduation, academic honors, probation, and dismissal.

Mid-semester Grades

During the mid-point in the fall and spring semesters, faculty submits grades as indicators of student performance. If a student's mid-year grade is a "D" or "F", or a "C-" in Health Sciences courses, he or she should meet with their instructor and academic advisor to review options for improvement.

Final Examinations

Final examinations are given in most credit courses. If a student is absent for a final examination, he/she should immediately contact the class instructor to request a makeup exam. It is up to the instructor whether a make-up exam is allowable, and the circumstances under which it may be given.

Other Course Outcomes

Although the following letter designations are not used in computing grade point average, some of them may have an impact on a student's financial aid status: W, WC, WR, I, UC, AU, S, U, T.

Designations of W, WC, WR are not grades. They may be assigned under the following circumstances:

W (Official Withdrawal): From the day after the end of the add/drop period before the end of the twelfth week of fifteen-week courses, the fourth week of six-week classes, the sixth week of eight-week courses, or the eighth week of ten-week classes in any semester, a student may withdraw from a course without penalty. The notation of "W" will be made on a student's permanent record.

WC (Withdrawal from the College): When a student officially withdraws from all courses and files the appropriate notification with the Office of Student Development, the notation of "WC" will be made on the student's permanent record for these courses, indicating official College withdrawal.

WR (Administrative Withdrawal): When there is no record that a student ever attended a course for which they were enrolled or if a student stopped attending a course but did not withdraw, the notation of "WR" will be made on a student's permanent record for that course. The "WR" designation will be accompanied by the student's last known date of attendance.

Designations of I, UC, AU, S, U, or T may be assigned under the following circumstances:

I (Incomplete): A temporary designation assigned to a student if he or she fails to complete the requirements of a course. An "I" designation may result from one of two causes: failure to take a final examination, or failure to complete all the required assignments. If a student received an "I," he or she should contact the instructor and obtain, in writing, the requirements for course completion. A student may be given up to one semester after the semester in which the "I" was assigned to complete all course requirements. The designation of "I" automatically becomes a Failing ("F") grade if a student does not complete the missed work within the following semester.

UC (Unsafe Clinical): Unacceptable performance in a clinical assignment.

AU (Audit): This status is assigned to a student who requests to register for and participate in a credit course on a no-credit basis. A student may audit any credit-bearing course at MassBay, but he or she must state their intention to audit the course on their registration form. Audit status cannot be changed after the drop/add period.

S (Satisfactory): Acceptable performance, equivalent to the grade of C or higher, in a pass/fail course or exam.

U (Unsatisfactory): Unacceptable performance in a pass/fail course.

T (Transfer Course): Course credits transferred from another college.

Graduation Requirements

The requirements for graduation are both academic and non-academic. Candidates for degrees and certificates must fulfill the following requirements:

1. Completion of the "Application for Graduation" form online or in the Registrar's Office.
2. Completion of program requirements, including all credit hours and Grade Point Average (GPA) requirements, of the particular academic program.
3. At least 25% or one quarter of the coursework must be taken at MassBay.
4. An overall cumulative Grade Point Average (GPA) of 2.000 or better.
5. Fulfillment of all College obligations, including financial, as well as completion of all exit forms by students receiving financial aid.

Students must complete the College's exit survey. Course requirements for graduation are specified in this catalog under your program of study.

Please Note: The College reserves the right to confer degrees and certificates once graduation requirements have been met.

Students must complete the graduation application by the defined deadline. If a student does not complete the graduation application by the stated deadline, their application will be reviewed for the following semester.

Change of Major, Adding Major, and Graduation Deadlines

Change of Major Deadlines:

Students that are currently active in a major (degree or certificate) may change their major by completing a Change of Major form with an academic advisor.

The deadline for changing a major in order to be active in the new major in the current term is the *last day of add/drop period (evening)* for the fall and spring semesters

The deadline for changing a major to be active in the new major in the current term if the term is summer is *the last day of add/drop for summer session III (6W2)*

A student must be active in the major during the term in which they plan to graduate from that major. Please meet with your academic advisor regularly to ensure you are active in the right major. Submitting a change of major form after the deadline will result in the effective date of the new major being the next academic term, and awarding of the certificate or degree in the next academic term.

Adding a Major Deadlines:

Students that are currently active in a degree or certificate program may add an additional major (degree or certificate) by submitting an Admission application to the Office of Admissions.

The deadline for adding a major in order to be active in the newly added major in the current term is the *last day of add/drop period (evening)* for the fall and spring semesters

The deadline for adding a major to be active in the newly added major in the current term if the term is summer is *the last day of add/drop for summer session III (6W2)*

A student must be active in the newly added major during the term in which they plan to graduate from that major. Please meet with your academic advisor regularly to ensure you are active in the right major/s. Submitting an Admission application for the purposes of adding an additional major after the deadline will result in the effective date of the additional major being the next academic term, and awarding of the certificate or degree in the next academic term.

Graduation Application Deadlines:

For Fall/December Graduation: The last day to apply to graduate in fall/December will be *the last day of Day/Evening/Online Final Exams for the fall semester*

For Spring/May Graduation: The last day to apply to graduate in spring/May will be *the last day of Day/Evening/Online Final Exams for the spring semester*

For Summer/August Graduation: The last day to apply to graduate in summer/August will be *the last day of final exams for summer session III (6W2)*

***Please refer to the Academic Calendar for specific dates

Grade Changes and Challenges

Grades reported by the instructor are considered permanent and final. There are, however, some circumstances in which a change of grade may be requested to correct clerical or procedural errors. Students must submit a written request to the instructor for re-evaluation. The final decision regarding grades rests with the instructor. However, students may appeal a grade by following the grade appeal process as outlined in the Student Handbook. No appeal challenging a grade may be initiated later than 30 calendar days following the last day of the instructional period for which the grade was granted.

Attendance Policy

Students are expected to attend all scheduled meetings of the courses in which they have enrolled, and they are responsible for any work missed due to absence. For each course, the policies regarding class and/or laboratory attendance and make-ups (if any) are developed by the instructor and will be specified in the course syllabus. The course instructor has full and final authority to allow make-up work. If student absences exceed five (5) class hours, the instructor may withdraw him/her from the course by notifying the Registrar with the student's last known date of attendance. This action will result in the recording of the "WR" designation for course abandonment on the student's academic record. Lack of attendance or course abandonment does not constitute automatic or official course withdrawal. Students who do not officially withdraw in accordance with College procedures are subject to full payment of tuition and fees, and may receive the failing grade of 'F' for the course(s). The date of official withdrawal is determined by the date all forms are completed and turned into the proper office, or the system date if the official withdrawal is conducted online, via Bay Navigator. Frequent withdrawal from courses may affect academic standing and financial aid status, among others.

Religious Observances

Under the Massachusetts General Laws, Chapter 151C, any student who cannot attend classes or take an exam, study, or fulfill work requirements on a particular day due to his or her religious beliefs shall be excused from such a scheduled obligation. Students must be provided with an opportunity for make-up as long as it does not create an unreasonable burden upon the institution.

Academic Progress

At each semester's end, MassBay reviews student academic performance. The College requires students to complete each semester with a minimum cumulative GPA of 2.000. Students who fail to meet the minimum GPA are subject to probation or dismissal. Grades in pre-college-level courses are not included in calculating the GPA or in the calculation of credits toward graduation.

Dean's List

To be eligible for the Dean's List, students must be full-time, enrolled in least 12 credits of college-level courses, in good standing with the College, maintain a 3.500 term GPA or higher, and have no course grade lower than 2.000 at the end of an academic semester. Only college-level course credits and grades are used to compute the term GPA for the Dean's List. If a student has any incompletes for the semester, even if he/she eventually completes them, he/she will not be eligible. Dean's List eligibility is not retroactive.

Active Military Duty

Students who are called to active U.S. military duty shall, upon verification, be granted exceptional consideration for making up any missed work should their service cause a temporary interruption in the semester. Students who are unable to complete a semester because they are called to active U.S. military duty shall, upon verification, be granted non-punitive withdrawals in all courses from which they are required to withdraw. Students may also submit a Student Financial Petition for a full, or partial, refund with the Office of Student Accounts. For verification, students must provide the Dean of Students, Registrar, or Veterans' Counselor with a copy of their Order to Active Duty within one week of receiving the Order. Students who have received any form of financial aid, including a scholarship or student loan, or who expect to receive such, must contact the Office of Financial Aid and the Veterans' Counselor to make arrangements.

Student Evaluations

MassBay is committed to the continual improvement of the quality of education at the institution. The periodic evaluation of instruction by students is an important component of this commitment. Student evaluations are conducted during a designated period at the end of each semester. More information is available in the Office of Strategic Planning, Institutional Effectiveness, and Grants Development.

Grade Requirements for Health Sciences Programs

Students enrolled in health sciences programs must complete all science courses with a grade of "C" or "C+" or better, depending on the program. Science courses must be repeated if they were taken more than five years before the time of application to the health sciences programs. Students who are uncertain of the validity of their science courses should consult with an academic counselor in the Academic Advising Center.

Academic Probation and Academic Dismissal

Student placed on probation should meet with their academic advisor to discuss MassBay's support services, which can help improve academic performance. While on probation, students may not participate in any extra-curricular activities, including athletics. In addition, he or she must immediately resign any position of responsibility, including the Student Government Association (SGA), Student Trustee, etc. Students may attend social and academic functions, as well as participate in work-study. Once on probation, students must earn a minimum cumulative GPA of 2.000 in one annual academic cycle (two academic semesters). Failure to achieve the above standard will result in dismissal from the College. Academic dismissal means that students are prohibited from enrolling in the College. If a student is dismissed, he or she may appeal their status with the College Appeals Board.

Withdrawal from the College

Students intending to withdraw from class(es), whereby there are no remaining classes for the enrolled semester, must meet with the Dean of Students to complete the withdrawal process. The withdrawal date is determined by the date all forms are completed and turned into the appropriate offices.

Readmission to the College

Students who fall under any of the following conditions must apply for readmission to MassBay:

- MassBay graduate entering a new program.
- Official withdrawal from MassBay.
- Academic dismissal from MassBay.
- Interruption of academic program of more than four semesters or two years.

To reapply to the College, contact the Office of Admissions or the Academic Advising Office for appropriate procedure and forms.

College Appeals Board for Readmission

Students who are dismissed from an academic program or the College may appeal for reinstatement through the College Appeals Board process. Appeal forms are available in the Office of Student Development. Students may only appear before the College Appeals Board one time for reinstatement.

General Education Requirements

All associate degree programs include at least 21 credits of general education requirements from the arts, humanities, mathematics, sciences, and social sciences. Please refer to individual curriculum sheets for program requirements.

Graduation Honors

Associate degree candidates for graduation whose cumulative grade point average is 3.700 or above will graduate with Highest Honors; those with GPAs of 3.500 - 3.699 will graduate with High Honors.

Student Life

Wellesley Hills Campus / Framingham Campus

Outside the classroom, MassBay offers many services and activities that can enhance the college experience. Diverse co-curricular activities are available to foster a sense of community and to afford students the opportunity to seize leadership and decision-making roles. The MassBay Student Handbook is an important resource for students, describing in detail various services available, as well as rights and responsibilities. The condensed Handbook includes an academic year calendar/ planner, and the full Handbook can be found online at www.massbay.edu.

Athletics

The College supports an intercollegiate athletic program. Full-time status (12 or more credit hours per semester) and a cumulative GPA of 2.00 are eligibility requirements for student participation in all intercollegiate programs. Team selection is determined through tryouts. MassBay offers the following athletic programs, depending on demand:

- Men's and Women's Soccer
- Men's and Women's Basketball
- Men's Baseball
- Men's and Women's Golf
- Men's and Women's Track & Field (club)

MassBay is a member of the Massachusetts Community College Athletic Conference (MCCAC) and the National Junior College Athletic Association (NJCAA). MassBay student-athletes compete for state, regional, and national honors and championships. All MassBay students are admitted free to all home games. Other club sports may be offered as well, depending on student interest. All full and part-time students are invited to participate in these activities. Offerings may include ice hockey, tennis, indoor soccer, and volleyball.

Recreation & Wellness Center

The MassBay Recreation & Wellness Center (RWC) is home to numerous recreation and physical fitness opportunities, offering a multi-purpose gymnasium and a fitness & wellness room with exercise equipment. The RWC signifies the College's commitment to provide an environment that promotes the total fitness and wellness of its students. The RWC is available free of charge to students. A campus identification card is required to use the facility, its equipment and locker rooms. Student Government, Clubs and Organizations All enrolled students at MassBay are members of the Student Government Association (SGA). The SGA serves as an advocate to address student concerns and sponsors a variety of student activities and student-interest programs. The elected governing body of the College SGA is the Student Senate, comprised of representatives elected by the student body at-large. All clubs and social organizations that receive funding are under the jurisdiction of the SGA. A copy of the Student Government Association Constitution is included in the MassBay Student Handbook. Social, cultural, and recreational activities, as well as trips, outings, and informal get-togethers, are planned by committees of the Student Senate and the Office of Student Activities each semester. Students must be in good academic and disciplinary standing to assume and continue to hold a leadership position in the SGA or in a club. Contact the Office of Student Activities or visit www.massbay.edu/studentactivities for a current list of active clubs. Students may join an existing club or start a new one by contacting the Office of Student Activities.

Identification Cards (OneCard)

MassBay OneCard (Student ID)

The "OneCard" is the official identification card of MassBay Community College issued to every student and employee. The OneCard is an essential key to campus life. In addition to being an official form of identification, it is used for other College services. The OneCard is used to access the Recreation and Wellness Center, and is also a Minuteman Library Network card. MassBay OneCards are available to MassBay students registered for at least one credit and to College employees.

The "OneCard" must be carried at all times and may not be used by anyone other than the student named on the card. It remains the property of the College and must be surrendered to the College upon demand. When necessary, students are required to identify themselves and to show their MassBay OneCards at the request of a College official (this includes, but is not limited to, admission to exams, buildings, and College events). Alteration or use of the card for any unauthorized purpose will result in confiscation and/or disciplinary action.

For more information; please contact the OneCard office: onecard@massbay.edu or call either campus (Wellesley Hills) 781-239-2518 (Framingham) 508-270-4065.

Bookstore

Textbooks for classes are available for purchase or for rental from the bookstores located on the Wellesley Hills and Framingham campuses, and online at www.efollet.com. Used textbooks may be available at a 25% savings off the new book price. Many textbooks are also available in digital format. A book buyback program throughout the year is also offered, where students can sell their unwanted textbooks for cash (market prices apply). The bookstore offers extended hours during the first and last week of each semester.

Parking and Transportation

Parking is available free of charge to MassBay students displaying a valid MassBay student decal (available from Public Safety). Please park in lots designated as "Student Parking." MassBay offers limited shuttle service to and from the Riverside MBTA stop to the Wellesley Hills and Framingham campuses. Current schedules are distributed during orientation and are available in the Office of Student Development and on the College website throughout the year.

Counseling Services

Licensed mental health counselors are available to help enrolled students address personal issues that may negatively affect their academic and personal well-being including anxiety, stress, depression, relationship issues, and life balance. Counseling Services provides individual therapy for students and makes referrals to specialists in the area. Services are private and confidential as defined by law. Counseling Services also provides consultation to faculty and staff about student mental health issues and offers educational programs on a variety of topics throughout the academic year. Students may call Counseling Services at 781-239-3142 or come to the Office of Student Development in Wellesley Hills or Framingham to make an appointment.

Career Development

MassBay career counselors provide on-going career planning assistance for students and alumni seeking career direction. Students have access to current information on potential careers. They are encouraged to have regular contact with counselors throughout their college experience to strategize and to explore their choices. Printed resources and career software programs are housed in The Office of Career & Internship Services on both campuses. These tools help students make informed decisions about career and educational goals. Career and interest inventories, including the Myers-Briggs Type Indicator, are available for all students and alumni. Job placement assistance is available through The Office of Career & Internship Services for all students and alumni. Students may register online to access job postings and to meet with a counselor to develop an individualized job search strategy. Workshops and individual assistance with résumé writing, interviewing, and job search strategies are also offered to help with the job search. Career fairs and other on-campus recruiting events are held throughout the academic year. The Office of Career & Internship Services can also assist students in finding internship opportunities that fit their career path. Internships are a valuable experience that allows students to gain experience in a particular field of interest and develop professional contacts.

International Student Services

MassBay celebrates our diverse College community. The College is committed to supporting the academic success of international students by providing services to meet their specific needs. The Office of Admissions offers comprehensive support for international students on both academic and personal levels. Services include but are not limited to international admissions, immigration compliance and advice, orientation and informational sessions, work authorization, and cultural adjustment and academic support.

Online and Hybrid Education

MassBay offers over 100 academic online and hybrid courses. These for-credit courses are the same as those offered in the classroom, varying only by modality. They follow the same semester schedule as other classes. Online and hybrid classes are taught by MassBay faculty and are an appropriate choice for many students. Fully online courses typically require no regular class time on campus although may include an on-campus orientation session, proctored examinations or other campus visits.

Online courses differ from classroom-based courses in that instruction is conducted online using a variety of technologies. .

Students in **hybrid courses** have reduced scheduled class time on campus and receive a portion of instruction online. The proportion of online instruction to classroom instruction may vary from course to course because instructors design hybrid courses based on specific instructional objectives.

Online and hybrid courses are not self-paced. They include set assignment deadlines and weekly course requirements.

Examples of technologies that students may use in online and hybrid courses include: discussion boards, multimedia presentations, online quizzes and tests, interactive simulations, Microsoft Office Suite products and other common Web tools (such as blogs, social media and ePortfolios)

Further questions about online learning at MassBay can be emailed to **the Office of Online Education and Technology Innovation** at MassBayOnline@massbay.edu

DIVISION OF AUTOMOTIVE TECHNOLOGY



Automotive Technology

BMW

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF AUTOMOTIVE TECHNOLOGY

The BMW Associate Degree Program (ADP) is designed to provide the technical competence and professional level of the incoming dealership technician. The program involves academic as well as automotive lecture/ laboratory instruction focusing on BMW products at the MassBay Automotive Technology Center. Students are also required to work at a BMW dealership as part of the cooperative education phase of their training. The BMW Program is a collaborative effort MassBay Community College and BMW. The College retains academic and administrative responsibility for the program and is certified by the National Automotive Technicians Education Foundation (NATEF) in all eight performance areas.

Upon completion, the associate in science degree in Automotive Technology with a concentration in BMW is awarded.

ADMISSION REQUIREMENTS

Minimum eligibility for admission to this program includes:

- Placement into EN 098 Fundamentals of Composition II or completion of EN 090 Fundamentals of Composition I
- MassBay placement into Intermediate Algebra MA 098 or completion of Introductory Algebra MA 095
- Valid driver's license (May be subject to dealership review of driving record and drug testing).

PROGRAM FOOTNOTES

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

COURSE	COURSE TITLE	CREDITS
Semester 1		
AB 100	Automotive Fundamentals	5
AB 102	Automotive Electrical Fundamentals	4
CS 100	Computers and Technology	3
MAC 101	Technical Math	3
CT 100	Critical Thinking	3
	credits:	18
Semester 2		
AB 103	Automotive Engine Diagnostic and Repairs	5
AB 105	Heating and Air Conditioning Theory	3
AB 106	Automotive Brake Systems	3
EN 101	Freshman English I	3
CO 131	Oral Communication	3
	credits:	17
Semester 3	Summer (12 weeks)	
AB 121	Cooperative Education I	3
	credits:	3
Semester 4		
AB 200	Advanced Engine Performance	5
AB 205	Automotive Transmissions, Manual Transmission, and Drive Systems	6
EN 102	Freshman English II	3
	Humanities Elective	3
	credits:	17
Semester 5		
PS 260	Psychology in Business and Industry	3
AB 201	Electronics Fuel and Ignition Systems	4
AB 204	Auto Suspension Systems	4
AB 208	Advanced Automotive Electronics	3
	Social Science Elective	3
	credits:	17
	Total Credits:	72

Automotive Technology

Chrysler (FCA)

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF AUTOMOTIVE TECHNOLOGY

The MOPAR Career Automotive program (MOPAR CAP) is designed to provide the technical competence and professional level training of the incoming dealership technicians. The MOPAR CAP program involves academics as well as automotive lecture automotive lecture/ laboratory instruction focusing on Fiat Chrysler Automobiles LLC. (FCA) products at the MassBay Automotive Technology Center. Students are also required to work at a Jeep, Chrysler, Dodge, RAM, Fiat, Alfa Romeo dealership as part of the cooperative education phase of their training. The MOPAR CAP Program is a collaborative effort between MassBay Community College and FCA. The College retains academic and administrative responsibility for the program and is certified by the National Automotive Technicians Education Foundation (NATEF) in all eight performance areas.

Upon completion, the Associate in Science Degree in Automotive Technology with a concentration in Chrysler is awarded.

ADMISSION REQUIREMENTS

Minimum eligibility for admission to this program includes:

- Completion of placement tests.
- Valid driver's license (May be subject to dealership review of driving record and drug testing).

PROGRAM FOOTNOTES

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

COURSE	COURSE TITLE	CREDITS
Semester 1		
AY 100	Fundamentals of Auto Technology	5
AY 110	Automotive Electricity	4
AY 109	Dealership Orientation	1
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
credits:		16
Semester 2		
AY 115	Cooperative Education I	2
AY 120	Automotive Electronics	3
AY 140	Automotive Brake Systems	3
AY 170	Electronic Fuel and Engine Controls	4
EN 101	Freshman English I	3
credits:		15
Semester 3		
AY 125	Cooperative Education II	3
AY 221	Heating, A/C & Climate Control Systems	3
AY 230	Engine Performance	5
CO 131	Oral Communications	3
MA 105	Introduction to Statistics	3
or		
MA 106	Quantitative Reasoning	3
credits:		17
Semester 4		
AY 215	Cooperative Education III	3
AY 245	Engine Diagnosis and Repair	4
PH 102	Philosophy: Ethics	3
EN 102	Freshman English II	3
credits:		13
Semester 5		
AY 212	Differential and Driveline Repair	2
AY 253	Automatic Transmissions, Manual Transmission, and Drive Systems	4
AY 270	Steering & Suspension Systems	3
AY 225	Cooperative Education IV	3
PS 260	Psychology in Business and Industry	3
credits:		15
Total Credits:		76

Automotive Technology

General Motors

Associate in Science



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF AUTOMOTIVE TECHNOLOGY

The General Motors Automotive Service Education Program (ASEP) is designed to provide the technical competence and professional level training of the incoming dealership technicians. The ASEP program involves academics as well as automotive lecture/ laboratory instruction focusing on General Motors (GM) products at the MassBay Automotive Technology Center. Students are also required to work at a GM dealership as part of the cooperative education phase of their training. The General Motors ASEP Program is a collaborative effort between MassBay Community College and General Motors. The College retains academic and administrative responsibility for the program and is certified by the National Automotive Technicians Education Foundation (NATEF) in all eight performance areas.

Upon completion, the Associate in Science Degree in Automotive Technology with a concentration in General Motors is awarded.

ADMISSION REQUIREMENTS

Minimum eligibility for Admission to this program includes:

- Completion of placement tests.
- Valid driver's license (May be subject to dealership review of driving record and drug testing).

PROGRAM FOOTNOTES

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

COURSE	COURSE TITLE	CREDITS
Semester 1		
AS 100	Automotive Fundamentals	5
AS 106	Automotive Brakes Systems	3
AS 113	Dealership Orientation	1
CT 100	Critical Thinking	3
CS 100	Computers & Technology	3
credits:		15
Semester 2		
AS 108	Automotive Ignition & Fuel Systems	3
AS 105	Heating & Air Conditioning Theory	3
AS 102	Automotive Electrical Fundamentals	4
AS 110	Cooperative Education I	2
EN 101	Freshman English I	3
credits:		15
Semester 3		
AS 111	Cooperative Education II	3
AS 206	Advanced Engine Performance	5
AS 204	Automotive Suspension Systems	3
CO 131	Oral Communications	3
MA 105	Introduction to Statistics	
or		
MA 106	Quantitative Reasoning	3
credits:		17
Semester 4		
AS 209	Cooperative Education III	3
AS 216	Automotive Engine Diagnosis & Repair	4
EN 102	Freshman English II	3
PH 102	Philosophy: Ethics	3
credits:		13
AS 213	Manual/Automatic Trans. & Drive Systems	4
AS 208	Advanced Automotive Electronics	3
PS 260	Psychology in Business & Industry	3
AS 215	Introduction to Automatic Transmissions	2
AS 210	Cooperative Education IV	3
		15
Total Credits:		75

Automotive Technology

Toyota/Lexus

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF AUTOMOTIVE TECHNOLOGY

The Toyota Technical Education Network (T-TEN) program is designed to provide the technical competence and professionalism needed to become a dealership technician. The program involves academic as well as automotive lecture/ laboratory instruction focusing on state-of-the-art Toyota/ Lexus dealership as part of the implementation of the T-TEN Program is a collaborative effort of MassBay Community College and Toyota. The College has the academic and administrative responsibility for the program which is certified by the National Automotive Technicians Education Foundation (NATEF) in all eight performance areas.

Students may also earn technical course credits from the University of Toyota/Lexus College.

Upon completion, the Associate in Science Degree in Automotive Service Technology with a concentration in Toyota (T-TEN) is awarded.

ADMISSION REQUIREMENTS

Minimum eligibility for admission to this program includes:

- Placement into EN 098 Fundamentals of Composition II or completion of EN 090 Fundamentals of Composition I
- MassBay placement into Intermediate Algebra MA 098 or completion of Introductory Algebra MA 095
- Valid driver's license (May be subject to dealership review of driving record and drug testing).

PROGRAM FOOTNOTES

Humanities Electives:

Art, Communication, Critical Thinking, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, Law and the Media (LA 200), Law and Society (LA 230), Psychology, Sociology

COURSE	COURSE TITLE	CREDITS
<i>Semester 1</i>	<i>Fall</i>	
AT 101	Introduction to Automotive Service	4
AT 102	Automotive Electrical Fundamentals	4
AT 109	Technician Portfolio TPORT	1
CS 100	Computers and Technology	3
MAC 101	Technical Math	3
CT 100	Critical Thinking	3
	credits:	18
<i>Semester 2</i>	<i>Spring</i>	
AT 113	Engine Diagnosis and Repair	4
AT 114	Automotive Brake Systems	4
AT 116	Suspension, Steering, and Handling	3
EN 101	Freshman English I	3
	Humanities Elective	3
	credits:	17
<i>Semester 3</i>	<i>Summer</i>	
AT 120	Cooperative Education I	3
	credits:	3
<i>Semester 4</i>	<i>Fall</i>	
AT 213	Hybrid Vehicle General Service	1
AT 205	Automotive Transmission & Drive Systems	6
AT 207	Engine Control Systems I	5
EN 102	Freshman English II	3
	Humanities Elective	3
	credits:	18
<i>Semester 5</i>	<i>Spring</i>	
AT 208	Body Electrical Diagnosis	3
AT 209	Engine Control Systems II	3
AT 212	Automotive Air Conditioning & Climate Control	3
AT 220	Cooperative Education II	3
	Social Science Elective	3
	Social Science Elective	3
	credits:	18
	Total Credits:	74

Automotive Technology

Toyota/Lexus

Certificate Program

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF AUTOMOTIVE TECHNOLOGY

The Toyota Technical Education Network (T-TEN) program is designed to provide the technical competence and professionalism needed to become a dealership technician. The T-TEN program involves automotive lecture/laboratory instruction focusing on Toyota/Lexus products at the MassBay Automotive Technology Center. Students are also required to work at a Toyota/Lexus dealership as part of the cooperative education phase of their training. The T-TEN program is a collaborative effort between MassBay Community College and Toyota. The College retains the academic and administrative responsibility for the program, which is certified by the National Automotive Technicians Education Foundation (NATEF) in all eight performance areas.

Students also earn technical course credits from the University of Toyota/Lexus College.

Upon successful completion, the Certificate in Automotive Technology with a concentration in Toyota (T-TEN) is awarded.

ADMISSION REQUIREMENTS

- Placement into EN 098 Fundamentals of Composition II or completion of EN 090 Fundamentals of Composition I
- MassBay placement into Intermediate Algebra MA 098 or completion of Introductory Algebra MA 095
- Valid driver's license (May be subject to dealership review of driving record and drug testing)

PROGRAM FOOTNOTES

- Minimum (18) University of Toyota e-modules must be completed.
- Complete all mandatory TPORT assignments.
- Minimum of 650 hours of supervised dealer co-op education.
- Minimum of (2) ASE certifications.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>.

COURSE	COURSE TITLE	CREDITS
<i>Semester 1</i>	<i>Fall</i>	
AT 101	Introduction to Automotive Service	4
AT 102	Automotive Electrical Fundamentals	4
AT 109	Technician Portfolio TPORT	1
	credits:	9
<i>Semester 2</i>	<i>Spring</i>	
AT 113	Engine Diagnosis and Repair	4
AT 114	Automotive Brake Systems	4
AT 116	Suspension, Steering, and Handling	3
	credits:	11
<i>Semester 3</i>	<i>Summer</i>	
AT 120	Cooperative Education I	3
	credits:	3
<i>Semester 4</i>	<i>Fall</i>	
AT 213	Hybrid Vehicle General Service	1
AT 205	Automotive Transmission & Drive Systems	6
AT 207	Engine Control Systems I	5
	credits:	12
<i>Semester 5</i>	<i>Spring</i>	
AT 208	Body Electrical Diagnosis	3
AT 209	Engine Control Systems II	3
AT 212	Automotive Air Conditioning & Climate Controls	3
AT 220	Cooperative Education II	3
	credits:	12
	Total Credits:	47

DIVISION OF BUSINESS & PROFESSIONAL STUDIES



Accounting

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

This professional program serves two purposes. First, it prepares students for entry-level positions in accounting including accounts receivable, accounts payable, bookkeeping, and as junior accountants and auditors. Second, it prepares students to transfer to four-year colleges to continue their education. Interested students are on track to take the CPA examination after fulfilling the more advanced course requirements at a transfer institution.

Upon successful completion, the Associate in Science Degree in Accounting is awarded.

PROGRAM FOOTNOTES

Economics Electives: EC 104 Contemporary Economic Issues, EC 201 Principles of Macroeconomics, EC 202 Principles of Microeconomics

Humanities Electives: Art, Communication, English (EN103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math Electives: 100-level Mathematics or higher (not MAC)

Science Electives: Biology, Chemistry, Contemporary Nutrition (NS 101), Environmental Science, Integrated Science, Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
AC 101	Financial Accounting I	4
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
MG 101	Principles of Management	3
	credits:	13
<i>First Year</i>	<i>Semester 2</i>	
AC 102	Financial Accounting II	4
CS 104	Microcomputer Applications/Business	3
EN 102	Freshman English II	3
MK 103	Principles of Marketing	3
	Math Elective	3/4
	credits:	16/17
<i>Second Year</i>	<i>Semester 1</i>	
AC 201	Intermediate Accounting I	4
AC 206	Managerial Accounting	4
LA 221	Principles of Business Law I	3
AC210	Accounting Essentials with QuickBooks	1
	Humanities Elective	3
	credits:	15
<i>Second Year</i>	<i>Semester 2</i>	
AC 202	Intermediate Accounting II	4
AC 207	Introduction to Taxation	3
	Humanities Elective	3
	Economics Elective	3
	Science Elective	3/4
	credits:	16/17
	Total Credits:	60/62

Accounting: MassTransfer Option

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

This professional program serves two purposes. It prepares students for entry level positions in accounting including accounts receivable, accounts payable, bookkeeping, and as junior accountants and auditors. Secondly, it enables students to transfer under the MassTransfer Compact with its associated benefits to Massachusetts universities and colleges. Program approvals may change slightly given new curriculum.

Upon completion, the Associate in Science Degree in Accounting is awarded.

PROGRAM FOOTNOTES

Economics Electives: EC 104 Contemporary Economic Issues, EC 201 Principles of Macroeconomics, EC 202 Principles of Microeconomics

Humanities Electives: Art, Communication, English (EN103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math Electives: 100-level Mathematics or higher (not MAC)

Science Electives: Biology, Chemistry, Contemporary Nutrition (NS 101), Environmental Science, Integrated Science, Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies for MassTransfer with select public institutions in Massachusetts. For more information please visit www.mass.edu/masstransfer

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
AC 101	Financial Accounting I	4
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
MG 101	Principles of Management	3
	Math Elective	3/4
	credits:	16/17
<i>First Year</i>	<i>Semester 2</i>	
AC 102	Financial Accounting II	4
EN 102	Freshman English II	3
MK 103	Principles of Marketing	3
CS104	Microcomputer Applications for Business	3
	Economics Elective	3
	credits:	16
<i>Second Year</i>	<i>Semester 1</i>	
AC 201	Intermediate Accounting I	4
AC 206	Managerial Accounting	4
LA 221	Principles of Business Law I	3
	Humanities Elective	3
	Science Elective	4
	credits:	18
<i>Second Year</i>	<i>Semester 2</i>	
AC 202	Intermediate Accounting II	4
AC 207	Introduction to Taxation	3
	Humanities Elective	3
	Science Elective	3/4
	Social Science Elective	3
	credits:	16/17
	Total Credits:	66/68

Business Administration

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

The program provides a general overview of accounting, economics, management, marketing, computer technology, and a strong foundation in the liberal arts. This comprehensive degree program is designed to prepare you to transfer to a bachelor's degree program in Business Administration, Accounting or other business specific programs.

Upon successful completion, the Associate in Science Degree in Business Administration is awarded.

PROGRAM FOOTNOTES

Business Electives: AC 201 Intermediate Accounting I, AC 202 Intermediate Accounting II, AC 207 Introduction to Taxation, BF 203 Principles of Finance, BF 232 Personal Finance, BU 100 Introduction to Business, BU 201 Global Business, LA 221 Principles of Business Law, LA 227 Legal Environment of Business Management, LA 230 Law and Society, MG 102 Small Business Management, MG 204 Human Resource Management, MK 213 Principles of Sales, MK 214 E-Commerce, MK 215 Principles of Advertising, OA 201 Business Communication

History Sequence:

HS 101 Western Civilization I & HS 102 Western Civilization II, or HS 103 World Civilization I & HS 104 World Civilization II, or HS 105 United States History to 1877 & HS 106 United States History Since 1877

Literature Sequence:

LI 201 World Literature I & LI 202 World Literature II, or LI 203 American Literature I & LI 204 American Literature II, or LI 205 British Literature I & LI 206 British Literature II

Humanities Electives: Art, Communication, English (EN103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math Electives: MA 104 Pre-calculus Mathematics or a 200-level course

Science Electives: Biology, Chemistry, Contemporary Nutrition (NS 101), Environmental Science, Integrated Science, Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
AC 101	Financial Accounting I	4
CS 104	Microcomputer Applications/ Business	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
MG 101	Principles of Management	3
	History Sequence	3
	credits:	19
<i>First Year</i>	<i>Semester 2</i>	
AC 102	Financial Accounting II	4
EN 102	Freshman English II	3
MK 103	Principles of Marketing	3
	History Sequence	3
	Math Elective	4
	credits:	17
<i>Second Year</i>	<i>Semester 1</i>	
AC 206	Managerial Accounting	4
EC 201	Principles of Macroeconomics	3
	Literature Sequence	3
	Science Elective	4
	Social Science Elective	3
	credits:	17
<i>Second Year</i>	<i>Semester 2</i>	
EC 202	Principles of Microeconomics	3
	Business Elective	3/4
	Humanities Elective	3
	Literature Sequence	3
	Science Elective	3/4
	credits:	16/17
	Total Credits:	68/70

test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies for MassTransfer with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Criminal Justice

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

This program combines professional courses with a broad background in liberal arts. The curriculum is designed to prepare you for a career in various areas of the criminal justice system including law enforcement, corrections, private security. The liberal arts background is well suited to help you succeed at the baccalaureate level.

The Criminal Justice program is approved as a Police Career Incentive Program by the Massachusetts Board of Higher Education.

Upon successful completion, the Associate in Science Degree in Criminal Justice is awarded.

PROGRAM FOOTNOTES

Criminal Justice Electives: CJ 141 Introduction to Corrections, CJ 151 Introduction to Law Enforcement, CJ 209 Organization and Management of Police, CJ 215 Criminal Investigation, CJ 217 Criminal Evidence, GV 203 United States Constitutional History, GV 230 Civil Rights and Civil Liberties, LA 200 Media and the Law, LA 230 Law and Society, PH 102 Philosophy: Ethics, PS 223 Psychology of Criminal Behavior, PS 240 Abnormal Psychology, SO 221 Drugs & Society

Humanities Electives: Art, Communication, English (EN103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Science Electives: Biology, Chemistry, Contemporary Nutrition (NS 101), Environmental Science, Integrated Science, Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (Mass Transfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CJ 101	Introduction to Criminal Justice	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
LA 228	Criminal Law and Procedures	3
CO 131	Oral Communication	3
	credits:	15
<i>First Year</i>	<i>Semester 2</i>	
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
	Humanities Elective	3
	Criminal Justice Elective	3
	Criminal Justice Elective	3
	credits:	15
<i>Second Year</i>	<i>Semester 1</i>	
CJ 221	Introduction to Criminology	3
CJ 241	Juvenile Offenders	3
MA105	Introduction to Statistics	3
SO 101	Introduction to Sociology	3
	Science Elective	3/4
	credits:	15/16
<i>Second Year</i>	<i>Semester 2</i>	
PS 101	Introduction to Psychology	3
	Social Science Elective	3
	Science Elective	4
	Criminal Justice Elective	3
	Criminal Justice Elective	3
	credits:	16
	Total Credits:	61/62

Early Childhood Education

Associate in Science



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

The Early Childhood Education program prepares students for positions working with children in a variety of settings including child care centers, nursery schools, family child care centers, and after school programs. The professional courses in the program provide a broad, basic understanding of children's developmental needs and a repertoire of specialized skills. Field work in approved early childhood centers, in conjunction with seminars, expose students to the practical aspects of working with children, thereby supplementing classroom theory. Electives across a variety of disciplines offer opportunity for a well-rounded education.

Graduates of the program meet the Massachusetts Department of Early Education and Care requirements for Child Care Teachers and Lead Teachers.

Students choosing to pursue public school teacher licensure programs at the bachelor's degree level should complete the Liberal Arts: Early Childhood Education or Liberal Arts: Elementary Education Program at MassBay.

Upon successful completion, the Associate in Science Degree in Early Childhood Education is awarded.

ADMISSION REQUIREMENTS

CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks are required prior to practicum placement and will be conducted in accordance with state regulations. CORI and SORI results are confidential.

PROGRAM FOOTNOTES

Humanities Electives: Art, Communication, English (EN103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

*A grade of C or higher is required in all Education (ED) and PS 222 Child Development courses.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
SC 102	Integrated Science I	4
	or	
BI 131	Health Science and Emergency Care	3
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
PS 222	Child Development	3
	credits:	15/16
<i>First Year</i>	<i>Semester 2</i>	
LI 104	Children's Literature	3
ED 108	Art and Music for Young Children	3
	or	
ED 228	Behavior Management	3
ED 112	Introduction to Early Childhood Education	3
EN 102	Freshman English II	3
SC 103	Integrated Science II	4
	or	
BI 131	Health Science and Emergency Care	3
	credits:	15/16
<i>Second Year</i>	<i>Semester 1</i>	
ED 203	Early Childhood Curriculum	3
ED 230	Practicum and Seminar in Early Childhood	6
MA 109	Elements of Mathematics I	3
	Humanities Elective	3
	credits:	15
<i>Second Year</i>	<i>Semester 2</i>	
ED 240	Practicum and Seminar in Early Childhood	6
SO 120	Disabilities: Diagnosis and Interventions	3
	Humanities Elective	3
	Social Science Elective	3
	credits:	15
	Total Credits:	61/62

General Business: International Business

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

Students will learn how American and international businesses interrelate. An in-depth study of American and international strategies and business practices is performed using case analysis, experiential learning exercises, team activities, guest speakers and the writing and presenting of student research/reaction papers. The concentration includes the following topics: international trade and banking policies and procedures, the impact of culture, demographics and infrastructure on global trade, and how marketing, law, politics, management and human resources are performed in the international marketplace. Also, a broad academic foundation in the sciences, humanities, communications and social sciences is part of the concentration. The program includes a language component, an optional internship, and the development of a team-based export business plan.

International internships and study abroad opportunities are strongly encouraged, and are available through the collaboration of the Business Department and MassBay's Office of International Education and Study Abroad Programs.

Students who complete the International Business Associate degree can take the certified Global Business Professional certification offered by the National Association of Small Business International Trade Educators to earn the Certified Global Business Professional certification. This prestigious certification designates a level of professionalism in various aspects of international business.

Upon successful completion, the Associate in Science in General Business with a concentration in International Business is awarded.

The degree prepares students for entry-level positions in global firms and organizations and provides a strong foundation for transfer to baccalaureate programs in international business.

PROGRAM FOOTNOTES

Business Electives: AC 201 Intermediate Accounting I, AC 202 Intermediate Accounting II, AC 206 Managerial Accounting, BF 203 Principles of Finance, BU 901 Internship, EC 202 Microeconomics, EC 205 Money & Banking, MG 204 Human Resources, MK 215 Principles of Advertising

Foreign languages – Language Sequence: French, Hindi, Italian and Spanish

Science Electives: Biology, Chemistry, Contemporary Nutrition (NS 101), Environmental Science, Integrated Science, Physics

Math Elective: 100-level Mathematics or higher (not MAC). MA 104 Pre-calculus math is strongly recommended

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
AC 101	Financial Accounting I	4
CS 104	Microcomputer Applications/Business	3
EN 101	Freshman English I	3
MG 101	Principles of Management	3
	credits:	13
<i>First Year</i>	<i>Semester 2</i>	
AC 102	Financial Accounting II	4
BU 201	Global Business	3
EN 102	Freshman English II	3
GG 105	World Regional Geography	3
MK 103	Principles of Marketing	3
	credits:	16
<i>Second Year</i>	<i>Semester 1</i>	
MK 220	Global Marketing	3
EC 201	Macroeconomics	3
	Language Sequence	3/4
	Math Elective	3/4
	Science Elective	4
	credits:	16/18
<i>Second Year</i>	<i>Semester 2</i>	
	Business Elective	3/4
CO 103	Intercultural Communications	3
	Language Sequence	3/4
	Science Elective	3/4
LA 221	Principles of Business Law	3
	credits:	15/18
	Total Credits:	60/65

*In order to fulfill the critical thinking graduate competency, students must pass the Critical Thinking Challenge Exam or complete CT 100 Critical Thinking.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program may qualify for MassTransfer with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

General Business

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

This program provides students with the basic skills necessary to pursue a rewarding career as a business professional. The program offers students the flexibility of pursuing career opportunities in a variety of business disciplines. Students can choose specialized business and liberal arts electives that best meet their interests and goals.

Upon successful completion, the Associate in Science Degree in General Business is awarded.

PROGRAM FOOTNOTES

Business Electives: AC 201 Intermediate Accounting I, AC 202 Intermediate Accounting II, AC 206 Managerial Accounting, AC 207 Introduction to Taxation, BF 203 Principles of Finance, BF232 Personal Finance, BU 100 Introduction to Business, BU 201 Global Business, EC104 Contemporary Economic Issues, EC 201 Principles of Macroeconomics, EC 202 Principles of Microeconomics, LA 227 Legal Environment of Business, LA 230 Law and Society, MG 102 Small Business Management, MG 204 Human Resource Management, MK213 Principles of Sales, MK 214 E-Commerce, MK 215 Principles of Advertising

Economics Electives: EC104 Contemporary Economic Issues, EC201 Macroeconomics, EC202 Microeconomics

Humanities Electives: Art, Communication, English (EN103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math Electives: 100-level Mathematics or higher (not MAC)

Science Electives: Biology, Chemistry, Environmental Science, Integrated Science, Physics, Contemporary Nutrition (NS101)

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies for MassTransfer with select public institutions in Massachusetts. For more information please, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
AC 101	Financial Accounting I	4
CS 104	Microcomputer Applications/ Business	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
MG 101	Principles of Management	3
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
AC 102	Financial Accounting II	4
EN 102	Freshman English II	3
MK 103	Principles of Marketing	3
OA 201	Business Communication	3
	Economics Elective	3
	Humanities Elective	3
	credits:	19
<i>Second Year</i>	<i>Semester 1</i>	
LA 221	Principles of Business Law I	3
	Business Elective	3/4
	Humanities Elective	3
	Math Elective	3/4
	Science Elective	4
	credits:	16/18
<i>Second Year</i>	<i>Semester 2</i>	
	Business Elective	3/4
	Business Elective	3/4
	Humanities Elective	3
	Science Elective	3/4
	Social Science Elective	3
	credits:	15/18
	Total Credits:	66/71

General Business: Hospitality Management

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

Gain an overview of the exciting hospitality industry through this comprehensive program. You'll receive an introduction to all aspects of the hotel, resort, and restaurant management sectors, as well as critical thinking and communication skills necessary for dealing with the general public. The hospitality industry is a growth industry, and its expansion is expected to continue. The industry seeks employees with marketing and management backgrounds, and the MassBay program includes courses in both areas. Students will have internship opportunities at excellent locations in Boston.

Students receive a broad background in general business administration and the liberal arts.

Upon completion, the associate in science degree in general business with a concentration in hospitality management is awarded.

PROGRAM FOOTNOTES

Business Electives: AC 201 Intermediate Accounting I, AC 202 Intermediate Accounting II, AC 206 Managerial Accounting, AC 207 Introduction to Taxation, BF 203 Principles of Finance, BF 232 Personal Finance, BU 100 Introduction to Business, BU 201 Global Business, EC 104 Contemporary Economic Issues, EC 201 Macroeconomics, EC 202 Microeconomics, LA 230 Law & Society, MG 102 Small Business Management, MG 204 Human Resource Management, MK 213 Principles of Sales, MK 215 Principles of Advertising, OA 201 Business Communication, LA 227 Legal Environment of Business, MK 214 eCommerce.

Math Electives: 100-level Mathematics or higher (not MAC)

Science Electives: Biology, Chemistry, Contemporary Nutrition (NS 101), Environmental Science, Integrated Science, Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 104	Microcomputer Applications for Business	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
HM 101	Introduction to Hospitality	3
MG 101	Principles of Management	3
	credits:	15
<i>First Year</i>	<i>Semester 2</i>	
EN 102	Freshman English II	3
GG 103	Introduction to Geography	3
	or	
GG 105	World Regional Geography	3
HM 102	Front Office Management	3
HM 203	Conference and Event Planning	3
	Math Elective	3
	credits:	15
<i>Second Year</i>	<i>Semester 1</i>	
AC 101	Financial Accounting I	4
	Business Elective	3
HM 208	Introduction to Tourism	3
CO 131	Oral Communication	3
	Science Elective	3/4
	credits:	16/17
<i>Second Year</i>	<i>Semester 2</i>	
AC 102	Financial Accounting II	4
BU 250*	Service Industry Internship	4
HM 201	Food & Beverage Management	3
MK 103	Principles of Marketing	3
	Social Science Elective	3
	credits:	17
	Total Credits:	63/64

*Must be taken in the final semester

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Liberal Arts:

Early Childhood Education

Associate in Arts

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

The Department of Higher Education has established an early childhood education transfer compact for students transferring from Massachusetts community colleges to public colleges and universities that offer early childhood (pre K-grade 2) public school teacher licensure at the baccalaureate level. Students must complete the courses required for this transfer compact with a 2.75 cumulative GPA. The program prepares students for the early childhood education licensure program at Massachusetts state colleges or university campuses. Up to 60 credits earned by students who fulfill the core requirements may be accepted as transfer credits by the receiving institution.

Upon successful completion, the Associate in Arts Degree in Liberal Arts with a concentration in Early Childhood Education is awarded.

ADMISSION REQUIREMENTS

To be admitted to the education department of a Massachusetts state college or university, students must achieve a passing score on the Communication and Literacy Skills Test (CLST) of the Massachusetts Test for Educator Licensure (MTEL). This requirement may be completed after receiving the Associate in Arts Degree. Students need a minimum of 2.75 GPA to be accepted into an education program at a four-year college or university.

CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks are required prior to practicum placement and will be conducted in accordance with state regulations. CORI and SORI results are confidential.

PROGRAM FOOTNOTES

History Sequence:

HS 101 Western Civilization I & HS 102 Western Civilization II, or
HS 103 World Civilization I & HS 104 World Civilization II, or
HS 105 United States History to 1877 & HS 106 United States History Since 1877

Humanities Electives: Art, Communication, English (EN103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

A grade of C or higher is required in all Education (ED) courses and PS 222 Child Development.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
EN 101	Freshman English I	3
CS 100	Computers & Technology	3
CT 100	Critical Thinking	3
PS 222	Child Development	3
SC 102	Integrated Science I	4
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
EN 102	Freshman English II	3
ED 112	Early Childhood Education	3
LI 104	Children's Literature	3
SC 103	Integrated Science II	4
SO 120	Disabilities: Diagnosis and Interventions	3
	credits:	16
<i>Second Year</i>	<i>Semester 1</i>	
ED 203	Early Childhood Curriculum	3
MA 109	Elements of Mathematics I	3
	History Sequence	3
	Humanities Elective	3
	Social Science Elective	3
	credits:	15
<i>Second Year</i>	<i>Semester 2</i>	
ED 230	Practicum and Seminar in Early Childhood	6
	or	
ED 240	Practicum/ Seminar in Early Childhood	6
MA 119	Elements of Math II	3
	History Sequence	3
	Humanities Elective	3
	credits:	15
	Total Credits:	62

This program qualifies for the Education Compact in the MassTransfer program with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

Liberal Arts: Elementary Education

Associate in Arts

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

The Department of Higher Education has established an elementary (grades 1-6) education transfer compact for students transferring from Massachusetts community colleges to public colleges and universities that offer elementary education public school teacher licensure at the baccalaureate level. Completion of the courses required for this transfer compact with a 2.75 cumulative GPA prepares students for the elementary licensure programs at Massachusetts state colleges or university campuses.

Upon successful completion, the Associate in Arts Degree in Liberal Arts with a concentration in Elementary Education is awarded.

ADMISSION REQUIREMENTS

Students are required to attend an Orientation to Teacher Education during the first semester of attendance and to maintain frequent contact with an Education advisor to avoid delays in degree achievement.

To be admitted for transfer into the education department of a Massachusetts state college or university, students must achieve a passing score on the Communication and Literacy Skills Test (CLST) of the Massachusetts Test for Educator Licensure (MTEL). Students are urged to take this test immediately after completing EN 102 to assess the need for additional preparation. Students need a minimum of 2.75 GPA to be accepted into an Education program at a four-year college or university.

CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks will be required by schools prior to fieldwork.

PROGRAM FOOTNOTES

Students should consult an Education Department Advisor before selecting electives. Transfer institutions may differ in requirements for general education courses. The planned Liberal Arts major after transfer (required of Education students) should also be considered in course selection.

Humanities Electives: Art, Communication, English (EN103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

A grade of C or higher is required in ED 115 Education in American Society and PS 222 Child Development. For transfer purposes, all other course grades should be C or higher.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
EN 101	Freshman English I	3
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
PS 101	Introduction to Psychology	3
SC 102	Integrated Science I	4
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
EN 102	Freshman English II	3
PS 222	Child Development	3
SC 103	Integrated Science II	4
	Social Science Elective	3
	Humanities Elective	3
	credits:	16
<i>Second Year</i>	<i>Semester 1</i>	
ED 115	Education in American Society	4
HS 105	United States History to 1877	3
LI 104	Children's Literature	3
MA 109	Elements of Mathematics I	3
	Humanities Elective	3
	credits:	16
<i>Second Year</i>	<i>Semester 2</i>	
HS 106	United States History Since 1877	3
MA 119	Elements of Mathematics II	3
SO 120	Disabilities: Diagnosis and Interventions	3
	Social Science Elective	3
	Humanities Elective	3
	credits:	15
	Total Credits:	63

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies for MassTransfer with select public institutions in Massachusetts. For more information please visit www.mass.edu/masstransfer.

Liberal Arts: Human Services

Associate in Arts

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

The Human Services program combines courses in social sciences, primarily psychology and sociology, with seminars and field work in the human and social services field. In addition to obtaining the necessary professional skills such as interviewing, report writing, behavior modification, and human relations, students gain a broad background in the liberal arts. Upon graduation, students are prepared to work in a variety of social agencies related to their educational credentials and work experience.

Upon successful completion, the Associate in Arts Degree in Liberal Arts with a concentration in Human Services is awarded.

ADMISSION REQUIREMENTS

CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks are required prior to practicum placement and will be conducted in accordance with state regulations. CORI and SORI results are confidential.

PROGRAM FOOTNOTES

History Sequence:

HS 101 Western Civilization I & HS 102 Western Civilization II, or
HS 103 World Civilization I & HS 104 World Civilization II, or
HS 105 United States History to 1877 & HS 106 United States History Since 1877

Laboratory Science Sequence:

BI 101 General Biology I & BI 102 General Biology II, or
BI 110 Principles of Biology I & BI 120 Principles of Biology II, or
BI 215 Anatomy and Physiology I & BI 217 Anatomy and Physiology II, or
CH 101 College Chemistry I & CH 102 College Chemistry II, or
CH 110 Principles of Chemistry I & CH 120 Principles of Chemistry II, or
EV 103 Environmental Studies I & EV 104 Environmental Studies II, or
PY 101 College Physics I & PY 102 College Physics II, or
PY 103 Engineering Physics I & PY 104 Engineering Physics II, or
SC 102 Integrated Science I & SC 103 Integrated Science II

Literature Sequence:

LI 201 World Literature I & LI 202 World Literature II, or
LI 203 American Literature I & LI 204 American Literature II, or
LI 205 British Literature I & LI 206 British Literature II

Math/Science Electives: Biology, Chemistry, Contemporary Nutrition (NS101), Environmental Science, Integrated Science, 100-level Mathematics or higher (not MAC), Physics

Program Electives: SP 101 Beginning Spanish I, SP 102 Beginning Spanish II, FR 101 Beginning French, FR 102 Beginning French II, SL 101 Intro to American Sign Language I, SO 203 Race & Ethnic Relations, SO 222 Aging and Society, SO 224 Sociology of Developmental Disabilities, other courses with permission of the Program Coordinator.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
SO 101	Introduction to Sociology	3
SW 101 *	Introduction to Social Welfare	4
	History Sequence	3
	credits:	19
<i>First Year</i>	<i>Semester 2</i>	
EN 102	Freshman English II	3
PS 101	Introduction to Psychology	3
	Program Elective	3
	History Sequence	3
	Math/Science Elective	3/4
	credits:	15/16
<i>Second Year</i>	<i>Semester 1</i>	
PS 118	Human Growth & Development	3
SO 120	Disabilities: Diagnosis and Interventions	3
SO 221	Drugs & Society	3
	Literature Sequence	3
	Laboratory Science Sequence	4
	credits:	16
<i>Second Year</i>	<i>Semester 2</i>	
PS 241	Group Process	3
SW 201	Practicum/Seminar	6
	Literature Sequence	3
	Laboratory Science Sequence	4
	credits:	16
	Total Credits:	66/67

* Course to be taken first semester.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level Mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies for MassTransfer with select public institutions in Massachusetts. (Student must take a 100 level math course for the math/science elective) For more information, visit www.mass.edu/masstransfer.

Paralegal Studies

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF SOCIAL SCIENCES & PROFESSIONAL STUDIES

For students interested in the law, the paralegal profession is a great start to an exciting, challenging, and lucrative field. This program teaches students to prepare and draft legal documents, investigate and research legal issues, interview clients and witnesses, and render practical procedural assistance in law-related matters. This program combines a college curriculum of business, liberal arts, and legal courses, as well as hands-on experience in a law firm.

Students also receive training in a variety of on-line research methods used in many law offices that provide the legal researcher with immediate access to cases, statutes, administrative regulations, and numerous other authorities.

Upon successful completion, the Associate in Science Degree in Paralegal Studies is awarded.

Unauthorized Practice of Law Statement

A paralegal may work only under the supervision of an attorney and is not authorized to engage in the practice of law. The American Bar Association defines paralegal as "a person, qualified by education, training, or work experience who is employed or retained by a lawyer, law office, corporation, governmental agency or other entity and who performs specifically delegated substantive legal work for which a lawyer is responsible."

PROGRAM FOOTNOTES

Humanities Electives: Art, Communication, English (EN103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math/Science Electives: Biology, Chemistry, Environmental Science, Integrated Science, 100-level Mathematics or higher (not MAC), Physics

Economics Electives: EC 104 Contemporary Economic Issues, EC 201 Principles of Macroeconomics, or EC 202 Principles of Microeconomics

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Program Electives: CS 116 Fundamentals of Cyber Security, LA 228 Criminal Law and Procedures, PA 203 Real Estate for Paralegals (fall semester), PA 205 Family Law for Paralegals, PA 251 Paralegal Internship***

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
AC 101	Financial Accounting I	4
CS 104	Microcomputer Applications/ Business	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
PA 100*	Introduction to Paralegal Studies	3
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
AC 102	Financial Accounting II	4
EN 102	Freshman English II	3
LA 221	Principles of Business Law I	3
MG 101	Principles of Management	3
	Humanities Elective	3
	credits:	16
<i>Second Year</i>	<i>Semester 1</i>	
MA 105	Intro to Statistics	3
PA 104	Litigation for Paralegals	3
PA 201	Legal Research and Writing I	3
	Program Elective	3
	Economics Elective	3
	credits:	15
<i>Second Year</i>	<i>Semester 2</i>	
PA 202	Legal Research and Writing II	3
	Humanities Elective	3
	Program Elective	3
	Math/ Science Elective	3/4
	Social Science Elective	3
	credits:	15/16
	Total Credits:	62/63

*Courses must be taken first semester

***PA 100, PA 104, and PA 201 are pre-requisites for PA 251 Paralegal Internship

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

Accounting

Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

The Accounting Certificate prepares students for entry-level positions in the workforce assisting professional accounts. Depending on previous educational credentials, the student is able to assist bookkeepers, and work in areas including accounts payable, accounts receivable, data entry, and as junior auditor.

Upon successful completion, the Certificate in Accounting is awarded.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
AC 101	Financial Accounting I	4
AC 102	Financial Accounting II	4
AC 201	Intermediate Accounting I	4
AC 202	Intermediate Accounting II	4
AC 206	Managerial Accounting	4
AC 207	Introduction to Taxation	3
AC 210	Accounting Essentials with QuickBooks	1
	credits:	24
	Total Credits:	24



Early Childhood Education: Infant-Toddler Teacher Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

This program is designed to qualify students to meet the Massachusetts Department of Early Education and Care requirements for teachers in group infant/toddler and child care centers. Only EEC-qualified individuals may accept positions as teachers in classrooms serving children ages 0-3 years. A one-semester supervised field work component in an approved infant-toddler center gives students valuable practical experience, thereby supplementing classroom theory and learning.

Upon successful completion, the Certificate in Early Childhood Education with a concentration in Infant-Toddler Teacher is awarded.

ADMISSION REQUIREMENTS

CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks are required prior to practicum placement and will be conducted in accordance with state regulations. CORI and SORI results are confidential.

PROGRAM FOOTNOTES

Students should apply to the Department of Early Education and Care for Infant-Toddler Teacher qualifications after completing the Certificate. Additional qualifying work experience will later enable the student to apply for the Infant-Toddler Lead Teacher qualification.

A grade of C or higher is required in all Education (ED) courses and PS 222 Child Development.

PS 222 Child Development should be taken before ED 203.

ED 203 is a pre- or co-requisite for ED 230 and ED 240.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
PS 222	Child Development	3
ED 223	Infants and Toddlers	3
LI 104	Children's Literature	3
	or	
ED 108	Art and Music for Young Children	3
ED 203	Early Childhood Curriculum	3
ED 230	Practicum and Seminar in Early Childhood	6
	or	
ED 240	Practicum/ Seminar in Early Childhood	6
	credits:	18
	Total Credits:	18

Early Childhood Education

Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

This program is designed to qualify students to meet the Massachusetts Department of Early Education and Care requirements for teachers in group child care centers.

Holders of this certificate are eligible to apply for EEC professional qualification as a preschool teacher. A one-semester supervised field work component in an approved center gives students valuable practical experience, thereby supplementing classroom theory and learning.

Upon successful completion, the Certificate in Early Childhood Education is awarded.

ADMISSION REQUIREMENTS

CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks are required prior to practicum placement and will be conducted in accordance with state regulations. CORI and SORI results are confidential.

PROGRAM FOOTNOTES

Students should consult an Education Advisor after program completion for assistance in applying for EEC Teacher Qualification and for information about Lead Teacher Qualification, which requires additional experience.

A grade of C or higher is required in Education (ED) courses and PS 222 Child Development.

PS 222 Child Development should be taken before ED 203.

ED 203 is a pre- or co-requisite for ED 230 and ED 240.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
PS 222*	Child Development	3
ED 112	Early Childhood Education	3
	or	
ED 228	Behavior Management	3
LI 104	Children's Literature	3
	or	
ED 108	Art and Music for Young Children	3
ED 203	Early Childhood Curriculum	3
ED 230	Practicum and Seminar in Early Childhood	6
	or	
ED 240	Practicum/ Seminar in Early Childhood	6
	credits:	18
	Total Credits:	18

*Course to be taken first semester.

Entrepreneurship

Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

The Entrepreneurship Certificate provides the academic foundation and mentoring support in entrepreneurship to guide students as they develop and implement their business ideas and plans. It is primarily designed for new entrepreneurs, small business owners, students who want to enhance their business studies in entrepreneurship, and students who have a sound business idea that they want to transform into a new business venture.

Developing an effective business plan and launching a small business venture are essential components of the Certificate. The Certificate provides a foundation for completing the Associate Degree in Entrepreneurship.

Upon successful completion, the Certificate in Entrepreneurship is awarded.

Successful graduates of the Entrepreneurship Certificate Program will be able to:

1. Identify the requirements for planning, developing and launching a small business.
2. Outline knowledge of the business and legal foundations for a new business.
3. Identify professional behaviors and communication skills.
4. Develop an understanding of the multicultural business environment in which entrepreneurship is engaged.
5. Recommend the best strategies for entrepreneurship by using critical thinking and analysis, applying decision making resources, and demonstrating sound problem solving skills.
6. Plan, design and develop a business plan for launching a new business venture.

PROGRAM FOOTNOTES

Electives: BU 201- Global Business; BU 901-Business Internship;
CO 201-Fundamentals of Public Relations;
EC 202- Microeconomics; LA 221-Business Law;
MG 102-Small Business Management; MG 204-Human Resource Management;
MK 213- Principles of Sales; MK 220-Global Marketing Management
MK 215- Principles of Advertising; PS 241-Group Process;
PS 260-Psychology in Business and Industry; MN 140-Project Management.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
AC 101	Financial Accounting I	4
MG 101	Principles of Management	3
MK 103	Principles of Marketing	3
MG 210	Entrepreneurship	3
AC 102	Financial Accounting II	4
MK 214	E-Commerce	3
OA 201	Business Communications	3
	Elective	3/4
	credits:	26/27
	Total Credits:	26/27

General Business: Hospitality Management Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

The Hospitality Management Certificate program provides the knowledge and skills needed to successfully enter the Hospitality Management Industry. It also enhances the skills of those currently employed in the hospitality industry. The Certificate includes five Hospitality subjects, coursework in the fundamentals of general accounting and business communications, and a Service Industry Internship.

You can take the certificate program independently or with another program with appropriate liberal studies courses leading to an associate degree in general business.

Upon completion, the certificate in general business with a concentration in hospitality management is awarded.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
AC101	Financial Accounting I	4
HM 101	Introduction to Hospitality	3
HM 102	Front Office Management	3
OA 201	Business Communications	3
HM 201	Food & Beverage Management	3
HM 203	Conference & Event Planning	3
HM 208	Introduction to Tourism	3
BU 250	Service Industry Internship	4
	credits:	26
	Total Credits:	26

Human Services: Direct Support Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at www.massbay.edu/uploadedFiles/online.pdf. Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

This is a workforce development career ladder offering for individuals working for the Department of Developmental Disabilities and/or their vendor agencies. This certificate prepares students for various positions in the broad field of Developmental Disabilities depending on their work or life experiences.

Upon successful completion, the Human Services: Direct Support Certificate is awarded.

ADMISSION REQUIREMENTS

CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks are required prior to practicum placement and will be conducted in accordance with state regulations. CORI and SORI results are confidential.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment.aspx>

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
SW 101	Introduction to Social Welfare	4
SO 224	Sociology of Developmental Disabilities	3
	credits:	7
<i>First Year</i>	<i>Semester 2</i>	
PS 101	Introduction to Psychology	3
SO 120	Disabilities: Diagnosis and Interventions	3
EN 101	Freshman English I	3
	credits:	9
<i>First Year</i>	<i>Semester 3</i>	
SW 201	Practicum/Seminar	6
	credits:	6
	Total Credits:	22

Interior Design

Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

The program provides the following: the study of interior space planning, the coordination and application of currently manufactured products, knowledge of building codes and materials of design, use of color, history of furnishings, the decorative arts, and preparation and delivery of creative graphic and oral residential and commercial presentations.

The Interior Design certificate develops students' knowledge in space design, materials and furnishing. Interior Design is not just decorating; it involves many aspects of architectural design and planning as well. Students will apply the principles of good design when planning the arrangement of furnishings and aesthetic details for an environment in which people live and work. The use of CAD (computer assisted design)/ AutoCAD software will be introduced. Students will also learn the principles, methods and tools for establishing and running their own Interior Design business in the Small Business Management course. The Internship provides the "capstone" that synthesizes the student's learning in a directed portfolio project.

Upon completion, the Certificate in Interior Design is awarded.

PROGRAM FOOTNOTES

In addition to textbooks, an architectural drawing kit and CAD/AutoCAD software are also required.

Massachusetts Building Codes will be integrated into each course and activity as applicable.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
<i>1st Year</i>	<i>Semester 1</i>	
IN 101	Introduction to Interior Design	3
IN 102	Architectural Drawing for Interior Design	3
IN 202	Materials in Design	3
IN 103	History of Home Furnishings	3
	credits:	12
<i>1st Year</i>	<i>Semester 2</i>	
IN 104	Interior Design with CAD/AutoCAD	3
IN 201	Color Theory and Techniques	3
IN 205	Commercial and Residential Presentation Techniques	3
MG 102	Small Business Management	3
BU 901*	Business Internship	3
	credits:	15
	Total Credits:	27

*Must be taken in the final semester

Liberal Arts: Human Services Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF BUSINESS & PROFESSIONAL STUDIES

This certificate program meets the needs of students looking to enter the social service field, upgrade their skills in their current human services position, or are interested in pursuing further studies in the human services or social work fields. Upon graduation, students are prepared for entry-level positions in a variety of human services agencies such as YMCAs, Boys and Girls Clubs, settlement houses, community centers, and multiservice agencies.

The program combines course work in the social sciences, primarily psychology and sociology, with human services courses and seminars. Students gain knowledge of the field and develop professional skills such as communication, observation, listening, report writing, behavior modification and human relations. Students complement their classroom studies with experimental learning through a 150-hour field placement and weekly seminar.

Upon successful completion, the Certificate in Liberal Arts with a concentration in Human Services is awarded.

ADMISSION REQUIREMENTS

CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks are required prior to practicum placement and will be conducted in accordance with state regulations. CORI and SORI results are confidential.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
SW 101	Introduction to Social Welfare	4
PS 101	Introduction to Psychology	3
SO 101	Introduction to Sociology	3
SO 120	Disabilities: Diagnosis and Interventions	3
	or	
SO 221	Drugs & Society	3
	credits:	13
<i>First Year</i>	<i>Semester 2</i>	
PS 118	Human Growth & Development	3
PS 241	Group Process	3
SW 201	Practicum/Seminar	6
	credits:	12
	Total Credits:	25

Management

Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF SOCIAL SCIENCES & PROFESSIONAL STUDIES

The Management Certificate is designed for students who want to broaden their current careers, or to establish a framework for further business studies, or to provide the foundation for transferring into a business oriented Associate Degree program. The Certificate is also an ideal introduction to various areas of management studies for students who have a technical or liberal arts education/vocation and are considering adding a business education component to their training. The Certificate offers a concentrated curriculum in management, a sound foundation in accounting and business law, and course work in the fundamentals of management, human resources, computer applications, marketing, and microeconomics. The Management Certificate also allows students to select from a variety of electives in business and business related psychology.

Upon successful completion, the Certificate in Management is awarded.

PROGRAM FOOTNOTES

Electives: AC 102 Financial Accounting II, BF 203 Principles of Finance, BU 100 Introduction to Business, BU 201 Global Business, BU 901 Business Internship, EC 201 Macroeconomics, EC 202 Microeconomics, MG 102 Small Business Management, MK 213 Principles of Sales, MK 214 E-Commerce, MK 215 Principles of Advertising, MN 140 Project Management, OA 201 Business Communications, PS 241 Group Process, PS 260 Psychology in Business and Industry.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
AC 101	Financial Accounting I	4
CS 104	Microcomputer Applications for Business	3
EC 202	Principles of Microeconomics	3
MG 101	Principles of Management	3
LA 221	Principles of Business Law	3
MG 204	Human Resource Management	3
MK 103	Principles of Marketing	3
	Elective	3/4
	credits:	25/26
	Total Credits:	25/26

Marketing

Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF SOCIAL SCIENCES & PROFESSIONAL STUDIES

The Marketing Certificate provides students with the comprehensive knowledge of the foundations and practices of marketing, and shows them how this knowledge is applicable to a variety of marketing services and industries.

Students will receive a sound marketing education that prepares them for entry-level and support positions in marketing and sales, or for transfer into a Marketing Associate or Bachelor degree program.

Elective courses will allow students to enhance their education or provide a career path with a comprehensive knowledge of Human Behavior, Global Business, Global Marketing, Marketing Research, Project Management, and Business Law. Students may also opt to participate in an Internship opportunity.

Upon completion, the Certificate in Marketing is awarded.

Successful graduates of the Marketing Certificate Program will be able to:

1. Describe the principles of marketing strategy and the marketing mix, as well as their foundation in the social sciences, both in writing and verbally.
2. Explain how business ethics impacts marketing.
3. Interpret and display the professional behavior and communication skills needed to thrive in a multicultural environment.
4. Analyze and integrate the body of marketing and general business knowledge using critical thinking and analysis, problem solving, and organization and presentation of complex data.
5. Devise marketing plans, campaigns and strategies applicable to various niches areas of marketing and for different industries.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
AC 101	Financial Accounting I	4
MK 103	Principles of Marketing	3
MG 101	Principles of Management	3
MK 214	E-Commerce	3
OA 201	Business Communications	3
MK 213	Principles of Sales	3
MK 215	Principles of Advertising	3
	Elective	3/4
	credits:	25/26
	Total Credits:	25/26

PROGRAM FOOTNOTES

*Electives: AC 102 Financial Accounting II; BU201 Global Business; BU 901 Business Internship; CO 201 Fundamentals of Public Relations; LA 221 Business Law; MA 105 Introduction to Statistics; MG 102-Small Business Management; MK 220 Global Marketing Management; MN 140 Project Management; PS 260 Psychology in Business and Industry; SO 101 Introduction to Sociology

Paralegal Studies

Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF SOCIAL SCIENCES & PROFESSIONAL STUDIES

This program prepares students to work under the supervision of attorneys to prepare legal documents, investigate and research legal issues, interview clients and witnesses, and render practical procedural assistance in law related matters.

The paralegal curriculum provides a solid foundation in all aspects of the field including litigation, legal research and writing. Through this program, students will have the opportunity to take elective courses in specialty areas of interest such as real estate, family law, business law, and trusts & wills.

Students also receive training in a variety of on-line research methods used in many law offices that provide the legal researcher with immediate access to cases, statutes, administrative regulations, and numerous other authorities.

Upon successful completion, the Certificate in Paralegal Studies is awarded.

Unauthorized Practice of Law Statement

A paralegal may work only under the supervision of an attorney and is not authorized to engage in the practice of law. The American Bar Association defines a paralegal or legal assistant as "a person, qualified by education, training or work experience qualified by education, training or work experience who is employed or retained by a lawyer, law office, corporation, governmental agency or other entity and who performs specifically delegated substantive legal work for which a lawyer is responsible."

PROGRAM FOOTNOTES

Program Electives: PA 203 Real Estate for Paralegal (offered fall semester), PA 205 Family Law for Paralegal (offered spring semester), LA 230 Law and Society, LA 228 Criminal Law and Procedures, PA 251 Paralegal Internship***, CS 104 Microcomputer Applications/ Business

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
PA 100*	Introduction to Paralegal Studies	3
PA 201	Legal Research and Writing I	3
LA 221	Principles of Business Law I	3
	Program Elective	3
	credits:	12
<i>First Year</i>	<i>Semester 2</i>	
PA 104	Litigation for Paralegals	3
PA 202	Legal Research and Writing II	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	credits:	15
	Total Credits:	27

*Course must be taken first semester

***PA 100, PA 104, and PA 201 are pre-requisites for PA 251 Paralegal Internship

DIVISION OF HEALTH SCIENCES



Associate Degree Nursing

Associate in Science

DIVISION OF HEALTH SCIENCES

Fall Semester Start

This program is designed to meet the educational needs of students pursuing a career in nursing who wish to attend college full-time during the day. The core curriculum is a full time program that is designed to be completed over four semesters.

The theoretical and clinical components of nursing courses must be taken concurrently and sequentially as outlined in the applicable curriculum sheet.

Graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN).

The Associate in Science Degree in Nursing is accredited by the Accreditation Commission for Education in Nursing (ACEN) and approved by the Massachusetts Board of Registration in Nursing.

Upon completion, the Associate in Science in Nursing degree is awarded.

ADMISSIONS REQUIREMENTS

Applicants seeking admission to the Associate Degree Nursing program are required to attend a recent information session. Times and dates for these sessions can be located at: [Information Session Schedule](#). Students seeking admission to the Associate Degree Nursing Program (ADN) will be individually evaluated on the basis of Grade Point Average (GPA), and performance on the HESI A2 Entrance Exam.

In order to be considered for admission students must have all the following:

- High school diploma or equivalent, or associate degree or higher
- An overall GPA of 2.5 or higher
- HESI Admission (A2) exam score of 75% or better in all subtest scores except Chemistry which requires a subtest score of at least 65 percent and Reading Comprehension which requires a subtest score of at least 85 percent. [HESI A2 RN Admission Exam FAQs](#) (Note: Student may take the HESI exam for a total of 2 times. Students repeating the exam must take a second version. The HESI A2 Exam is given twice per year, and the second try at taking the HESI must include the alternate HESI version to the first attempt. The exam version schedule is determined and maintained by Elsevier, the company that offers the HESI Exam).

Applicants must also meet the following additional criteria for acceptance into the nursing program:

- Completion of Freshman English I (EN 101) with a grade of C or higher.
- MassBay placement into College Algebra (MA 102) OR Pre-Calculus Mathematics (MA 104) or completion of Intermediate Algebra (MA 098) with a grade of C or higher.
- Completion of BI 215 Anatomy and Physiology I, BI 217 Anatomy and Physiology II and BI 223 Fundamentals of Microbiology within a five (5) year time frame with a grade of C+ or higher at the time student records are reviewed for matriculation into the nursing program (Note: students may repeat each science course only once to achieve a C+ within the required 5-year period).

- Completion of Chemistry I with a grade of C+ or higher (High School Chemistry or College Chemistry (CH 101) within 10 years of acceptance into the nursing program).
- Successful completion of Reading Assessment Test with a score of 72 or better.
- Documentation from a healthcare provider stating that you have a positive Hepatitis B titer, or have completed the Hepatitis B vaccine series and are a "non-responder" to the vaccine. You must allow a minimum of 6 months to complete this process.

Once students have been admitted to the program the following pre-program requirements must be completed:

Orientation: Nursing students are required to attend a New Student Orientation and Registration session and complete a **mandatory** two-day orientation. Students who do not complete this two-day orientation will be withdrawn from the program and be considered for readmission at a later date.

Required Pre-Entry Documentation:

In order to be eligible to start class and remain in the program all new and progressing students are required to have [Castle Branch](#) accounts initiated **at least 6** weeks in advance of the **first day of class**. All required forms and documentation outlined below must be uploaded to [CastleBranch](#) accounts by August 1st.

Failure to have completed this step will result in the student being withdrawn from the program. Students who are withdrawn will be considered for readmission at a later date.

- Medical clearance and proof of immunizations as outlined in the Division of Health Sciences handbook and in admission paperwork.
- Proof of CPR certification. The Healthcare Provider Card (from the American Heart Association) and the Professional Rescuer Card (from American Red Cross or National Safety Council) are the only types of CPR certification that meet this requirement (Copies of both sides and a valid signature required).
- Completion of CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) in accordance with state regulations (CORI and SORI results are confidential).

PROGRAM FOOTNOTES:

All Nursing (NU) courses must be completed with a grade of C (73%) or higher.

Competency in Mathematics is MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of a 100-level math course (not MAC).

Competency in Critical Thinking is a MassBay graduation requirement. Students who achieve a C or higher in the Nursing Capstone course (NU 275) have demonstrated competency in critical thinking and have met the required graduation requirement.

Humanities Electives: Art, Communications, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts.

See next page for curriculum sheet.

Associate Degree Nursing Program Day Curriculum Sheet

COURSE	COURSE TITLE	CREDITS
BI 215 *	Anatomy and Physiology I w/ Lab	4
BI 217	Anatomy and Physiology II w/ Lab	4
BI 223 *	Fundamentals of Microbiology w/ Lab	4
EN 101	Freshman English I	3
	Subtotal for Program Requirements	15-19

*BI 101 (4 credits) pre-requisite

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester I (Fall)</i>	
NU 130	Introduction to Professional/Humanistic Nursing Concepts	2
NU 125	Introduction to Biophysical Concepts and Pharmacology in Nursing	4
HL 110	Health Assessment and Skills	1
EN 102	Freshman English II	3
PS 101	Introduction to Psychology	3
	credits:	13
<i>First Year</i>	<i>Semester II (Spring)</i>	
NU 135	Introduction to Psychosocial Nursing Concepts Across the Lifespan	4
NU 160	Concepts in Nursing Care Across the Lifespan I	4
NU 161	Concepts in Nursing Care Across the Lifespan I Practicum	4
CS 100	Computers and Technology	3
	credits:	15
<i>Second Year</i>	<i>Semester I (Fall)</i>	
NU 225	Concepts in Nursing Care Across the Lifespan II	3
NU 226	Concepts in Nursing Care Across the Lifespan II Practicum	2
NU 235	Concepts in Family Nursing	3
NU 236	Concepts in Family Nursing Practicum	2
	Humanities elective	3
	credits:	13
<i>Second Year</i>	<i>Semester II (Spring)</i>	
NU 260	Concepts in Nursing Care Across the Lifespan III	4
NU 261	Concepts in Nursing Care Across the Lifespan III Practicum	4
NU 275	Nursing Capstone	4
	credits:	12
	Total Program Credits	68-72

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Radiologic Technology

Associate in Science

DIVISION OF HEALTH SCIENCES

Fall Semester Start

The radiologic technologist provides diagnostic imaging services to patients in hospitals, clinics, private imaging centers, and medical offices. Comprehensive, rigorous, multi-faceted, and interrelated experiences in the classroom, laboratory, and clinical settings are designed to prepare the student to enter the field as a competent, compassionate professional. The successful program graduate will be capable of assuming many responsibilities associated with meeting each patient's needs, satisfying the requirements associated with the performance of high-quality imaging exams, and assuming accountability for the radiation safety of the patient as well as oneself. Graduates of the program are eligible to seek Massachusetts State Licensing and take the American Registry of Radiologic Technologists Examination.

The Radiological Technology Program is accredited by the Joint Review Committee on Education in Radiologic Technology.

ADMISSION REQUIREMENTS

Admission to the Radiologic Technology program is competitive. Students seeking admission to the Radiologic Technology Program will be evaluated by GPA and total number of college-level credits completed at MassBay. Once the selected students have met the minimum requirements of GPA, admission is based on a core GPA point ranking system. Though core sciences courses can be taken concurrently, consideration will be given to students who have already completed all core science courses as well as college level algebra. Priority for admission is given to current MassBay students and to those applicants having the highest point rating (core GPA) of the core science classes. Applicants must also meet all other required course prerequisites for the program. Minimum eligibility for admissions to this program includes:

- High School diploma or equivalent, or Associate Degree or higher
- MassBay Placement into Freshman English I (EN 101) or completion of Fundamentals of Composition II (EN 098) with a grade of C or higher.
- MassBay Placement into College Algebra (MA 102)/Pre-Calculus Mathematics (MA 104) or completion of Intermediate Algebra (MA 098) with a grade of C or higher.
- Successful completion of Reading Assessment Test with a score of 72 or higher.

Upon acceptance into the Radiologic Technology program, students are required to attend a New Student (program-specific) Orientation. Students accepted to the program are required to verify certain immunization and health records and submit documentation thereof by published deadlines which are program-specific and determined by clinical rotation start dates. A complete list of the required immunizations can be found on Division of Health Sciences' web pages of the MassBay website by clicking the link, "[Health and Background Check Requirements](#)." Immunization requirements are in accordance with clinical site requirements and Massachusetts state law. If the student does not meet the initial published deadline, s/he will not attend the clinical rotation.

Proof of CPR certification is required for the program. The Healthcare Provider Card (from the American Heart Association) and the CPR/AED for the Professional Rescuer Card (from the American Red Cross) are the only types of CPR certification that meet this requirement.

The student must complete the CORI (Criminal Offender Record Information) form to authorize a search of conviction and pending criminal case information under Standard Required Level I by the DCJIS (Department of Criminal Justice Information Services). The student must also complete the SORI (Sex Offender Registry Information) form. The CORI and SORI completion process will occur prior to the beginning of clinical/practicum experiences. If a CORI and SORI completion process will occur prior to the beginning of clinical/practicum experiences.

If a CORI and/or SORI Report is returned with a finding(s), it may or may not prohibit progression in a Health Sciences Program. A National County Criminal Background check will be conducted as a part of the student's completion of the clinical requirements.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>		<i>Semester 1</i>
BI 215*	Anatomy and Physiology I	4
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
RT 101	Radiographic Positioning I	3
RT 111	Radiographic Technique I	3
RT 121	Clinical Education I	3
		credits: 19
<i>First Year</i>		<i>Semester 2</i>
BI 217	Anatomy and Physiology II	4
RT 102	Radiographic Positioning II	3
RT 112	Radiographic Technique II	3
RT 122	Clinical Education II	3
RT 131	Radiographic Physics	4
		credits: 17
<i>First Year</i>		<i>Summer</i>
RT 123	Clinical Education III	6
		credits: 6
<i>Second Year</i>		<i>Semester 1</i>
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
RT 203	Radiographic Positioning III	3
RT 213	Radiobiology and Radiation Protection	2
RT 214	Radiographic Technique III	2
RT 221	Clinical Education IV	4
		credits: 17
<i>Second Year</i>		<i>Semester 2</i>
RT 216	Medical and Surgical Diseases	3
RT 217	Advanced Radiographic Technology	3
RT 222	Clinical Education V	4
	Social Science Elective	3
	Humanities Elective	3
	Humanities or Social Science Elective	3
		credits: 19
		Total Credits: 78

Applicants to the Radiologic Technology program are required to attend a recent information session. Times and dates for these sessions can be located at [Information Session Schedule](#). More information is available on the [Division of Health Sciences pages](#) on the MassBay website.

PROGRAM FOOTNOTES

Humanities Electives: Art, Communications, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts,

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

*Prerequisite General Biology I (BI 101) with a grade of C or higher in the last five years.

A grade of C or higher is required in all Radiologic Technology (RT) and science courses.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of a 100-level math course (not MAC).

AY '18-'19

Radiologic Technology – Flex Option

Associate in Science

DIVISION OF HEALTH SCIENCES

Spring Semester Start

Courses are scheduled in the evening on the Framingham campus for the first two years. Clinicals occur during the day.

The radiologic technologist provides diagnostic imaging services to patients in hospitals, clinics, private imaging centers, and medical offices. Comprehensive, rigorous, multi-faceted, and interrelated experiences in the classroom, laboratory, and clinical settings are designed to prepare the student to enter the field as a competent, compassionate professional. The successful program graduate will be capable of assuming many responsibilities associated with meeting each patient's needs, satisfying the requirements associated with the performance of high-quality imaging exams, and assuming accountability for the radiation safety of the patient as well as oneself. Courses are scheduled in the evening on the Framingham campus for the first two years. Clinicals occur during the day. This flexible schedule allows an opportunity for students to complete the majority of courses required for the RT program in a non-traditional, flexible, and structured manner. Graduates of the program are eligible to seek Massachusetts State Licensing and take the American Registry of Radiologic Technologists Examination.

The Radiological Technology Program is accredited by the Joint Review Committee on Education in Radiologic Technology.

ADMISSION REQUIREMENTS

Admission to the Radiologic Technology program is competitive. Students seeking admission to the Radiologic Technology Program will be evaluated by GPA and total number of college-level credits completed at MassBay. Once the selected students have met the minimum requirements of GPA, admission is based on a core GPA point ranking system. Though core sciences courses can be taken concurrently, consideration will be given to students who have already completed all core science courses as well as college level algebra. Priority for admission is given to current MassBay students and to those applicants having the highest point rating (core GPA) of the core science classes. Applicants must also meet all other required course prerequisites for the program. Minimum eligibility for admissions to this program includes:

- High School diploma or equivalent, or Associate Degree or higher
- MassBay Placement into Freshman English I (EN 101) or completion of Fundamentals of Composition II (EN 098) with a grade of C or higher.
- MassBay Placement into College Algebra (MA 102)/Pre-Calculus Mathematics (MA 104) or completion of Intermediate Algebra (MA 098) with a grade of C or higher.
- Successful completion of Reading Assessment Test with a score of 72 or higher.

Upon acceptance into the Radiologic Technology program, students are required to attend a New Student (program-specific) Orientation. Students in the program are required to verify certain immunization and health records and submit documentation thereof by published deadlines which are program-specific and determined by clinical rotation start dates. A complete list of the required immunizations can be found on Division of Health Sciences' web pages of the MassBay website by clicking the link, "[Health and Background Check Requirements](#)." Immunization requirements are in accordance with clinical site requirements and Massachusetts state law. If the student does not meet the initial published deadline, s/he will not attend the clinical rotation.

Proof of CPR certification is required for the program. The Healthcare Provider Card (from the American Heart Association) and the CPR/AED for the Professional Rescuer Card (from the American Red Cross) are the only types of CPR certification that meet this requirement.

The student must complete the CORI (Criminal Offender Record Information) form to authorize a search of conviction and pending criminal case information under Standard Required Level I by the DCJIS (Department of Criminal Justice Information Services). The student must also complete the SORI (Sex Offender Registry Information) form. The CORI and SORI completion process will occur prior to the beginning of clinical/practicum experiences. If a CORI and SORI completion process will occur prior to the beginning of clinical/practicum experiences. If a CORI and/or SORI Report is returned with a finding(s), it may or may not prohibit progression in a Health Sciences Program. A National County Criminal Background check will be conducted as a part of the student's completion of the clinical requirements.

More information is available on the [Division of Health Sciences pages](#) on the MassBay website.

Applicants to the Radiologic Technology Program are required to attend a recent Information Session. Times and dates for these sessions can be located at [Information Session Schedule](#)

Program Footnotes:

Humanities Electives: Art, Communications, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts,

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of a 100-level math course (not MAC).

A grade of C or higher is required in all Radiologic Technology (RT) and science courses.

*Prerequisites: General Biology I (BI 101) with a grade of C or higher in the last five years

See next page for curriculum sheet.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Spring Semester</i>	
BI 215*	Anatomy and Physiology I	4
RT 131	Radiographic Physics I	4
	credits:	8
<i>First Year</i>	<i>Summer Session</i>	
BI 217	Anatomy and Physiology II	4
RT 213	Radiation Biology & Protection	2
	credits:	6
<i>Second Year</i>	<i>Fall Semester</i>	
RT 101	Radiographic Positioning I	3
RT 111	Radiographic Technique I	3
	credits:	6
<i>Second Year</i>	<i>Semester 4 (Spring)</i>	
RT 102	Radiographic Positioning II	3
RT 112	Radiographic Technique II	3
	credits:	6
<i>Second Year</i>	<i>Summer Session</i>	
RT 203	Radiographic Positioning III	3
RT 214	Radiographic Technique III	2
	credits:	5

* * The following courses must also be completed by the student prior to commencing the Clinical phase (Third Year) of this program. A student may complete some or all of these courses prior to admission. Alternatively, a student may add one or two additional courses each of the semesters above depending on specific course prerequisite and availability.

CT 100	Critical Thinking	3
CS 100	Computers and Technology	3
EN 101	Freshman English I	3
EN 102	Freshman English II	3
	Humanities Elective	3
	Social Science Elective	3
	Humanities or Social Science Elective	3
	credits:	21
<i>Third Year</i>	<i>Semester 6 (Fall)</i>	
RT 121	Clinical Education I	3
RT 221	Clinical Education IV	4
	credits:	7
<i>Third Year</i>	<i>Semester 7 (Spring)</i>	
RT 122	Clinical Education II	3
RT 222	Clinical Education V	4
	credits:	7
<i>Third Year</i>	<i>Summer Session</i>	
RT 123	Clinical Education III	6
RT 216	Medical AND Surgical Diseases	3
RT 217	Advanced Radiographic Technology	3
	credits:	12
	Total Credits:	78

Central Processing Technology Certificate

DIVISION OF HEALTH SCIENCES

Fall, Spring, And Summer Semester Starts; Evenings

The goal of this program is to prepare graduates for a rewarding career in hospitals, physician and dental offices, biotech and veterinary hospitals, and surgical centers. Lecture and Laboratory classes occur in the evening. Clinical experiences take place in the late afternoon and early evening. Central services is the "hub" of the medical care environment especially in those health care agencies performing surgical procedures and need equipment that is sterile, packed correctly, and delivered on time to the operating room. Central Service Technicians also provide critical services to all departments, healthcare professionals and patients.

Graduates are prepared to take the International Certification Exam offered by the International Association of Healthcare Central Service Material Management (IAHCSCMM), whose primary role is to provide education and certification to Central Service and Material Management professionals.

ADMISSION REQUIREMENTS

High School diploma or equivalent, or Associate Degree or higher.

Upon acceptance into the Central Processing Technology program, students are expected to attend a New Student program-specific orientation. Students accepted to the program are required to obtain certain immunization and health records and submit documentation thereof by published deadlines which are program-specific and determined by clinical rotation start dates. A complete list of the required immunizations can be found on Division of Health Sciences' web pages of the MassBay website by clicking the link, "[Health and Background Check Requirements](#)." Immunization requirements are in accordance with clinical site requirements and Massachusetts state law. If the student does not meet the initial published deadline, s/he will not attend the clinical rotation.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment.aspx>

Applicants to the Central Processing Technology program are required to attend a recent information session. Times and dates for these sessions can be located at [Information Session Schedule](#)

COURSE	COURSE TITLE	CREDITS
CY 101	Principles of Central Processing Technology	4
	credits:	4
	Total Credits:	4

A grade of C or higher is required in the Principles of Central Processing Technology course.

Computed Tomography

Certificate

DIVISION OF HEALTH SCIENCES

FALL START

The Computed Tomography (Advanced Certificate) (CT) program has been designed to meet the healthcare demand for high-skilled Computed Tomography (CT) Technologists. This imaging program prepares students for the ARRT post-primary registry examination in CT, as well as for entry level CT positions*. It is designed for certified technologists, i.e., Diagnostic X-ray, Nuclear Medicine, Radiation Therapy and Interventional Radiologic Technologists.

*NOTE: Once the applicant has fulfilled their clinical competency requirements they will be eligible to sit for the national CT Registry Exam.

The program is a two-semester didactic face-to-face program with an optional clinical practicum. This certificate program will include all of the content category requirements within the ARRT Computed Tomography Examination for Patient Care and Safety, Imaging Procedures, Physics and Instrumentation.

Upon successful completion, the Certificate in Computed Tomography is awarded.

ADMISSION REQUIREMENTS

Minimum eligibility for admissions to the Computed Tomography Certificate Program include:

- Submission of a copy of your current unrestricted ARRT or NMTCB (Nuclear Medicine) certification card. TRACK 1&2.
- Current employment within the Diagnostic x-ray, Nuclear Medicine or Radiation Therapy career field- For Track 2 Applicants.
- Submit a Letter of Recommendation from a current supervisor within the field of your discipline. This letter should attest to your current employment-For Track 2 Applicants.
- Current CPR Certification (AHA BLS) and/or the CPR/AED for the Professional Rescuer Card from the American Red Cross. These are the only types of CPR certification that meet this requirement-For Track 2 Applicants.

Admission is selective. Applicants to the Computed Tomography program are required to attend a recent information session. Times and dates for these sessions can be located at www.massbay.edu/infosessions.

Applications will be reviewed by June for a September start. Upon acceptance into the Advanced Certificate Computed Tomography program, students are expected to attend a Mandatory New Student orientation.

PROGRAM FOOTNOTES

- * A grade of C+ (77%) or higher is required in all Computed Tomography courses in order to progress.
- * If TRACK 2 is selected, all health and immunization records must be complete and current to register for clinical courses. Both clinical courses must be successfully completed to pass TRACK 2.
- *A complete list of the required immunizations can be found on Division of Health Sciences' web pages of the MassBay website by clicking the link, "[Health and Background Check Requirements](#)."

TRACK 1

COURSE	COURSE TITLE	CREDITS
Semester 1		
TO 201	Computed Tomography (I) Introduction	2
TO 214	Computed Tomography Cross-Sectional Anatomy	2
	credits:	4
Semester 2		
TO 202	Computed Tomography (II) Advanced	2
TO 215	Computed Tomography Pathology & Procedures	2
	credits:	4
	Total Credits:	8

TRACK 2

COURSE	COURSE TITLE	CREDITS
Semester 1		
TO 201	Computed Tomography (I) Introduction	2
TO 214	Computed Tomography Cross-Sectional Anatomy	2
TO 220	Clinical Education I	3
	credits:	7
Semester 2		
TO 202	Computed Tomography (II) Advanced	2
TO 215	Computed Tomography Pathology & Procedures	2
TO 225	Clinical Education II	3
	credits:	7
	Total Credits:	14

The student must complete the CORI /SORI (Criminal/Sex Offender Record Information) for to authorize a search of conviction and pending criminal case information under Standard Required Level 1 by DCJIS (Department of Criminal Justice Information Services). The CORI/SORI completion process will occur prior to the beginning of clinical experiences. A return of findings may or may not prohibit progression in a Health Sciences Program. A National County Criminal Background check will be conducted as part of the student's completion of the clinical requirements.

More information is available on the [Division of Health Sciences](#) pages on the MassBay website.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

Emergency Medical Technician Certificate

DIVISION OF HEALTH SCIENCES

Days and Evenings, Fall, Spring, and Summer Semester Starts

Emergency Medical Technicians (EMTs) provide prompt basic emergency care to the critically ill and injured, and safe, expeditious transportation to medical facilities for emergent and non-emergent patients who access the emergency medical system. EMTs are the link from the scene to the emergency health care system and function as part of a comprehensive Emergency Medical Services (EMS) response, under medical oversight. An EMT possesses the knowledge and skills necessary to provide competent and compassionate patient care and transportation.

EMTs perform interventions with the basic equipment typically found on an ambulance. EMTs are trained in patient assessment, anatomy and physiology, pathophysiology, management of medical and trauma patients, medication administration, as well as safe and effective EMS operations. EMTs primarily work on ambulances providing emergent and non-emergent patient care at private, municipal, or fire service based EMS agencies. They may also work in Emergency Departments, in industrial settings, as well as in education, sports teams, and volunteer groups.

The EMT Certificate prepares students for careers in Emergency Medical Services as EMTs. Upon completion of the EMT Program, graduates will be eligible to take the National Registry of EMTs (NREMT) certification exams. Those who earn NREMT EMT certification will be eligible to seek state licensure in Massachusetts and most other states. Upon completion of coursework, both parts of the NREMT exam (psychomotor and cognitive), and state EMT certification, the graduate may seek employment.

The EMT Program is accredited by the Department of Public Health: Office of Emergency Medical Services.

ADMISSION REQUIREMENTS

Admissions Requirements:

- High School diploma or equivalent, or Associate Degree or higher
- Placement into EN 098 Fundamentals of Composition II or completion of EN 090 Fundamentals of Composition I with a grade of C or higher
- Reading Placement test score of 72 or higher

Upon acceptance into the Emergency Medical Technician program, students are expected to attend a program-specific orientation. Students in the program are required to obtain certain immunization and health records and submit documentation thereof by published deadlines, which are program-specific and determined by clinical rotation start dates. A complete list of the required immunizations can be found on Division of Health Sciences' web pages of the MassBay website by clicking the link, "Health and Background Check Requirements." Immunization requirements are in accordance with clinical site requirements and Massachusetts state law. If the student does not meet the initial published deadline, s/he will not attend the clinical rotation.

The student must complete the CORI (Criminal Offender Record Information) form to authorize a search of conviction and pending criminal case information under Standard Required Level by the DCJIS (Department of Criminal Justice Information Services). The student must also complete the SORI (Sex Offender Registry Information) form. The CORI and SORI completion process will occur prior to the beginning of clinical/practicum experiences. If a CORI and SORI completion process will occur prior to the beginning of clinical/practicum experiences. If a CORI and/or SORI Report is returned with a finding(s), it may or may not prohibit progression in a Health Sciences Program. A National County Criminal Background check will be conducted as a part of the student's completion of the clinical requirements.

COURSE	COURSE TITLE	CREDITS
EM 101	Principles of Prehospital Care	6
EM 105	EMT Clinical and Field Practice	2
	credits:	8
	Total Credits:	8

The EMT program requires applicants to attend a recent information session. Times and dates for these sessions can be located at [Information Session Schedule](#)

More information is available on the [Emergency Medical Services Program](#) pages on the MassBay website.

PROGRAM FOOTNOTES

EM 101 and EM 105 must be taken together in accordance with the requirements of the MA Office of Emergency Medical Services.

Minimum Grade:

Students must earn a minimum of 77% (C+) in both EM 101 and EM 105 in order to complete the EMT Certificate. Students must meet attend all course meetings and complete all clinical requirements in order to be eligible to sit for certification exams.

Students must be 18 years of age at the time of the National Registry of EMT's Emergency Medical Technician certification exam and Massachusetts EMT Licensure.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

Medical Coding Certificate

DIVISION OF HEALTH SCIENCES

Fall Semester Start; Evenings

This program is designed to prepare students in medical records coding in either an inpatient or outpatient setting. This program offers training in medical terminology; inpatient and outpatient medical office administrative practice; pathophysiology and pharmacology for medical coding; medical records management, ICD-CM, CPT-4 and HCPCS coding, coding regulatory issues, medical-legal and ethical issues, computer usage and medical data entry, and insurance and billing practices. It is appropriate for entry-level job candidates, and for those wishing to build on a current skill base in order to make a career change.

Upon successful completion, the Certificate in Medical Coding is awarded.

ADMISSIONS REQUIREMENTS

High School diploma or equivalent, or Associate Degree or higher

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
BI 113	Essentials of Anatomy and Physiology w/ Lab	3
MO 120	Medical Office Insurance and Billing	4
HL 103	Medical Terminology	3
	credits:	10
<i>First Year</i>	<i>Semester 2</i>	
EN 101	Freshman English I	3
MR 120	Pathophysiology for Medical Coding	3
MR 206	Coding: Current Procedural Terminology (CPT)	4
	credits:	10
<i>First Year</i>	<i>Semester 3 (Summer)</i>	
MR 203	Coding: International Classification of Diseases (ICD-CM)	4
MR 207	HIPAA Standards and Ethics for Medical Coders	3
	credits:	7
	Total Credits:	27

PROGRAM FOOTNOTES

A grade of C or higher is required in all Medical Coding (HL, MR and MO) courses.

Medical Office Administrative Assistant Certificate

DIVISION OF HEALTH SCIENCES

Fall Semester Start; Evenings

This program is designed to prepare the students for administrative assistant career opportunities in a variety of health care settings, including medical clinics, physician practices, hospital-based practices or units, or in health-related businesses. This is a hands-on training course in administrative procedures and computer usage specific to a medical facility or business. It is appropriate for entry-level job candidates, as well as for those wishing to make a career change.

ADMISSION REQUIREMENTS

High School diploma or equivalent, or Associate Degree or higher

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page:

<http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
<i>Semester 1</i>		
HL 103	Medical Terminology	3
MO 101	Medical Office Procedures I	5
EN 100*	College Writing	4
	credits:	12
<i>Semester 2</i>		
MO 110	Medical Office Procedures II	5
MO 120	Medical Office Insurance and Billing	4
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	12
	Total Credits:	23/24

PROGRAM FOOTNOTES

Humanities Electives: Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

*EN 101 or higher may be substituted for this requirement.

Paramedicine–Day Option

Certificate

DIVISION OF HEALTH SCIENCES

Paramedics provide the most advanced level of prehospital emergency patient care for critically ill and injured patients who access the emergency medical system. A Paramedic possesses the complex knowledge and skills necessary to provide compassionate, comprehensive advanced patient care in dynamic and often stressful environments.

The MassBay Paramedicine program prepares students to become members of the health care team and function as leaders in prehospital emergency care as paramedics. The program provides students with knowledge, skills, and clinical decision-making skills to manage patients of all ages with acute and critical illness.

MassBay's EMT Paramedicine Programs are accredited by the Massachusetts Department of Public Health: Office of Emergency Medical Services. The Paramedicine Program has been issued a Letter of Review from the Commission on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP) and is pursuing full accreditation from CAAHEP.

Upon successful completion, a Certificate in Paramedicine will be awarded.

ADMISSION REQUIREMENTS

Applicants seeking admission to health profession programs will be evaluated on an individual basis. Students seeking admission will be evaluated by GPA and total number of college-level credits completed at MassBay. Priority for admission is given to current MassBay students. Applicants must also meet all other required course prerequisites for the program. Minimum eligibility for admissions to this program includes:

- HS Diploma or GED
- MassBay Placement into Freshman English I (EN 101) or completion of Fundamentals of Composition II (EN 098) with a grade of C or higher.
- MassBay Placement into Intermediate Algebra (MA 098) or completion of Introduction to Algebra (MA 095) with a grade of C or higher.
- Successful completion of Reading Assessment Test. Refer to the Competitive Programs Admissions Requirements.
- Current Nationally Registered and/or state certified EMT required prior to enrolling in Paramedicine courses. Students who enter with NREMT EMT Certification only, must obtain MA EMT certification prior to enrolling in PM 210.
- Current CPR certification (AHA BLS, ARC Professional Rescuer, Military Training Network).

Background Check

- CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks are required prior to clinical placement and will be conducted in accordance with state regulations. CORI and SORI results are confidential.
- Students must have a valid, unrestricted driver's license in order to seek employment in the field.
- Students who do not submit the required Division of Health Sciences (DHS) health forms or other required information will have a health hold placed on their records preventing registration in any courses. Forms/ information must be submitted to the DHS compliance coordinator. Refer to the DHS Student Handbook for additional information.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Fall (15 weeks)</i>	
	Anatomy & Physiology Requirement**	3/4
PM 201	Foundations of Paramedicine	4
PM 202	Prehospital Pharmacology	2
PM 203	Current Issues in Paramedicine	1
PM 204	Cardiology	5
PM 205	Medical Emergencies	3
	credits:	18/19
<i>First Year</i>	<i>Spring I (8 week 1st Session)</i>	
PM 206	Trauma and Special Patient Populations	4
PM 207	Clinical Decision Making	3
<i>First Year</i>	<i>Spring II (8 week 2nd Session)</i>	
PM 210*	Emergency Care Clinical I	3
	credits:	10
<i>First Year</i>	<i>Summer I (8 weeks)</i>	
PM 211*	Emergency Care Clinical II	4
<i>First Year</i>	<i>Summer II (10 weeks)</i>	
PM 212*	Paramedic Field Practice Capstone	5
	credits:	9
	Total Credits:	37/38

PROGRAM FOOTNOTES

A grade of C+ (77%) or higher is required in all Paramedicine (PM) courses. A grade of C is required in all sciences courses.

* All Paramedicine courses must be taken in sequence. The clinical and field courses (PM 210, PM 211, PM 212) must be completed within one (1) year of completing the didactic courses (PM 201, 202, 203, 204, 205, 206, 207) in accordance with MA OEMS and Program requirements.

Anatomy & Physiology Requirement

** Prerequisite or Co-requisite in 1st semester: Anatomy and Physiology requirement- BI 113 or BI 215 or BI 217 course with a grade of C or higher fulfills this requirement.

Paramedicine– Evening Option Certificate

DIVISION OF HEALTH SCIENCES

Paramedics provide the most advanced level of prehospital emergency patient care for critically ill and injured patients who access the emergency medical system. A Paramedic possesses the complex knowledge and skills necessary to provide compassionate, comprehensive advanced patient care in dynamic and often stressful environments.

The MassBay Paramedicine program prepares students to become members of the health care team and function as leaders in prehospital emergency care as paramedics. The program provides students with knowledge, skills, and clinical decision-making skills to manage patients of all ages with acute and critical illness.

MassBay's EMT Paramedicine Programs are accredited by the Massachusetts Department of Public Health: Office of Emergency Medical Services. The Paramedicine Program has been issued a Letter of Review from the Commission on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP) and is pursuing full accreditation from CAAHEP.

On campus classes and clinical rotations are primarily scheduled in the evenings; however, some rotations are only available during the daytime hours.

Upon successful completion, a Certificate in Paramedicine will be awarded.

ADMISSION REQUIREMENTS

Applicants seeking admission to health profession programs will be evaluated on an individual basis. Students seeking admission will be evaluated by GPA and total number of college-level credits completed at MassBay. Priority for admission is given to current MassBay students. Applicants must also meet all other required course prerequisites for the program. Minimum eligibility for admissions to this program includes:

- HS Diploma or GED
- MassBay Placement into Freshman English I (EN 101) or completion of Fundamentals of Composition II (EN 098) with a grade of C or higher.
- MassBay Placement into Intermediate Algebra (MA 098) or completion of Introduction to Algebra (MA 095) with a grade of C or higher. Successful completion of Reading Assessment Test. Refer to the Competitive Programs Admissions Requirements.
- Current Nationally Registered and/or state certified EMT required prior to enrolling in Paramedicine courses. Students who enter with NREMT EMT Certification only, must obtain MA EMT certification prior to enrolling in PM 210.
- Current CPR certification (AHA BLS, ARC Professional Rescuer, Military Training Network).

Background Check

- CORI (Criminal Offender Record Information) and SORI (Sexual Offender Registry Information) background checks are required prior to clinical placement and will be conducted in accordance with state regulations. CORI and SORI results are confidential.
- Students must have a valid, unrestricted driver's license in order to seek employment in the field.
- Students who do not submit the required Division of Health Sciences (DHS) health forms or other required information will have a health hold placed on their records preventing registration in any courses. Forms/information must be submitted to the DHS compliance coordinator. Refer to the DHS Student Handbook for additional information.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Spring (15 week session)</i>	
	Anatomy & Physiology Requirement**	3/4
PM 201	Foundations of Paramedicine	4
PM 202	Prehospital Pharmacology	2
PM 203	Current Issues in Paramedicine	1
	credits:	10/11
<i>First Year</i>	<i>Summer (12 week session)</i>	
PM 204	Cardiology	5
PM 205	Medical Emergencies	3
	credits:	8
<i>First Year</i>	<i>Fall I (8 week 1st Session)</i>	
PM 206	Trauma and Special Patient Populations	4
PM 207	Clinical Decision Making	3
	credits:	7
<i>First Year</i>	<i>Fall II (8 week 2nd Session)</i>	
PM 210*	Emergency Care Clinical I	3
	credits:	3
<i>Second Year</i>	<i>Spring I (8 week 1st Session)</i>	
PM 211*	Emergency Care Clinical II	4
	credits:	4
<i>Second Year</i>	<i>Spring II (8 week 2nd Session)</i>	
PM 212*	Paramedic Field Practice Capstone	5
	credits:	5
	Total Credits:	37/38

PROGRAM FOOTNOTES

A grade of C+ (77%) or higher is required in all Paramedicine (PM) courses. A grade of C is required in all sciences courses.

* All Paramedicine courses must be taken in sequence. The clinical and field courses (PM 210, PM 211, PM 212) must be completed within one (1) year of completing the didactic courses (PM 201, 202, 203, 204, 205, 206, 207) in accordance with MA OEMS and Program requirements.

Anatomy & Physiology Requirement

** Prerequisite or Co-requisite in 1st semester: Anatomy and Physiology requirement- BI 113 or BI 215 or BI 217 course with a grade of C or higher fulfills this requirement.

Phlebotomy

Certificate

DIVISION OF HEALTH SCIENCES

FALL/SPRING: 8-WEEK SATURDAY CLASS, 8-WEEK WEEKDAY CLINICAL

A phlebotomist is skilled in blood collection, and in the preparation of certain specimens for diagnostic laboratory testing as ordered by a physician. This is a one-semester program that prepares students for a career as a phlebotomist in various health care settings such as hospitals, physician offices, HMOs, surgical centers, and independent laboratories.

This program includes the profession's history; medical terminology; venipuncture; microsampling; special blood collection procedures; OSHA and safety procedures involving bloodborne pathogens; basic pre-analytical and post-analytical laboratory procedures, and point of care testing; and electrocardiography procedures.

Course objectives and competency are accomplished through formal coursework, laboratory practice, and a clinical practicum. In the fall and spring semesters, the classroom portion takes place on Saturdays. The clinical practicum takes place Monday through Friday during daytime business hours. The program may be completed in one semester.

ADMISSION REQUIREMENTS

High School diploma or equivalent, or Associate Degree or higher

Upon acceptance into the Phlebotomy program, students are expected to attend a mandatory New Student (program-specific) Orientation. Students in the program are required to verify certain immunization and health records and submit documentation thereof by published deadlines which are program-specific and determined by clinical rotation start dates. A complete list of the required immunization and determined by clinical rotation start dates. A complete list of the required immunizations can be found on Division of Health Sciences' web pages of the MassBay website by clicking the link, "[Health and Background Check Requirements](#)." Immunization requirements are in accordance with clinical site requirements and Massachusetts state law. If the student does not meet the initial published deadline, s/he will not attend the clinical rotation.

Proof of CPR certification is required for the program. The Healthcare Provider Card (from the American Heart Association) and the CPR/AED for the Professional Rescuer Card (from the American Red Cross) are the only types of CPR certification that meet this requirement.

The student must complete the CORI (Criminal Offender Records Information) form to authorize a search of conviction and pending criminal case information under Standard Required Level I by the

COURSE	COURSE TITLE	CREDITS
PB 100	Principles & Methods of Phlebotomy	3
PB 105	Clinical Practicum Phlebotomy	4
	credits:	7
	Total Credits:	7

DCJIS (Department of Criminal Justice Information Services). The student must also complete the SORI (Sex Offender Registry Information) form. The CORI and SORI completion process will occur prior to the beginning of the clinical-practicum experiences. If a CORI and SORI Report is returned with a finding(s), it may or may not prohibit progression in a Health Sciences Program. A National County Criminal Background check will be conducted as a part of the student's completion of the clinical requirements.

Applicants to the Phlebotomy program are required to attend a recent information session. Times and dates for these sessions can be located at [Information Session Schedule](#)

More information is available on the [Division of Health Sciences](#) pages on the MassBay website.

PROGRAM FOOTNOTES

A grade of C or higher is required in all Phlebotomy (PB) courses. The clinical is completed with a pass/fail grade.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

Practical Nursing– Day Option Certificate

DIVISION OF HEALTH SCIENCES

Fall Semester Start

The Practical Nursing Certificate program is designed to meet the educational needs of those who wish career entry as a licensed health care worker. Graduates are employed in various health care settings such as long term care facilities, hospitals, clinics, physician offices, home health, and community health facilities. The day option of the Practical Nursing Program is conducted over a 40-week period beginning in the fall and continued through June. Classes, labs, and clinicals are scheduled full-time during the day. The theoretical, lab and clinical components of nursing courses must be taken concurrently and sequentially.

The Practical Nursing Program has been approved by the Massachusetts Board of Registration in Nursing. Graduates are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN).

A minimum grade of C, 75% is required for progression in all Practical Nursing courses.

ADMISSION REQUIREMENTS

Students seeking admission to the Practical Nursing Program (PN) will be individually evaluated on the basis of the Grade Point Average (GPA) and performance on the HESI A2 Entrance Exam. Students must also meet the following additional criteria for eligibility for acceptance into the practical nursing program:

- High School diploma or equivalent, or Associate Degree or higher
- MassBay Placement into Freshman English I (EN 101) or completion of Fundamentals of Composition II (EN 98) or with a grade of C or higher.
- MassBay Placement into Intermediate Algebra (MA 098) or completion of Introductory Algebra (MA 095) with a grade of C or higher.
- Successful completion of Reading Assessment Test with a score of 72 or higher.
- HESI Admission (A2) exam score of 70% or better. A Student may take the HESI exam a total of 4 times. HESI exam scores are valid for one year, at which time the exam must be retaken.
- Completion of BI 215 Anatomy & Physiology and BI 217 Anatomy & Physiology II, within a five (5) year timeframe with a grade of C or higher at the time of review into the Practical Nursing Program. Students can repeat each science course only once to achieve C or higher.

- Documentation from a healthcare provider stating that you have a positive Hepatitis B titer, or have completed the Hepatitis B vaccine series and are a “non-responder” to the vaccine. You must allow a minimum of 6 months to complete this process.

Once students have been admitted to the program the following pre-program requirements must be completed:

Orientation: Nursing students are required to attend a **mandatory** New Student Orientation. Students who do not complete this one-day orientation will be withdrawn from the program and be considered for readmission at a later date.

Required Pre-Entry Documentation:

In order to be eligible to start class and remain in the program all new and progressing students are required to have [Castle Branch](#) accounts initiated **at least 6 weeks** in advance of the **first day of class**. All required forms and documentation outlined below must be uploaded to [Castle Branch](#) accounts by August 1st.

Failure to complete this step will result in the student being withdrawn from the program. Students who are withdrawn will be considered for readmission at a later date.

- Medical clearance and proof of immunizations as required by state law and outlined in the Division of Health Sciences handbook and in admission paperwork and can be found on Division of Health Sciences’ web pages of the MassBay website by clicking the link, “Health and Background Check Requirements.”
- Proof of CPR certification. The Healthcare Provider Card (from the American Heart Association) and the Professional Rescuer Card (from American Red Cross or National Safety Council) are the **only** types of CPR certification that meet this requirement (Copies of both sides and a valid signature required).
- Completion of CORI (Criminal Offender Record Information) form to authorize a search of conviction and pending criminal case information under Standard Required Level I by the DCJIS (Department of Criminal Justice Information Services) and SORI (Sexual Offender Registry Information) in accordance with state regulations (CORI and SORI results are confidential). If a CORI and/or SORI report is returned with a finding(s), it may or may not prohibit progression in a Health Sciences Program. A National County Criminal Background check will be conducted as a part of the student’s completion of the clinical requirements.

More information is available on the [Division of Health Sciences pages](#) on the MassBay website.

- Applicants to the Practical Nursing Program are required to attend a recent Information Session. Times and dates for these sessions can be located at Information Session Schedule
- For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

See next page for curriculum sheet.

Prerequisites (prior to application)		
COURSE	COURSE TITLE	CREDITS
BI 215 *	Anatomy and Physiology I w/ Lab*	4
BI 217	Anatomy and Physiology II w/ Lab	4
	Subtotal for Program Prerequisites	8-12

*BI 101 (4 credits) pre-requisite if taking BI 215 at MassBay

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
HL 103	Medical Terminology	3
PN 102	Foundations of Practical Nursing	10
PN 105	Issues and Trends in Practical Nursing	1
PN 107	Principles of Pharmacology I	3
	credits:	17
	<i>Intersession</i>	
PN 109	Introduction to Medical/ Surgical Nursing	2
	credits:	2
<i>First Year</i>	<i>Semester 2</i>	
PN 110	Principles of Pharmacology II	3
PN121	Medical/ Surgical Nursing I	7
PN 122	Medical/ Surgical Nursing II	7
	credits:	17
	<i>Summer</i>	
PN 130	Care of the Family	7
	credits:	7
	Total Credits:	43

Surgical Technology

Certificate

DIVISION OF HEALTH SCIENCES

FOR DAY AND EVENING OPTIONS, PLEASE VISIT THE: ["PROGRAM START SCHEDULE"](#)

The Surgical Technology Program prepares graduates to function as members of the surgical team, assisting the surgeon, professional nurse, or anesthetist in a variety of surgical arenas. Theory and practice of surgical asepsis are the focuses of the program. Students develop knowledge and skills in maintaining aseptic technique within the surgical areas of health care delivery. The curriculum combines didactic, college laboratory and clinical experience with an emphasis on acquiring clinical skills. The study of operating room technology is planned sequentially, making use of all prior learning so that students can synthesize course material and focus on applying it in operating room practice. Students will have clinical experiences in a variety of surgical cases, including endoscopic and obstetrics. Students must pass the NBSTSA (National Board of Surgical Technology and Surgical Assisting Association) Certifying Examination, which is approved by the NBSTSA Advisory Board.

The Surgical Technology Program is accredited by the Accreditation Review Committee on Education in Surgical Technology.

ADMISSION REQUIREMENTS

Students seeking admission to the Surgical Technology program will be evaluated by GPA and total number of college-level credits completed at MassBay. Priority for admission is given to current MassBay students. Applicants must also meet all other required course prerequisites for the program. Minimum eligibility for admissions to this program includes:

- High School diploma or equivalent, or Associate Degree or higher.
- Placement into EN 098 Fundamentals of Composition II or completion of EN 090 Fundamentals of Composition I with a grade of C or higher.
- MassBay Placement into Introductory Algebra (MA 095) or completion of Basic Math Studies (MA 090) with a grade of C or higher.
- Successful completion of Reading Assessment Test with a score of 72 or higher.

Upon acceptance into the Surgical Technology program, students are required to attend a New Student (program-specific) orientation. Students in the program are required to verify certain immunization and health records and submit documentation thereof by published deadlines which are program-specific and determined by clinical rotation start dates. A complete list of the required immunizations can be found on Division of Health Sciences' web pages of the MassBay website by clicking the link, "[Health and Background Check Requirements](#)." Immunization requirements are in accordance with clinical site requirements and Massachusetts state law. If the student does not meet the initial published deadline, s/he will not attend the clinical rotation.

Proof of CPR certification is required for the program. The Healthcare Provider Card (from the American Heart Association) and the CPR/AED for the Professional Rescuer Card (from the American Red Cross) are the only types of CPR certification that meet this requirement.

COURSE	COURSE TITLE	CREDITS
<i>Semester 1</i>		
BI 101	General Biology I w/ Lab	4
BI 113*	Essentials of Anatomy and Physiology w/ Lab	3
SX 110	Principles of Surgical Technology I	8
	credits:	15
<i>Semester 2</i>		
BI 223	Fundamentals of Microbiology w/ Lab	4
SX 120	Principles of Surgical Technology II	8
	credits:	12
<i>Semester 3</i>		
SX 130	Principles of Surgical Technology III	7
	Social Science Elective	3
	credits:	10
	Total Credits:	37

The student must complete the CORI (Criminal Offender Record Information) form to authorize a search of conviction and pending criminal case information under Standard Required Level I by the DCJIS (Department of Criminal Justice Information Services).

The student must also complete the SORI (Sex Offender Registry Information) form. The CORI and SORI completion process will occur prior to the beginning of clinical/practicum experiences. If a CORI and/or SORI report is returned with a finding(s), it may or may not prohibit progression in a Health Sciences Program. A National County Criminal Background check will be conducted as a part of the student's completion of the clinical requirements.

Applicants to the Surgical Technology Program are required to attend a recent Information Session. Times and dates for these sessions can be located at [Information Session Schedule](#)

More information is available on the [Division of Health Sciences pages](#) on the MassBay website.

PROGRAM FOOTNOTES

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

A grade of C or higher is required for all Surgical Technology (SX) and science courses. Science courses must be taken within five (5) years of acceptance in the Surgical Technology program.

* A combination of Anatomy & Physiology I (BI 215) and Anatomy & Physiology II with a C or higher (BI 217) fulfills this requirement.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

DIVISION OF HUMANITIES & SOCIAL SCIENCE



General Studies

Associate in Arts

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF HUMANITIES & SOCIAL SCIENCES

This program enables students to explore a variety of interests and choices from a wide range of subject areas including business, science, health sciences, and liberal arts. Students also complete a course in a career/ life planning to help them assess their options and develop a degree plan to meet their individual needs.

Upon successful completion, the Associate in Arts Degree in General Studies is awarded.

History Sequence:

HS 101 Western Civilization I & HS 102 Western Civilization II, or
HS 103 World Civilization I & HS 104 World Civilization II, or
HS 105 United States History to 1877 & HS 106 United States History Since 1877

Laboratory Science Sequence:

BI 101 General Biology I & BI 102 General Biology II, or
BI 110 Principles of Biology I & BI 120 Principles of Biology II, or
BI 215 Anatomy and Physiology I & BI 217 Anatomy and Physiology II, or
CH 101 College Chemistry I & CH 102 College Chemistry II, or
CH 110 Principles of Chemistry I & CH 120 Principles of Chemistry II, or
EV 103 Environmental Studies I & EV 104 Environmental Studies II, or
PY 101 College Physics I & PY 102 College Physics II, or
PY 103 Engineering Physics I & PY 104 Engineering Physics II, or
SC 102 Integrated Science I & SC 103 Integrated Science II,

Literature Sequence:

LI 201 World Literature I & LI 202 World Literature II, or
LI 203 American Literature I & LI 204 American Literature II, or
LI 205 British Literature I & LI 206 British Literature II

Humanities Electives: Art, Communication, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math/Science Electives: Biology, Chemistry, Environmental Science, Integrated Science, Contemporary Nutrition (NS 101), 100-Level Mathematics or higher (not MAC), Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA 230 Law and Society, Psychology, Sociology

Program Electives: Any college-level courses offered at the College.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

The program qualifies for MassTransfer with select public Institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
PS 150	Career/ Life Planning	3
	History Sequence	3
	credits:	15
<i>First Year</i>	<i>Semester 2</i>	
EN 102	Freshman English II	3
	History Sequence	3
	Program Elective	3
	Program Elective	3
	Math/Science Elective	3/4
	credits:	15/16
<i>Second Year</i>	<i>Semester 1</i>	
	Literature Sequence	3
	Laboratory Science Sequence	4
	Program Elective	3
	Program Elective	3
	Program Elective	3
	credits:	16
<i>Second Year</i>	<i>Semester 2</i>	
	Literature Sequence	3
	Laboratory Science Sequence	4
	Social Science Elective	3
	Humanities Elective	3
	Program Elective	3
	credits:	16
	Total Credits:	62/63

Liberal Arts: Psychology/Sociology

Associate in Arts

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF HUMANITIES & SOCIAL SCIENCES

This program is for students who want to specialize in the social and behavioral sciences. Students gain a solid foundation in the fields of psychology and sociology to be used in the workforce or to further their education.

Upon successful completion, the Associate of Arts Degree in Liberal Arts with a concentration in Psychology and Sociology is awarded.

PROGRAM FOOTNOTES:

History Elective:

HS 101 Western Civilization I, HS 102 Western Civilization II, HS 103 World Civilization I, HS 104 World Civilization II, HS 105 United States History to 1877, HS 106 United States History Since 1877, HS 115 America through Media, HS 201 Modern Latin America, HS 210 African-American History, HS 220 Nazi Germany and the Holocaust, HS 230 Immigration and Citizenship

Laboratory Science Elective:

BI 101 General Biology I, BI 102 General Biology II, BI 110 Principles of Biology I, BI 120 Principles of Biology II, BI 215 Anatomy and Physiology I, BI 217 Anatomy and Physiology II, CH 101 College Chemistry I, CH 102 College Chemistry II, CH 110 Principles of Chemistry I, CH 120 Principles of Chemistry II, EV 103 Environmental Studies I & EV 104 Environmental Studies II, or PY 101 College Physics I, PY 102 College Physics II, PY 103 Engineering Physics I, PY 104 Engineering Physics II, SC 102 Integrated Science I, SC 103 Integrated Science II

Literature Elective:

Any Literature course at the College

Humanities Electives:

Art, Communication, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts, English (EN 103 or higher)

Math Electives:

Math elective must be 100-level or higher and does not include courses with a MAC prefix

*MA 105 Introduction to Statistics is recommended

Science Electives:

Any 3 or 4 credit Science course at the College

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 100	Computers and Technology	3
PS 101	Introduction to Psychology	3
EN 101	Freshman English I	3
	History Elective	3
	Laboratory Science Elective	4
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
EN 102	Freshman English II	3
SO 101	Introduction to Sociology	3
CT 100	Critical Thinking	3
	History Elective	3
	Science Elective	3/4
	credits:	15/16
<i>Second Year</i>	<i>Semester 1</i>	
	Literature Elective	3
	Math Elective	3/4
	Social Science Elective	3
	Social Science Elective	3
	Humanities Elective	3
	credits:	15/16
<i>Second Year</i>	<i>Semester 2</i>	
PS 250	Research Methods	3
	Humanities Elective	3
	Humanities Elective	3
	Program Elective	3
	Program Elective	3
	credits:	15
	Total Credits:	61/63

Program Electives:

Any Anthropology, Psychology, Sociology courses

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

The program qualifies for MassTransfer with select public Institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Liberal Arts

Associate in Arts

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF HUMANITIES & SOCIAL SCIENCES

This program is the equivalent of the freshman and sophomore years of a Bachelor of Arts program at a four-year college or university. Students gain a broad knowledge of the arts, literature, history, psychology, social sciences, science, and mathematics. In addition, students develop writing and speaking competencies, critical thinking and problem solving skills.

Upon successful completion, the Associate in Arts Degree in Liberal Arts is awarded.

History Sequence:

HS 101 Western Civilization I & HS 102 Western Civilization II, or
HS 103 World Civilization I & HS 104 World Civilization II, or
HS 105 United States History to 1877 & HS 106 United States History Since 1877

Laboratory Science Sequence:

BI 101 General Biology I & BI 102 General Biology II, or
BI 110 Principles of Biology I & BI 120 Principles of Biology II, or
BI 215 Anatomy and Physiology I & BI 217 Anatomy and Physiology II, or
CH 101 College Chemistry I & CH 102 College Chemistry II, or
CH 110 Principles of Chemistry I & CH 120 Principles of Chemistry II, or
EV 103 Environmental Studies I & EV 104 Environmental Studies II, or
PY 101 College Physics I & PY 102 College Physics II, or
PY 103 Engineering Physics I & PY 104 Engineering Physics II, or
SC 102 Integrated Science I & SC 103 Integrated Science II

Literature Sequence:

LI 201 World Literature I & LI 202 World Literature II, or
LI 203 American Literature I & LI 204 American Literature II, or
LI 205 British Literature I & LI 206 British Literature II

Humanities Electives: Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts,

Math Electives: 100-Level Mathematics or higher (not MAC)

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Program Electives: Any Liberal Arts Elective or Accounting, Business, Business Communication, Criminal Justice, Computer Science, Education, Electrical Engineering, Essentials of Nutrition (HL 111), Human Services, Law, Management, Marketing, Mechanical Engineering, Nutrition.

Liberal Arts Electives: Any college-level elective in the Humanities, Social Science, or Mathematics & Science areas.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
EN 101	Freshman English I	3
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
	History Sequence	3
	Laboratory Science Sequence	4
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
EN 102	Freshman English II	3
	History Sequence	3
	Laboratory Science Sequence	4
	Humanities Elective	3
	Math Elective	3/4
	credits:	16/17
<i>Second Year</i>	<i>Semester 1</i>	
	Literature Sequence	3
	Liberal Arts Elective	3
	Liberal Arts Elective	3
	Social Science Elective	3
	Program Elective	3
	credits:	15
<i>Second Year</i>	<i>Semester 2</i>	
	Literature Sequence	3
	Liberal Arts Elective	3
	Liberal Arts Elective	3
	Liberal Arts Elective	3
	Program Elective	3
	credits:	15
	Total Credits:	62/63

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

The program qualifies for MassTransfer with select public Institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Liberal Arts: English

Associate in Arts

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF HUMANITIES & SOCIAL SCIENCES

The English Concentration is an option for students who wish to pursue a liberal arts degree and who have academic and career aspirations requiring a strong background in writing/language arts. It includes analysis of the practice in producing academic, creative, professional, and digital/multi-modal writing. This concentration is appropriate for students considering careers in teaching, publishing, and writing; but also for a wide range of careers in the humanities, business, STEM, and health sciences.

Upon successful completion, the Associate in Arts Degree in Liberal Arts with a concentration in English is awarded.

PROGRAM FOOTNOTES

History Elective:
Any History course at the College.

Laboratory Science Elective:

BI 101 General Biology I, BI 102 General Biology II, BI 110 Principles of Biology I, BI 120 Principles of Biology II, BI 215 Anatomy and Physiology I, BI 217 Anatomy and Physiology II, CH 101 College Chemistry I, CH 102 College Chemistry II, CH 110 Principles of Chemistry I, CH 120 Principles of Chemistry II, EV 103 Environmental Studies I, EV 104 Environmental Studies II, PY 101 College Physics I, PY 102 College Physics II, PY 103 Engineering Physics I, PY 104 Engineering Physics II, SC 102 Integrated Science I, or SC 103 Integrated Science II

Science Elective: Any 3 or 4 credit science course

Literature Elective:
Any Literature course.

Humanities Electives:

Art, Communication, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts, English (EN 103 or higher)

English Concentration Elective: EN 195 Creative Writing, EN 220 Professional Writing, LI 208 Life Writing: Reading and Writing Autobiography, CO 105 Journalism I, or any college-level English and/or Literature course

Math Electives: 100-Level Mathematics or higher (not MAC)

Program Elective: Any college-level elective in the Humanities, Social Science, or Mathematics & Science areas, or Business, Business Communication, Criminal Justice, Computer Science, Contemporary Nutrition (NS101), Education, Electrical Engineering, Essentials of Nutrition (HL 111), Human Services, Law, Management, Marketing, Mechanical Engineering

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
EN 101	Freshman English I	3
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
	History Elective	3
	English Concentration Elective	3
	credits:	15
<i>First Year</i>	<i>Semester 2</i>	
EN 102	Freshman English II	3
	History Elective	3
	Laboratory Science Elective	4
	English Concentration Elective	3
	Math Elective	3/4
	credits:	16/17
<i>Second Year</i>	<i>Semester 1</i>	
EN 120	Digital Writing	3
	Literature Elective	3
	Science Elective	3/4
	Social Science Elective	3
	English Concentration Elective	3
	credits:	15/16
<i>Second Year</i>	<i>Semester 2</i>	
EN 202	Advanced Writing	3
	Literature Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	credits:	15
	Total Credits:	61/63

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

The program qualifies for MassTransfer with select public Institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Liberal Arts: Communication

Associate in Arts

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF HUMANITIES & SOCIAL SCIENCES

This communication program combines liberal arts and business to provide the basic knowledge and skills needed for a communications-related career in business. The curriculum offers students the flexibility to develop a concentration that meets a student's particular interests and needs.

Upon successful completion, the Associate in Arts Degree in Liberal Arts with a concentration in Communication is awarded.

History Sequence:

HS 101 Western Civilization I & HS 102 Western Civilization II, or
HS 103 World Civilization I & HS 104 World Civilization II, or
HS 105 United States History to 1877 & HS 106 United States History Since 1877

Laboratory Science Sequence:

BI 101 General Biology I & BI 102 General Biology II, or
BI 110 Principles of Biology I & BI 120 Principles of Biology II, or
BI 215 Anatomy and Physiology I & BI 217 Anatomy and Physiology II, or
CH 101 College Chemistry I & CH 102 College Chemistry II, or
CH 110 Principles of Chemistry I & CH 120 Principles of Chemistry II, or
EV 103 Environmental Studies I & EV 104 Environmental Studies II, or
PY 101 College Physics I & PY 102 College Physics II, or
PY 103 Engineering Physics I & PY 104 Engineering Physics II, or
SC 102 Integrated Science I & SC 103 Integrated Science II,

Literature Sequence:

LI 201 World Literature I & LI 202 World Literature II, or
LI 203 American Literature I & LI 204 American Literature II, or
LI 205 British Literature I & LI 206 British Literature II

Math Electives: 100-Level Mathematics or higher (not MAC)

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Program Electives:

CO 103 Intercultural Communication, CO 107 Broadcast Journalism, CO 105 Journalism I, CO 106 Global Journalism, CO 200 Principles of Persuasion, CO 201 Fundamentals of Public Relations, CO 210 Communication Internship, MK 103 Principles of Marketing, MK 213 Principles of Sales, MK 215 Principles of Advertising, PO 115 Photography I

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CO 100	Introduction to Communication	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
CO 131	Oral Communication	3
	History Sequence	3
	credits:	15
<i>First Year</i>	<i>Semester 2</i>	
CO 101	Introduction to Mass Media	3
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
	History Sequence	3
	Math Elective	3/4
	credits:	15/16
<i>Second Year</i>	<i>Semester 1</i>	
	Program Elective	3
	Program Elective	3
	Program Elective	3
	Literature Sequence	3
	Laboratory Science Sequence	4
	credits:	16
<i>Second Year</i>	<i>Semester 2</i>	
	Program Elective	3
	Program Elective	3
	Social Science Elective	3
	Literature Sequence	3
	Laboratory Science Sequence	4
	credits:	16
	Total Credits:	62/63

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

The program qualifies for MassTransfer with select public Institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer

Liberal Arts: Communication Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF HUMANITIES & SOCIAL SCIENCE

This comprehensive program enables students to pursue a career in the communications industry. Students choose 15 credits from a wide range of elective offerings across various disciplines. This certificate program will meet the needs of students who are seeking to upgrade or develop their skills.

Upon successful completion, the Certificate in Communication is awarded.

PROGRAM FOOTNOTES

Program Electives: CO 103 Intercultural Communication CO 105 Journalism I, CO 106 Global Journalism, CO 107 Broadcast Journalism, CO 200 Principles of Persuasion, CO 201 Fundamentals of Public Relations, CO 210 Communication Internship, MK 103 Principles of Marketing, MK 213 Principles of Sales, MK 215 Principles of Advertising, PO 115 Photography I

COURSE	COURSE TITLE	CREDITS
CO 100	Introduction to Communication	3
CO 101	Introduction to Mass Media	3
CO 131	Oral Communication	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	Total Credits:	24

**DIVISION OF SCIENCE, TECHNOLOGY,
ENGINEERING & MATHEMATICS**



Biotechnology

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Our Biotechnology program is internationally renowned and offers exciting, hands-on, and research-based study in this rapidly expanding scientific area. Through participation in national research collaborations, students are trained in the scientific disciplines most in demand by the biotechnology industry and government laboratories, including recombinant DNA technology, mammalian cell culture, and chromatography with special emphasis on High Performance Liquid Chromatography. Biotechnology students intern at some of the most prestigious research institutions in the world, such as Dana Farber (Boston), Boston Medical Center, The University of Edinburgh (Scotland), Moscow State University (Russia), University of the Amazon (Brazil), and the University of Quebec at Trois-Rivières (Canada).

Upon successful completion, the Associate in Science Degree in Biotechnology is awarded.

PROGRAM FOOTNOTES

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

A grade of C or higher is required for all Biotechnology (BT) courses.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

***Pre-Calculus Mathematics (MA 104) may be substituted.**

****In order to fulfill the critical thinking graduation competency, students must pass the Critical Thinking Challenge Exam or complete CT100.**

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
BI 110	Principles of Biology I	4
BT 101	Introduction to Biotechnology	3
CH 110	Principles of Chemistry I	4
EN 101	Freshman English I	3
MA 102 *	College Algebra	3
	credits:	17
<i>First Year</i>	<i>Semester 2</i>	
BI 120	Principles of Biology II	4
	or	
BI 240	Forensic Microbiology	4
BT 201	Cell Culture	3
CH 120	Principles of Chemistry II	4
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
	credits:	17
<i>First Year</i>	<i>Summer</i>	
	Social Science Elective	3
	credits:	3
<i>Second Year</i>	<i>Semester 1</i>	
BI 210	Molecular Biology	4
BT 215	Gene Expression Laboratory Course	3
CH 201	Organic Chemistry I	4
	Humanities Elective	3
	credits:	14
<i>Second Year</i>	<i>Semester 2</i>	
BI 220	Immunology	4
CH 202	Organic Chemistry II	4
CH 210	Biochemistry I	4
	Humanities Elective	3
	or	
	Social Sciences Elective	3
	credits:	15
<i>Second Year</i>	<i>Summer</i>	
BT 240	Biotechnology Internship	4
	Total Credits:	70

Biotechnology: Forensic DNA Science

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

The Associate Degree in Forensic DNA Science is the first and only undergraduate degree program in this field in the world. The training of the program is unique for several reasons. First, students are trained by participating in actual criminal and anthropological cases involving DNA evidence collection and analysis. Second, forensic training is entirely hands-on and confers on students' extensive skills in DNA analysis. Third, students learn to perform mitochondrial DNA analysis, a high-demand forensic methodology used to determine the identity of unidentified human remains. Further, students intern with the world's most renowned forensic institutions, including the FBI, Armed Forces DNA Identification Labs, and Royal Canadian Mounted Police.

Upon successful completion, the Associate in Science Degree in Biotechnology with a concentration in Forensic DNA Science is awarded.

PROGRAM FOOTNOTES

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

A grade of C or higher is required for all Biotechnology (BT) courses.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

***Pre-Calculus Mathematics (MA 104) may be substituted.**

****In order to fulfill the critical thinking graduation competency, students must pass the Critical Thinking Challenge Exam or complete CT100.**

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
BI 110	Principles of Biology I w/ Lab	4
BT 101	Introduction to Biotechnology	3
CH 110	Principles of Chemistry I w/ Lab	4
EN 101	Freshman English I	3
MA 102*	College Algebra	3
	credits:	17
<i>First Year</i>	<i>Semester 2</i>	
BI 120	Principles of Biology II w/ Lab	4
	or	
BI 240	Forensic Microbiology w/ Lab	4
BT 107	Forensic DNA Analysis I	3
CH 120	Principles of Chemistry II w/ Lab	4
CS 100	Computers and Technology	3
LA 228	Criminal Law and Procedures	3
	credits:	17
<i>First Year</i>	<i>Summer</i>	
EN 102	Freshman English II	3
	credits:	6
<i>Second Year</i>	<i>Semester 1</i>	
BI 210	Molecular Biology w/ Lab	4
BT 205	Forensic DNA Analysis II	3
CH 201	Organic Chemistry I w/ Lab	4
CJ 217	Criminal Evidence	3
	Humanities/Social Science Elective	3
	credits:	17
<i>Second Year</i>	<i>Semester 2</i>	
CH 202	Organic Chemistry II w/ Lab	4
CH 210	Biochemistry I	4
LA 241	DNA Law	3
	Humanities/Social Science Elective	3
	credits:	14
<i>Second Year</i>	<i>Summer</i>	
BT 241	Forensic Internship	4
	Total Credits:	75

Biotechnology: Marine Biotechnology

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

The goal of the Marine Biotechnology program is to train students to work as technicians in sophisticated field and laboratory marine settings where multiple molecular disciplines converge to solve complex marine problems. The emphasis of this program, however, is to provide extensive and novel research experiences, career mentoring and academic bridging networks for the individual whose career goal is to work in the marine sciences as an independent, doctoral-level investigator. Marine Biotechnology applies technology and molecular biology to marine biological systems, living organisms (e.g. algae, fish or plankton) or derivatives thereof, to make or modify products or processes for specific use such as pharmaceuticals and food. Hence, the program's training entails the integration of molecular biology and marine sciences.

Upon successful completion, the Associate in Science Degree in Biotechnology with a concentration in Marine Biotechnology is awarded.

PROGRAM FOOTNOTES:

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts,

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

A grade of C or higher is required for all Biotechnology (BT) courses.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

***Pre-Calculus Mathematics (MA 104) may be substituted.**

****In order to fulfill the critical thinking graduation competency, students must pass the Critical Thinking Challenge Exam or complete CT100.**

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
BI 110	Principles of Biology I	4
BT 101	Introduction to Biotechnology	3
CH 110	Principles of Chemistry I	4
EN 101	Freshman English I	3
MA 102*	College Algebra	3
	credits:	17
<i>First Year</i>	<i>Semester 2</i>	
BI 120	Principles of Biology II	4
BT 108	Marine Biotechnology I	3
CH 120	Principles of Chemistry II	4
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
	credits:	17
<i>First Year</i>	<i>Summer 1</i>	
	Social Science Elective	3
	credits:	3
<i>Second Year</i>	<i>Semester 1</i>	
BI 210	Molecular Biology	4
BT 206	Marine Biotechnology II	3
CH 201	Organic Chemistry I	4
	Humanities Elective	3
	credits:	14
<i>Second Year</i>	<i>Semester 2</i>	
BI 220	Immunology	4
CH 202	Organic Chemistry II	4
CH 210	Biochemistry I	4
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	15
<i>Second Year</i>	<i>Summer 2</i>	
BT 240	Biotechnology Internship	4
	Total Credits:	70

Computer Information Systems

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program is designed to prepare students for employment in the computer information industry or to transfer and pursue a baccalaureate degree in computer information or any related field.

Computer courses give the students a sound background in computer programming, data modeling and database design, computer networks, web design and development, accounting and financial skills.

Upon successful completion, the Associate in Science Degree in Computer Information Systems is awarded.

PROGRAM FOOTNOTES

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Program Electives: CS 116 Fundamentals of Cyber Security, CS 126 Digital Imaging, CS 140 Interactive Multimedia, CS 176 Web Design, CS 230 Information Systems Administration and Management, MK 214 E-Commerce, MN140 Project Management

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

The program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 110	Introduction to Computer Science	4
CS 205	Introduction to Computation	4
CT 100	Critical Thinking	3
EC 201	Principles of Macroeconomics	3
EN 101	Freshman English I	3
	credits:	17
<i>First Year</i>	<i>Semester 2</i>	
CS 120	Programming I	4
CS 160	Applications Software	4
EN 102	Freshman English II	3
MA 105	Intro to Statistics	3
	Humanities Elective	3
	credits:	17
<i>Second</i>	<i>Semester 1</i>	
AC 101	Financial Accounting I	4
CS 200	Programming II	4
CS 213	Database Management	4
CS 242	Computer Networks	4
	credits:	16
<i>Second</i>	<i>Semester 2</i>	
AC 102	Financial Accounting II	4
CS 235	Information Systems Analysis and Design	4
CS 241	Web Site Development	4
	Program Elective	3/4
	Humanities Elective or Social Science Elective	3
	credits:	18/19
	Total Credits:	68/69

Computer Science

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program enables students to practice developing larger applications and study computer architecture and operating systems. Students learn object-oriented and modular programming techniques, including the use, design, and analysis of data structures and associated algorithms. This program prepares students for transfer to a four-year institution so they may pursue a baccalaureate degree in computer science.

Upon successful completion, the Associate in Science Degree in Computer Science is awarded.

PROGRAM FOOTNOTES

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Program Electives: CS 141 Linux System Management, CS 213 Data Management Systems I, CS 241 Web Site Development, CS 242 Computer Networks

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 120	Programming I	4
CS 205	Introduction to Computation	4
EN 101	Freshman English I	3
MA 200	Calculus I	4
	credits:	15
<i>First Year</i>	<i>Semester 2</i>	
CS 200	Programming II	4
CS 214	Computer Architecture and Assembly Language	4
EN 102	Freshman English II	3
MA 201	Calculus II	4
	credits:	15
<i>First Year</i>	<i>Semester 1 or 2</i>	
CT 100	Critical Thinking	3
	Social Science Elective	3
	credits:	6
<i>Second Year</i>	<i>Semester 1</i>	
CS 208	Data Structures	4
CS 212	Systems Programming with C	4
PY 103	Engineering Physics I	4
	Humanities Elective	3
	credits:	15
<i>Second Year</i>	<i>Semester 2</i>	
CS 225	Software Design	3
MA 210	Introduction to Linear Algebra	4
PY 104	Engineering Physics II	4
	Program Elective	3/4
	credits:	15
<i>Second Year</i>	<i>Semester 1 or 2</i>	
	Humanities Elective	3
	or	
	Social Science Elective	3
	Total Credits:	68/69

Cyber Security

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

The Cyber Security Associate in Science degree provides courses and content that are aligned with two major sources of proven requirements for cybersecurity education in 2-year colleges: NICE Framework from National Institute of Standards and Technology (NIST) and Knowledge Unit required for National Centers of Academic Excellence (CAE) in Information Assurance/Cyber Defense (IA/CD) designation, a program jointly sponsored by the National Security Agency (NSA) and the Department of Homeland Security (DHS).

The goal of this program is to offer a balanced and comprehensive security program that could lead to the CAE-2Y designation for MassBay.

The objective of this program is to provide students with such knowledge, skills, and abilities that are expected from a student who has earned an associate degree in cybersecurity from a CAE-2Y designated program. Students completing this program will be able to successfully pass a number of CompTIA and Cisco's certifications.

Career Outlook:

This degree program prepares students with appropriate security knowledge to enable their employment as a network and security technician and/or specialist. Students completing this certificate are trained with the latest technology and learning environment acquiring knowledge in networking and security that will help them secure a position in security field that offers great job opportunities.

Upon successful completion, the Associate in Science Degree in Cyber Security is awarded.

PROGRAM FOOTNOTES

Program Electives: CS 113 Fundamentals of Information Technology (IT), CS 212 Systems Programming with C, CS213 Database Management, CS214 Computer Architecture and Assembly Language, CS246 Web Server administration

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CT 100	Critical Thinking	3
CS 110	Introduction to Computer Science	4
EN 101	Freshman English I	3
CS 118	Scripting	3
MA 105	Introduction to Statistics	3
	or	
MA 106	Quantitative Reasoning	3
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
CS 180	Intro to Operating Systems	3
CS 116	Fundamentals of Cyber Security	3
EN 102	Freshman English II	3
CS 242	Computer Networks	4
	Humanities/Social Science Elective	3
	credits:	16
<i>Second Year</i>	<i>Semester 1</i>	
CS 141	Linux System Management	3
	Humanities/Social Science Elective	3
CS 243	Computer Networks II	4
	Program Elective	3/4
CS 117	Cyber Ethics	3
	credits:	16/17
<i>Second Year</i>	<i>Semester 2</i>	
CS 247	Perimeter Defense	3
CS248	Securing Access	3
	Humanities/Social Science Elective	3
	Program Elective	3/4
CS 281	Capstone Experience	3
	credits:	15/16
	Total Credits:	63/65

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and the Media (LA 200), Law and Society (LA 230), Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

Electrical & Computer Engineering

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This comprehensive program provides students an overview of the electrical and computer engineering field. Students explore such areas as computer hardware, digital electronics, computer science, and engineering.

Upon successful completion, the Associate in Science Degree in Electrical and Computer Engineering is awarded.

PROGRAM FOOTNOTES

Computer Science Electives: CS 120 Programming I, CS 212 Systems Programming with "C," CS 116 Fundamentals of Cyber Security

Humanities Electives: Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CH 110	Principles of Chemistry I w/ Lab	4
CS 110	Introduction to Computer Science	4
CT 100	Critical Thinking	3
EE 120	Digital Electronics	4
EN 101	Freshman English I	3
MA 200	Calculus I	4
	credits:	22
<i>First Year</i>	<i>Semester 2</i>	
CH 120	Principles of Chemistry II w/ Lab	4
EE 125	Digital Computer Systems	4
EN 102	Freshman English II	3
MA 201	Calculus II	4
	Computer Science Elective	4
	credits:	19
<i>Second Year</i>	<i>Semester 1</i>	
EE 110	Circuit Analysis I	4
EE 150	Microprocessors	4
MA 202	Calculus III	4
PY 103	Engineering Physics I w/ Lab	4
	Humanities Elective	3
	Social Science Elective	3
	credits:	22
<i>Second Year</i>	<i>Semester 2</i>	
EE 115	Circuit Analysis II	4
EE 231	Hardware Organization and Design	4
MA 211	Differential Equations	4
PY 104	Engineering Physics II w/ Lab	4
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	19
	Total Credits:	82

Electronics Technology

Associate in Science



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program offers students the foundation they will need to enter the exciting field of electronics technology. Students gain expertise in electronics, electrical and electronics design (CAD), computer science, digital electronics, digital computer systems, printed circuit design, and semiconductor devices. With a strong commitment to hands-on training, the program prepares students for entry-level positions in the high-tech industry.

Upon successful completion, the Associate in Science Degree in Electronics Technology is awarded.

PROGRAM FOOTNOTES

Computer Science Electives: CS 120 Programming I, CS 212 Systems Programming with "C", CS 116 Fundamentals of Cyber Security

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 110	Introduction to Computer Science	4
CT 100	Critical Thinking	3
EE 120	Digital Electronics	4
EL 101	Fundamentals of Electronics	4
EN 101	Freshman English I	3
	credits:	18
<i>First Year</i>	<i>Semester 2</i>	
EE 125	Digital Computer Systems	4
EL 102	Fundamentals of Electronics II	4
MN 101	Introduction to Computer Aided Design and Drafting	4
EN 102	Freshman English II	3
MA 104	Pre-Calculus Mathematics	4
	credits:	19
<i>First Year</i>	<i>Summer</i>	
EL 125	Internship	4
	credits:	4
<i>Second Year</i>	<i>Semester 1</i>	
EL 151	Electronics I	4
CO 131	Oral Communication	3
	Math/Science Elective	3/4
	Social Science Elective	3
	credits:	13/14
<i>Second Year</i>	<i>Semester 2</i>	
EL 220	Semiconductor Devices	4
EL 152	Electronics II	4
	Computer Science Elective	3/4
	Math/Science Elective	3/4
	Social Science Elective	3
	credits:	17/19
	Total Credits:	71/74

Engineering

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program is designed to enhance students' interest in the math and science fields by pursuing a career in engineering. The program's core curriculum emphasizes mathematics, physics, and chemistry -- the foundation for all engineering projects. The core curriculum is complemented with courses in engineering design, engineering mechanics, and engineering physics.

Upon successful completion, the Associate in Science Degree in Engineering is awarded.

CAREER PATHWAY

Students are advised to select career pathway electives after careful consideration of their career choices in their second year. Some electives may or may not transfer to an engineering program at some four-year institutions

PROGRAM FOOTNOTE

Career Pathway Electives:

MN 118 Ethics for Engineers and Technologists

EC 201 Principles of Macroeconomics (fall),

EC 202 Principles of Microeconomics (spring)

(recommended for transferring to UMass Lowell),

BI 110 Principles of Biology I (fall) (recommended for transfer to Northeastern University Mechanical Engineering program)

Career Pathway Electives:

CS 120 Programming I (fall), CS 200 Programming II (spring), or Computer Science (CS) courses higher than CS 110 (for transfer to UMass Lowell for Electrical Engineering/Computer Science double major program)

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

Students are advised to check transfer requirements at four year institutions. Some Institutions require 2 (two) Chemistry Courses for specific engineering programs. CH 110 and CH 120 sequence is recommended in such cases.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
PY 103	Engineering Physics I w/ Lab	4
EN 101	Freshman English I	3
MA 200	Calculus I	4
MN 130	Engineering Design with CAD I	4
	credits:	15
<i>First Year</i>	<i>Semester 2</i>	
PY 104	Engineering Physics II w/ Lab	4
MN 125	Engineering Computation with Application Software	4
EN 102	Freshman English II	3
MA 201	Calculus II	4
CT 100	Critical Thinking	3
	credits:	18
<i>Second Year</i>	<i>Semester 1</i>	
CH 110	Principles of Chemistry I w/ Lab	4
	or	
CH 140	Chemistry for Engineers w/ Lab	4
CS 110	Introduction to Computer Science	4
MA 202	Calculus III	4
MN 203	Engineering Mechanics: Statics	3
	Social Science Elective	3
	credits:	18
<i>Second Year</i>	<i>Semester 2</i>	
MA 211	Differential Equations	4
MN 204	Engineering Mechanics: Dynamics	3
MN 210	Strength of Materials I	4
	or	
	Career Pathway Elective	3/4
	Humanities Elective	3
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	16/17
	Total Credits:	67/68

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Engineering Design

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Designers translate the ideas, sketches, and specifications of engineers into workable plans and models. Students develop skills and techniques by using the most modern equipment and software, such as AutoCAD®, AutoDesk Revit®, PTC Creo®, SolidWorks®, and MS Project®. Instruction is given in mechanical, electrical, electro-mechanical, architectural, and multimedia design. Students will use the acquired computer and manual drafting skills from various courses to complete projects in the areas of their interest. Graduates may seek positions as detailers/designers/schedulers.

Upon successful completion, the Associate in Science Degree in Engineering Design is awarded.

PROGRAM FOOTNOTES

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, LA 200 Media and the Law, LA230 Law and Society, Psychology, Sociology

Program Electives: IN 102 Architectural Drawing for Interior Design, MN 241 Architectural Design, MN 251 Electro-Mechanical Design, MN 271 Project Design, MN 272 Designing Plastic Parts, and/or courses in Biology, Computer Science, (except CS 100), Chemistry, Electronics, Engineering, Environmental Science, Mathematics, Mechanical Engineering, Physics

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
EN 101	Freshman English I	3
MN 101	Introduction to Computer Aided Design and Drafting	4
MN 130	Engineering Design with CAD I	4
MA 104	Pre-Calculus Mathematics	4
	credits:	15
<i>First Year</i>	<i>Semester 2</i>	
CS 110	Introduction to Computer Science	4
CT 100	Critical Thinking	3
EN 102	Freshman English II	3
MN 135	Engineering Design with CAD II	4
MN 141	Architecture & Civil CAD Applications	4
	credits:	18
<i>Second Year</i>	<i>Semester 1</i>	
MN 121	Mechanical Detailing	4
	Humanities Elective	3
	Program Elective	4
	Social Science Elective	3
	credits:	14
<i>Second Year</i>	<i>Semester 2</i>	
MN 261	Animation Materials 3D Molding	4
MN 140	Project Management	4
	Program Elective	3/4
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	14/15
	Total Credits:	61/62

Environmental Sciences & Safety

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program focuses on environmental science issues such as air and water testing and analysis, industrial waste treatment, municipal wastewater treatment, and environmental law. In obtaining an understanding of the complex interrelationships that exist at the earth's surface, students learn how to interpret environmental stresses, such as ground and surface water contamination, pesticide, degradation, and solid waste disposal. Students also learn how to apply this knowledge to occupational safety and protection.

Upon successful completion, the Associate in Science Degree in Environmental Sciences & Safety is awarded.

PROGRAM FOOTNOTES

Humanities Electives: Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math Electives: 100-Level Mathematics or Higher (not MAC)

Social Science Electives: Anthropology, Economics, Geography, Government, History, LA 200 Law and the Media, Law and Society (LA 230), Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

The program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
BI 110	Principles of Biology I w/ Lab	4
CH 110	Principles of Chemistry I w/ Lab	4
EN 101	Freshman English I	3
EV 110	Principles of Environmental Sciences & Safety	4
	Math Elective	3/4
	credits:	18/19
<i>First Year</i>	<i>Semester 2</i>	
BI 120	Principles of Biology II w/ Lab	4
CH 120	Principles of Chemistry II w/ Lab	4
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
EV 201	Environmental Health & Safety	4
	credits:	18
<i>Second Year</i>	<i>Semester 1</i>	
CT 100	Critical Thinking	3
EV 210	Environmental Microbiology	4
EV 220	Environmental Organization Issues & Analysis	3
	Humanities Elective	3
	Social Science Elective	3
	credits:	16
<i>Second Year</i>	<i>Semester 2</i>	
EV 240	Environmental Toxicology	4
EV 242	Environmental Sciences Directed Research Study	4
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	11
	Total Credits:	63/64

General Studies

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program offers students the opportunity to explore a variety of interests and choices while completing a broad background of study through our core science and advanced technology competencies.

Upon successful completion, the Associate in Science Degree in General Studies is awarded.

PROGRAM FOOTNOTES

Laboratory Science Sequence:

BI 101 General Biology I & BI 102 General Biology II, or BI 110 Principles of Biology I & BI 120 Principles of Biology II, or BI 215 Anatomy and Physiology I & BI 217 Anatomy and Physiology II, or CH 101 College Chemistry I & CH 102 College Chemistry II, or CH 110 Principles of Chemistry I & CH 120 Principles of Chemistry II, or, EV 103 Environmental Studies I & EV 104 Environmental Studies II, or, PY 101 College Physics I & PY 102 College Physics II, or PY 103 Engineering Physics I & PY 104 Engineering Physics II, or SC 102 Integrated Science I & SC 103 Integrated Science II

Math Sequence: MA 200 Calculus I & Math 201 Calculus II

Humanities Electives: Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math/Science Electives: Astronomy, Biology, Chemistry, Contemporary Nutrition (NS 101) Environmental Science, Integrated Science, 100-Level Mathematics or higher (not MAC), Meteorology, Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and the Media (LA 200), Law and Society (LA 230), Psychology, Sociology

Program Electives: Any college-level courses offered at the College.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of a 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies for MassTransfer with select public institutions in Massachusetts. Student should use course equivalencies for program electives. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
PS 150	Career/Life Planning	3
	Laboratory Science Sequence	4
	or	
	Math Sequence	4
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
EN 102	Freshman English II	3
	Humanities Elective	3
	Laboratory Science Sequence	4
	or	
	Math Sequence	4
	Program Elective	3
	Program Elective	3
	Program Elective	3
	credits:	19
<i>Second Year</i>	<i>Semester 1</i>	
	Math/Science Elective	3/4
	Social Science Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	credits:	15/16
<i>Second Year</i>	<i>Semester 2</i>	
	Humanities Elective	3
	Social Science Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	credits:	15
	Total Credits:	65/66

General Studies: Mathematics

Associate in Arts

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program offers students a solid foundation in mathematics, while providing the opportunity to explore a variety of interests and choices from all divisions, including economics, science, nutrition and liberal arts. Students complete a course in career/life planning to help them assess their options and develop a degree plan to meet their individual needs.

Upon successful completion, the Associate in Arts Degree in General Studies with a concentration in Mathematics is awarded.

PROGRAM FOOTNOTES

History Sequence:

HS 101 Western Civilization I & HS 102 Western Civilization II, or HS 103 World Civilization I & HS 104 World Civilization II, or HS 105 United States History to 1877 & HS 106 United States History Since 1877

Laboratory Science Sequence:

BI 101 General Biology I & BI 102 General Biology II, or BI 110 Principles of Biology I & BI 120 Principles of Biology II, or BI 215 Anatomy and Physiology I & BI 217 Anatomy and Physiology II, or CH 101 College Chemistry I & CH 102 College Chemistry II, or CH 110 Principles of Chemistry I & CH 120 Principles of Chemistry II, or EV 103 Environmental Studies I & EV 104 Environmental Studies II, or PY 101 College Physics I & PY 102 College Physics II, or PY 103 Engineering Physics I & PY 104 Engineering Physics II, or SC 102 Integrated Science I & SC 103 Integrated Science II

Literature Sequence:

LI 201 World Literature I & LI 202 World Literature II
LI 203 American Literature I & LI 204 American Literature II, or
LI 205 British Literature I & LI 206 British Literature II, or

Humanities Electives: Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and the Media (LA 200), Law and Society (LA 230), Psychology, Sociology

Program Elective: Any college-level courses offered at the College.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
MA 104	Pre-Calculus Mathematics	4
	History Sequence	3
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
PS 150	Career/Life Planning	3
EN 102	Freshman English II	3
MA 105	Intro to Statistics	3
MA 200	Calculus I	4
	History Sequence	3
	credits:	16
<i>Second Year</i>	<i>Semester 1</i>	
MA 201	Calculus II	4
	Laboratory Science Sequence	4
	Literature Sequence	3
	Program Elective	3
	Program Elective	3
	credits:	17
<i>Second Year</i>	<i>Semester 2</i>	
MA 202	Calculus III	4
	Laboratory Science Sequence	4
	Literature Sequence	3
	Humanities Elective	3
	Social Science Elective	3
	credits:	17
	Total Credits:	66

This program qualifies for MassTransfer with select public institutions in Massachusetts. Student should use course equivalencies for program electives. For more information, visit www.mass.edu/masstransfer.

Information Systems Technology & Management: Management Concentration

Associate in Science



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

In the Information Systems Technology and Management program, students acquire the skills to solve information and management problems using computer hardware and software. Computer courses give students a solid background in Windows, database design, computer networks, web page design, and various software applications. Second year courses provide a strong emphasis on business and management related applications.

Upon successful completion, the Associate in Science Degree in Information Systems Technology & Management is awarded.

PROGRAM FOOTNOTES

Humanities Electives: Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and the Media (LA 200), Law and Society (LA 230), Psychology, Sociology

Program Electives: CS 176 Web Design, CS 140 Interactive Multimedia, CS 241 Web Site Development, CS 126 Digital Imaging, CS 141 Linux Management, MG 101 Principles of Management, MN 140 Project Management

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 104	Microcomputer Applications/ Business	3
CS 110	Introduction to Computer Science	4
CS 118	Scripting	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
	credits:	16
<i>First Year</i>	<i>Semester 2</i>	
CS 116	Fundamentals of Cyber Security	3
CS 160	Application Software Strategies	4
EN 102	Freshman English II	3
MA 105	Intro to Statistics	3
	credits:	13
<i>Second Year</i>	<i>Semester 1</i>	
AC 101	Financial Accounting I	4
CS 213	Database Management Systems	4
CS 230	Information Systems Administration and Management	4
CS 242	Computer Networks	4
CS 280	Computer Science Internship	1
	credits:	17
<i>Second Year</i>	<i>Semester 2</i>	
CS 235	Information Systems Analysis and Design	4
EC 201	Principles of Macroeconomics	3
	Humanities Elective	3
	Humanities Elective	3
	or	
	Social Science Elective	3
	Program Elective	3/4
	credits:	16/17
	Total Credits:	62/63

Information Systems Technology & Management: Technology Concentration

Associate in Science



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Students completing Information Systems Technology & Management: Technology will be knowledgeable and experienced in systems and technologies. Students will be able to: support various types of technologies related to operating systems, have experience working with various web technologies related to design, understand fundamental cyber security issues, know how to support and build Computer Networks in Windows and Linux, design, create and use databases, write scripts to perform administrative operations related to computer systems.

The current job market requires that students have a broader background that includes exposure to the latest technologies related to web technologies as well as cyber security and exposure to administrative tasks in the Windows and Linux systems. This degree will prepare students for careers in fields related to helpdesk, technology, networks, and web support.

Upon successful completion, the Associate in Science Degree in Information Systems Technology & Management: Technology is awarded.

PROGRAM FOOTNOTES

Humanities Electives:

Art, Communication, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and the Media (LA 200), Law and Society (LA 230), Psychology, Sociology

Program Electives: CS 120 Programming I, CS 126 Digital Imaging, CS 140 Interactive Multimedia, CS 141 Linux Management, CS 176 Web Design, CS 200 Programming II, CS 235 Systems Analysis and Design, CS 241 Web Site Development, CS 246 Web Server Administration, MN 141 Project Management

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 107	Intro to the Internet	1
CS 108	Web Site Development I	1
CS 109	Website Development II	1
CS 110	Introduction to Computer Science	4
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
	credits:	13
<i>First Year</i>	<i>Semester 2</i>	
CS 118	Scripting	3
CS 160	Application Software Strategies	4
CS 116	Fundamentals of Cyber Security	3
EN 102	Freshman English II	3
	Program Elective	3/4
	credits:	16/17
<i>Second Year</i>	<i>Semester 1</i>	
CS 213	Database Management Systems	4
CS 242	Computer Networks	4
MA 105	Introduction to Statistics	3
	Program Elective	3/4
	credits:	14/15
<i>Second Year</i>	<i>Semester 2</i>	
	Social Science Elective	3
	Humanities Elective	3
	Humanities Elective	3
	OR	
	Social Science Elective	3
	Program Elective	3
	Program Elective	4
	credits:	16
<i>Summer</i>		
CS 280	Computer Science Internship	1
	Total Credits:	60/62

Life Sciences

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program provides a solid foundation in biological sciences and liberal arts, which can translate into a number of exciting career opportunities. The program is designed to prepare students for transfer to a four-year bachelor's degree program in biology or pre-med.

Upon successful completion, the Associate in Science Degree in Life Sciences is awarded.

PROGRAM FOOTNOTES

Mathematics Requirement:

MA 104 Pre-Calculus is the minimum standard for meeting the math requirement of the program. Students considering a career in medical sciences should take MA 200 Calculus I and MA 201 Calculus II.

Computer Science Requirement:

CS 100 Computers and Technology or CS 110 Introduction to Computer Science

Physics Sequence Requirement:

PY 101 College Physics I and PY 102 College Physics II or PY 103 Engineering Physics I and PY 104 Engineering Physics II

Program Electives:

MA 105 Statistics, MA 200 Calculus I, MA 201 Calculus II, BI 215 Human Anatomy and Physiology I, EV 110 Principles of Environmental Science & Safety, EV 120 Astronomy, EV 130 Meteorology

Advanced Lab Science Electives:

BI 215 Human Anatomy and Physiology I, BI 217 Human Anatomy and Physiology II, BI 223 Fundamentals of Microbiology, BI 210 Molecular Biology, BI 220 Immunology, BI 240 Forensic Microbiology, CH 210 Biochemistry, PY 103 Engineering Physics I, PY 104 Engineering Physics II

Humanities Electives:

Art, Communication, Critical Thinking, English (EN 103 or higher), Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, Law and the Media (LA 200), Law and Society (LA 230), Psychology, Sociology

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
BI 110	Principles of Biology I w/ Lab	4
CH 110	Principles of Chemistry I w/ Lab	4
EN 101	Freshman English I	3
	Math Requirement	4
	credits:	15
<i>First Year</i>	<i>Semester 2</i>	
BI 120	Principles of Biology II w/ Lab	4
CH 120	Principles of Chemistry II w/ Lab	4
	Computer Requirement	3/4
EN 102	Freshman English II	3
	Social Science Elective	3
	credits:	17/18
<i>Second Year</i>	<i>Semester 1</i>	
CH 201	Organic Chemistry I w/ Lab	4
	Physics Sequence Requirement	4
	Program Elective	3/4
	Advanced Laboratory Science Elective	4
	Humanities Elective	3
	credits:	18/19
<i>Second Year</i>	<i>Semester 2</i>	
CH 202	Organic Chemistry II w/ Lab	4
	Physics Sequence Requirement	4
	Humanities Elective	3
	or	
	Social Science Elective	3
	Advanced Laboratory Science Elective	4
	credits:	15
	Total Credits:	65/67

*In order to fulfill the Critical Thinking graduation competency, students must pass the Critical Thinking Challenge Exam or complete CT 100 Critical Thinking.

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Mechanical Engineering

Associate in Science

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Mechanical engineers are active in all engineering functions of a product including creative design, research and development, production and management. Energy, airplanes, automobiles, space vehicles, machinery, earth-moving equipment and medical hardware are but a few examples of the infinite number of products that mechanical engineers have produced through their use of the basic laws of physical sciences.

Upon successful completion, the Associate in Science Degree in Mechanical Engineering is awarded.

CAREER PATHWAY

Students are advised to select career pathway electives after careful consideration of their career choices in their second year. Some electives may not transfer to engineering programs at some four-year institutions.

Career Pathway Electives:

MN 118 Ethics for Engineers and Technologists
EC 201 Principles of Macroeconomics (fall),
EC 202 Principles of Microeconomics (spring:
recommended for transferring to UMass Lowell),
BI 110 Principles of Biology I (fall)
(recommended for transfer to Northeastern University
Mechanical Engineering program)

Career Pathway Electives:

CS 120 Programming I (fall), CS 200 Programming II (spring), or
Computer Science (CS) courses higher than CS 110
(for transfer to UMass Lowell for Electrical Engineering/Computer
Science double major program)

Humanities Electives:

Art, Communication, Critical Thinking, English (EN 103 or higher), Film,
Foreign Language, Humanities, Literature, Music, Oral Communication.
Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives:

Anthropology, Economics, Geography, Government, History, Law and the
Media (LA 200), Law and Society (LA 230), Psychology, Sociology

PROGRAM FOOTNOTES

Students are advised to check transfer requirements at four year institutions. Some institutions require 2 (two) Chemistry courses for specific engineering programs. CH 110 and CH 120 sequence is recommended in such cases.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CT 100	Critical Thinking	3
PY 103	Engineering Physics I w/ Lab	4
EN 101	Freshman English I	3
MA 200	Calculus I	4
MN 130	Engineering Design with CAD I	4
	credits:	18
<i>First Year</i>	<i>Semester 2</i>	
MN 125	Engineering Computation with Application Software	4
PY 104	Engineering Physics II w/ Lab	4
EN 102	Freshman English II	3
	Humanities Elective	3
MA 201	Calculus II	4
	credits:	18
<i>Second Year</i>	<i>Semester 1</i>	
CH 110	Principles of Chemistry w/ Lab	4
	or	
CH 140	Chemistry for Engineers w/ Lab	4
MA 202	Calculus III	4
CS 110	Introduction to Computer Science	4
MN 203	Engineering Mechanics: Statics	3
	Social Science Elective	3
	credits:	18
<i>Second Year</i>	<i>Semester 2</i>	
MN 204	Engineering Mechanics: Dynamics	3
MA 211	Differential Equations	4
MN 210	Strength of Materials I	4
	Career Pathway Elective	3/4
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	17/18
	Total Credits:	71/72

This program qualifies as an Alternative Transfer Agreement (MassTransfer) with select public institutions in Massachusetts. For more information, visit www.mass.edu/masstransfer.

Competency in mathematics is a MassBay graduation requirement. Prior to graduation, students must demonstrate competency at 100-level math. This may be accomplished by an appropriate placement test score or completion of any 100-level mathematics course or higher, except mathematics courses with a MAC prefix.

Advanced Cyber Security

Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This certificate, the second-level in a stackable certificate model, offers non-traditional, under-represented, career-changer, and veteran students in addition to traditional students, skills in a field with great job opportunities. The security field used to require a higher level of education; however, this requirement has changed recently and the demand for hiring those with cyber security knowledge is growing fast.

The stackable nature of these certificates allows students to earn multiple certificates while pursuing their Associate Degree. In addition, the certificates allow students to not only earn an academic credential but also the opportunity to earn industry credentials by successfully passing industry standard certification exams.

Students completing this certificate will be prepared and are encouraged to gain industry credentials by taking CompTIA's Network+ and Security+ certificate exams; as well as CISCO's CCNA and CCNA-Security.

Career outlook:

This certificate prepares students with advanced security knowledge to enable their employment as a network and security technician and/or specialist. The courses in this certificate are aligned with NICE framework as well as Cisco Academy certification criteria. Students completing this certificate will be trained with up-to-date technology and a knowledge-base in security that will help them secure a position in security field.

Upon successful completion, the Certificate in Advanced Cyber Security is awarded.

COURSE	COURSE TITLE	CREDITS
CS 118	Scripting	3
CS 242	Computer Networks	4
CS 180	Introduction to Operating Systems	3
CS 116	Fundamentals of Cyber Security	3
CS 243	Computer Networks II	4
CS 248	Securing Access	3
CS 247	Perimeter Defense	3
Total Credits:		23

Computer-Aided Design (CAD) Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Students develop CAD skills and techniques by using the most modern equipment and software such as AutoCAD®, Pro/ENGINEER®, SolidWorks®, and MS Project®. Instruction is given in mechanical, electrical, and architectural design. Students will use the acquired computer skills from various courses to complete projects in the areas of their interest. Graduates may seek positions as detailers/drafters/CAD operators.

Upon successful completion, the Certificate in Computer-Aided Design is awarded.

PROGRAM FOOTNOTES

Program Electives: MN 121 Mechanical Detailing, MN 140 Project Management, MN 141 Architecture & Civil CAD Applications, MN 241 Architectural Design, MN 251 Electro-Mechanical Design, MN 261 Animation Materials 3D Molding, MN 271 Project Design, MN 272 Designing Plastic Parts

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>

COURSE	COURSE TITLE	CREDITS
MN 101	Introduction to Computer Aided Design and Drafting	4
MN 130	Engineering Design with CAD I	4
MN 135	Engineering Design with CAD II	4
	Program Elective	4
	Program Elective	4
	credits:	20
	Total Credits:	20

Cyber Security

Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This certificate is designed to prepare students with the knowledge and skills that will enable them to perform network and security technician jobs. Students will be able to administer and configure networks while applying cyber security best practices.

Students completing this certificate are encouraged to gain industry credentials by taking CompTIA's Network+ and Security+ exams, as well as CISCO's ICND1.

Career outlook

This certificate prepares students with necessary knowledge and skills for the cyber security field. The courses in this certificate are aligned with NIST's NICE Framework; hence, students are trained with consistent and current technology and concepts to help them secure a position as an entry-level network and/or security specialist.

Upon successful completion, the Certificate in Cyber Security is awarded.

COURSE	COURSE TITLE	CREDITS
CS106	Security Awareness	2
CS 118	Scripting	3
CS 242	Computer Networks	4
CS 116	Fundamentals of Cyber Security	3
CS 243	Computer Networks II	4
	credits:	16
	Total Credits:	16

Information Technology

Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

The world of Information Technology continues to grow and evolve, offering long-term job security. For students who are interested in entering this field, but have little or no computer-related experience, this program offers a wide-ranging introduction. The curriculum focuses on business related applications to provide students with the computer skills needed for a successful entry-level position in the Information Technology field.

Upon successful completion, the Certificate in Information Technology is awarded.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>.

COURSE	COURSE TITLE	CREDITS
CS 104	Microcomputer Applications/ Business	3
CS 110	Introduction to Computer Science	4
CS 118	Scripting	3
CS 160	Application Software Strategies	4
CS 213	Database Management Systems	4
CS 230	Information Systems Administration and Management	4
	or	
CS 235	Information Systems Analysis and Design	4
CS 242	Computer Networks	4
	credits:	26
	Total Credits:	26

Manufacturing Innovation

Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This is a 12-month, three semester long fast track program that offers a stackable certificate in Advanced Manufacturing. The certificate program is designed to provide students with other pathways in the future, such as a relevant associate degree at a community college or for any student already holding a Bachelor degree, a relevant graduate degree.

Through the program, students develop skills necessary in today's advanced manufacturing industry through completing relevant hands-on course work, projects, and Internship /CO-OP.

Graduates may select to open their own small manufacturing business or seek operational positions in a manufacturing company.

Upon successful completion, a Certificate in Manufacturing Innovation is awarded.

PROGRAM FOOTNOTES

Program Electives:

Business: AC 101 Financial Accounting I, AC 102 Financial Accounting II, AC 120 Accounting Using Peachtree, AC 210 Accounting Essentials with QuickBooks, MG 101 Principles of Management, MG 102 Small Business Management, MK 103 Principles of Marketing, MK 213 Principles of Sales, MK 214 E-Commerce, MG 210 Entrepreneurship, OA 210 Business Communications

Computer Science: CS 101 A Making it Happen with Code, CS 101 B Making it Happen with Artifacts, CS 101 C Making it Happen with Robots, CS 101 D Making it Happen with Data, CS 108 Web Page Development I, CS 109 Web Page Development II, CS 126 Digital Imaging, CS 140 Introduction to Multimedia, CS 176 Web Design, ET 111 iCREAT

Manufacturing:

MN 133 B Lean Six Sigma Fundamental, MN 140 Project Management

Biology:

BI 101 General Biology I with Lab

COURSE	COURSE TITLE	CREDITS
<i>Semester 1</i>		
MN 130	Engineering Design with CAD I	4
MN 131 A	Manufacturing Technology Fundamentals	1
MN 131 B	Geometric Dimensioning and Tolerancing	1
MN 131 C	Statistical Process Control and Quality Assurance	1
MN 100	Career Readiness and e-Portfolio	1
BU 100	Introduction to Business	3
	Program Elective	1
credits:		12
<i>Semester 2</i>		
MG 210	Entrepreneurship	3
MN 133 A	New Product Development	2
	Program Electives	7
MN 201	CO-OP Dialogue (Optional)*	1
credits:		12/13
Total Credits:		24/25

Manufacturing Technology

Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This is a 12-month, three semester long fast track program that offers a stackable certificate in Advanced Manufacturing. The certificate program is designed to provide students with other pathways in the future, namely an associate degree at a community college or for any student already holding a Bachelor degree, a graduate degree at a university in advanced manufacturing.

Through the program, students develop skills necessary in today's advanced manufacturing industry through completing relevant course WORK, projects and participating in an Internship.

Graduates may seek positions as detailers, drafters, CAD operators and CNC programmers, and QA/QC Technicians.

Upon successful completion, the Certificate in Manufacturing Technology is awarded.

PROGRAM FOOTNOTES

We recommend 10-hours of OSHA training. Students should select program electives based on manufacturing industry concentration that is of interest to them.

*Students are encouraged to seek and participate in relevant internships and are responsible for finding internship and CO-OP opportunities. Students participating in internships and CO-OP will need to register for MN 201.

Coding Electives:

CS 101 A Making it Happen with Code
CS 101 B Making it Happen with Artifacts
CS 101 C Making it Happen with Robots
CS 101 D Making it Happen with Data
ET 111 iCREAT
MN 125 Engineering Computation with Application Software

Program Electives:

Engineering Design:

EL101 Fundamentals of Electronics, MN 121 Mechanical Detailing, MN 135 Engineering Design with CADD II, MN 140 Project Management, MN 251 Electro-Mechanical Design, MN 261 Animation Materials 3D Modeling, MN 271 Project Design, MN 272 Designing Plastic Parts

Computer Science:

CS 108 Web Page Development I, CS 109 Web Page Development II
CS 126 Digital Imaging, CS 140 Introduction to Multimedia
CS 176 Web Design

COURSE	COURSE TITLE	CREDITS
	<i>Semester 1</i>	
MN 130	Engineering Design with CAD I	4
MN 131 A	Manufacturing Technology Fundamentals	1
MN 131 B	Geometric Dimensioning and Tolerancing	1
MN 131 C	Statistical Process Control and Quality Assurance	1
MN 100	Career Readiness and e-Portfolio	1
	Coding Elective(s)	4
	credits:	12
	<i>Semester 2</i>	
MN 205	Supply Chain Management	4
MN 132 A	Reverse Engineering, 3D Scanning and 3D Printing	1
MN 132 B	Numerical Control Machining	2
MN 132 C	Sustainability and Lifecycle Management	1
MN 201	CO-OP Dialogue (Optional)*	1
	Program Elective(s)	4
	credits:	12/13
	Total Credits:	24/25

Business:

BU 100 Introduction to Business, AC 101 Financial Accounting
MG 101 Principles of Management, MK 103 Principles of Marketing
MK 213 Principles of Sales, MG 210 Entrepreneurship
OA 210 Business Communications

Manufacturing:

MN 133 A New Product Development, MN 133 B Lean Six Sigma Fundamentals

Biology:

BI 101 General Biology I w/ Lab

Technology Support Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

There is an increased need for technology support specialists that are knowledgeable in systems (Linux and Windows) and web technologies. The purpose of this certificate is to expose students (re-entering or new to the Information Technology field) to a series of technologies and skills that as a whole will provide a strong foundation to work as a support technician or helpdesk support in the technology field. The certificate will require students to complete a summer internship to provide students with the experience needed for a first job. Some of the courses in this certificate will provide students with pathways to industry certifications that are widely used as standards in the IT industry.

PROGRAM FOOTNOTES

Program Electives: CS 213 Database Management Systems, CS 246 Web Server Administration, MN 140 Project Management.

Students are encouraged to get MOS certified before graduating from the program.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 107	Introduction to the Internet	1
CS 108	Web Page Development I	1
CS 109	Web Page Development II	1
CS 110	Introduction to Computer Science	4
CS 141	Linux System Management	3
CS 118	Scripting	3
	credits:	13
<i>First Year</i>	<i>Semester 2</i>	
CS 116	Fundamentals of Cyber Security	3
CS 242	Computer Networks	4
	Program Elective	3/4
CS 280	Computer Science	1
	credits:	11/12
	Total Credits:	24/25

Web Designer Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This certificate introduces students to client-side web technologies. The emphasis of this certificate is on content presentation. Students learn to design and develop websites using professional authoring and scripting tools.

Students completing the Web Designer Certificate will be proficient in the visual arts and creating the images and designs that capture and keep visitors' interest. They will know how to present aesthetically enticing designs that meet the requirements and preferences of their audience.

Upon successful completion, the Certificate in Web Design is awarded.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 107	Fundamentals of the Internet	1
CS 108	Fundamentals of Web Design	1
CS 109	Web and Social Media	1
CS 110	Introduction to Computer Science	4
CS 118	Scripting	3
CS 126	Digital Imaging	3
	credits:	13
<i>First Year</i>	<i>Semester 2</i>	
CS 140	Interactive Multimedia	3
CS 176	Web Design	4
CS 242	Computer Networks	4
	credits:	11
	Total Credits:	24

Web Developer Certificate

 MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This certificate introduces students to client- and server-side web technologies. The program provides students with the basic skills in client- and server-side scripting to build dynamic data-driven web applications. Students learn to design and develop database-driven websites. Students completing a Web Developer Certificate are proficient at creating website structure and interactivity. They know how to use database tools and custom applications to prepare the site for dynamic presentation of content to visitors.

Upon successful completion, the Certificate in Web Developer is awarded.

PROGRAM FOOTNOTES

Program Electives:

CS 116 Fundamentals of Cyber Security, CS 126 Digital Imaging, CS 140 Interactive Multimedia, CS 141 Linux Management.

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 118	Scripting	3
CS 176	Web Design	4
MN 140	Project Management	4
	credits:	11
<i>First Year</i>	<i>Semester 2</i>	
CS 213	Database Management Systems	4
CS 241	Website Development	4
CS 242	Computer Networks	4
	Program Elective	3
	credits:	15
	Total Credits:	26

Web Master Certificate



MassBay courses are offered days, evenings, weekends, and online. View the complete list of online courses at <https://mbccweb.massbay.edu/online/>.

Check current course availability at www.massbay.edu/courses

DIVISION OF SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This certificate introduces students to the web technologies required to create, manage, and host a web site. Students completing a Web Master Certificate are proficient at blending the art of HTML-coding with the visual arts to create pages that are content rich and visually pleasing. They are proficient at page layout, image creation and manipulation, interactivity, content creation, as well as project and business management.

Upon successful completion, the Certificate in Web Master is awarded.

PROGRAM FOOTNOTES

Program Electives:
CS 116 Fundamentals of Cyber Security, CS 141 Linux System Management

For more information about the costs of this program and employment opportunities after completion, please visit our gainful employment page: <http://www.massbay.edu/gainfulemployment/>.

COURSE	COURSE TITLE	CREDITS
<i>First Year</i>	<i>Semester 1</i>	
CS 126	Digital Imaging	3
CS 176	Web Design	4
CS 140	Interactive Media	3
CS 118	Scripting	3
	credits:	13
<i>First Year</i>	<i>Semester 2</i>	
CS 242	Computer Networks	4
CS 246	Web Server Administration	3
MN 140	Project Management	4
	Program Elective	3
	credits:	14
	Total Credits:	27

Course Descriptions

Accounting

AC 101 FINANCIAL ACCOUNTING I

This first course in financial accounting and reporting taken by all business students assumes no prior knowledge of accounting. It introduces the FASB conceptual framework as the logic underlying accounting standards. It develops and traces the basic steps used in accounting and reporting for service-oriented entities and progresses to more complex merchandising firms with inventory valuation considerations. The course culminates in the use of simple financial statement analysis in reaching credit and investment decisions. A general ledger software package embedded in the coursework familiarizes students with the rapid electronic processing of information possible and with the basic outline of all such packages available today. Lecture: 4 hours per week. 4 Credits

AC 102 FINANCIAL ACCOUNTING II

This course forms the second half of a two-course sequence in financial accounting and reporting. It concentrates on measurement and reporting of major balance sheet accounts, which include cash, receivables, investments, plant and equipment, intangibles, current liabilities, long-term debt, contributed capital, and retained earnings. The student learns preparation of the statement of cash flows using the direct method. Further financial statement analysis refocuses on the purposes behind the preparation of financial reports. Lecture: 4 hours per week. Prerequisite: AC 101 4 Credits Prerequisite: AC101

AC 120 ACCOUNTING USING PEACHTREE

This course assumes a prior knowledge of accounting concepts and applications on the part of the student. It builds on the existing knowledge base of the student to give them a working knowledge of Peachtree software. This course will show the student the mechanics of setting up service and merchandising businesses using this well-known commercial software. Divided into three modules, the first module demonstrates how Peachtree is used. The second and third modules show how to set up and do accounting using Peachtree for service and merchandising businesses. Prerequisites: AC101 & AC102, or instructor permission 1 Credits Prerequisites: AC101 & AC102, or instructor permission

AC 201 INTERMEDIATE ACCOUNTING I

This intermediate level course is the first part of a two-course sequence intended for accounting majors. This course in financial accounting and reporting broadens the existing theoretical and conceptual foundation and balances it with technical procedures. Students learn to identify, measure, and communicate financial information in accordance with generally accepted accounting principles. Coverage includes the FASBs conceptual framework of accounting, a review of the accounting process, the reporting requirements for income statement and the statement of retained earnings, classification and valuation in the balance sheet, the statement of cash flows, revenue recognition and income determination, and the concepts of time value of money. Lecture: 4 hours per week. Prerequisite: AC 102 4 Credits Prerequisite: AC102

AC 202 INTERMEDIATE ACCOUNTING II

The second course in the sequence concentrates on the recognition, valuation, and reporting of the major balance sheet accounts and the related income statement accounts at the intermediate level. Topics include cash, current receivables and liabilities, inventory valuation, investments in debt and equity securities, plant assets and intangibles, long term debt, and stockholders' equity. Lecture: 4 hours per week. Prerequisite: AC 201 4 Credits Prerequisite: AC201

AC 206 MANAGERIAL ACCOUNTING

This course focuses on the system of measuring and providing operational and financial information to management of business, non-profit, and governmental organizations. Students learn how managers use this information to make decisions, plan and control operations, gauge performance for reward systems, and foster a culture necessary to achieve an organizations strategic objectives. The topics covered include cost concepts and behavior, variable and absorption costing, cost-volume-profit relationships, budgets, control and responsibility accounting, and product costing. Lecture: 4 hours per week. Prerequisite: AC 102 4 Credits Prerequisite: AC102

AC 207 INTRODUCTION TO TAXATION

Based on the Model Tax Curriculum, this course introduces students to a broad range of tax concepts and types of taxpayers, particularly within a framework of financial accounting. The role of taxation in the business decision-making process is emphasized. The student is exposed to professional standards and ethics; and learns to do basic tax research and tax planning. This course gives an understanding of the interrelationship and differences between financial accounting and tax accounting. Lecture: 3 hours per week. Prerequisite: AC 102 3 Credits Prerequisite: AC102

AC 210 ACCOUNTING WITH QUICKBOOKS

This course introduces the QuickBooks software. Content includes software installation and creation of a new company; exploration of QuickBooks user interface, internal controls, help resources, and sample product and service companies; setting up of a merchandising company; working with inventory, vendors, and customers; completing year end adjusting entries, closing of fiscal year, and printing of financial statements. Prerequisite: AC101 2 Credits Prerequisite: AC101

Anthropology

AN 203 INTRODUCTION TO CULTURAL ANTHROPOLOGY

This course investigates how human societies are organized and the basic concept of culture. We develop an understanding of how anthropologists interpret social, economic, and belief systems in different societies. The course also considers how anthropologists conduct research, and what role Anthropology should play in an increasingly global society. Societies studied include those of southern Africa, the South American Amazon, and Papua New Guinea. This is a sophomore level course that requires several research papers. Lecture: 3 hours per week. 3 Credits

Art

AR 100 ART FUNDAMENTALS

Art Fundamentals is a global introduction to the field of Art for non-art majors and art majors. Art Fundamentals is a course that explores through study of elements of art and the various art forms and a chronological study of art history. The course is a survey of art history from prehistoric times to the present. The course offers an introduction and evaluation of the visual artist, with emphasis on the relationship of the end product. The main purpose of this course is to gain appreciation for art. The specific topics in this course include; learning about terms and concepts common to all of the visual arts (for example, composition, space, content, color). The student will explore materials, media and presentation skills (traditional and technology media included). Students will learn to compose the vocabulary of visual elements and principals as well as construction processes and material commonly understood. Through proscribed projects students will progressively define and articulate their subjective

interests, expressive ideas, and visual affinities. Students will participate in critiques. Students will purchase their own artistic materials. Students will leave the course with a portfolio of work. 3 Credits

AR 101 HISTORY AND APPRECIATION OF ART I

A study of painting, sculpture, and architecture from the prehistoric period through the 15th-century Italian Renaissance. Includes Egyptian, Greek, Roman and Christian Art; Giotto, Donatello, Brunelleschi, Raphael, and Leonardo da Vinci. Emphasis given to understanding changes in major styles, the role of the artist, and the relationship of Fine Arts to social-cultural trends. Lecture: 3 hours per week. 3 Credits

AR 102 HISTORY AND APPRECIATION OF ART II

History of Western Art from the Renaissance to the present. Includes Michelangelo, van Eyck, Durer, Velazquez, Rembrandt, Goya, Picasso, and Matisse. Emphasis is given to sequential development of major styles in painting, sculpture, and architecture, the role of the individual artist, and the relationship of visual arts to social cultural trends. Lecture: 3 hours per week. 3 Credits

AR 110 FORM STUDY

This is an introductory composition course aimed at developing problem solving skills in the three and four-dimensional realms. The student will develop a more precise visual vocabulary. Elements and principles of design are identified and employed. Students will understand how to construct a wire sculpture, papier mache, modeling and molding, cultural sculptures and pots, art from nature sculptures, hand wiring sculptures, assemblages, crafts, recycled sculptures and paper sculptures. Students will work with dirty, messy, sticky and unpredictable materials. Students will learn craftsmanship like production and students will brainstorm multiple sketches. A series of projects are assigned which are completed during class and outside of class. Students will purchase their own art supplies. The students will participate in class critiques. Students will visit local galleries and or museums. 3 Credits

AR 111 PAINTING I

Painting I is a studio course that will provide students with instruction in two-dimensional design. Students will utilize their previous experience in visual thinking and their technical approach to materials while building upon their knowledge of historical and contemporary design forms. Painting I will concentrate on channeling the student's energies even as it instructs them on how to properly use painting media. Students will acquire various techniques while discovering their personal artistic vision. Students will acquire painting skills and brushstroke techniques using oil and acrylic paints as well as gouache and watercolors. Color and composition will be emphasized throughout this course. Students are required to purchase their own art supplies. Prerequisite: AR 100 Art Fundamentals and AR 131 Color 3 Credits
Prerequisite: AR 100 Art Fundamentals and AR 131 Color

AR 121 DRAWING I

This in-depth drawing studio introduces and builds upon fundamental drawing concepts that apply across disciplines. Line, value, shape, form, space, intent and other elements are included using direct observation. This comprehensive course reviews those basics of drawing using the portrait, still life, geometric shapes, landscape, interiors, and other disciplines. A series of problems designed to acquaint the students with perceptual and inventive skilled in drawing. Students will work with erasers, charcoals, pencils, pen and ink, black and white colored pencils, and conte crayons. Students will learn how to render shadows, highlights, perspective, space, depth, and gradation. Students will draw thumbnails, a midterm, a final composition and drawing ideas. Students will participate in critiques. Students will finish the course with a portfolio of drawings. Students are expected to purchase their own materials. Drawing I is a foundation course in drawing media and techniques; focusing on the study of objects and natural

forms in problems of analysis and composition. This course is appropriate for experienced students and beginners. 3 Credits. 3 Credits

AR 122 DRAWING II

This advanced drawing studio course focuses on the human form, city/landscape drawing, as well as abstract drawing skills. Students will be introduced to advanced drawing concepts, vocabulary, and concepts in art criticism. Students will engage in a variety of drawing techniques and mediums. Students may be required to purchase their own art supplies and will participate in weekly critiques. Prerequisite: AR-121 3 Credits Prerequisite: AR 121

AR 131 COLOR

This studio course will concentrate solely on color; easily the most powerful, yet neglected, aspect of an artist's education. Through a practical exploration of theoretical and conceptual issues, students will become aware of the complex and interrelated nature of color in all of its perceptual, emotional, psychological, aesthetic, and technical aspects. Students will complete a series of studio color projects that emphasize color as an integral part of one's work. They will acquire a broad and intuitive awareness of color as a formal means of visual communication and storytelling. The student's complete understanding of color will include aesthetics and, most important, its creative and technical applications. 3 Credits

AR 200 WATERCOLORS

This course will cover fundamental techniques of transparent watercolor media, such as wet on wet, dry brush, glazing, and knowledge of painting tools. Emphasis will be on value, light and applied color theory, vocabulary development, form, texture, space, and perspective. Students will create still life paintings, city/landscapes, and figurative painting. Students will acquire critical skills to evaluate paintings and participate in weekly critiques. Students may be required to purchase their own art supplies and exhibit their artwork. 3 Credits

AR 901 HIST APPRECIATION ART 1 INDEPEN STUDY

History Appreciation of Art I - as independent study 3 Credits

Automotive: BMW

AB 100 AUTOMOTIVE FUNDAMENTALS

Examines the role and opportunities of the automotive technician in today's society. Shop environment and personal safety are explored. Principles of operation of the internal combustion engine as applied to the automotive vehicles and components of cooling and lubrication systems, and charging/starting to provide practical experience in the identification, repair, and replacement of the components of these systems. Supplies the background information needed to understand the operation of the vehicles. Schematics and shop manuals are studied. Lecture: 2 credits. Lab 3 credits. Total: 120 hours. 5 Credits

AB 102 AUTOMOTIVE ELECTRICAL FUNDAMENTALS

Introduction to the fundamentals of electricity, magnetism, and basic electronics. A working knowledge of the electrical circuits which make up the automobile including the battery, starting, and charging systems. Emphasis will be placed on performing electrical tests, interpreting results, and the correct use of meters and test equipment. Lecture: 1 credit. Lab 3 credits. Total: 105 hours. 4 Credits

AB 103 AUTOMOTIVE ENGINE DIAGNOSTIC AND REPAIRS

A course designed to teach the principles and procedures necessary to repair an automotive engine and to provide the practical experience in engine diagnosis, removal, disassembly, rebuilding, and dynamic check out. Lecture: 2 credits. Lab 3 credits. Total: 120 hours. 5 Credits Prerequisites: AB100, AB102

AB 105 HEATING AND AIR CONDITIONING THEORY

Designed to teach the fundamentals of the automotive heating and air conditioning systems. Special emphasis will be placed on the proper techniques for diagnosing air conditioning system problems as well as complete instruction in the recovering, recycling, evacuation and recharging equipment. Prerequisite: AB102 Lecture: 1 credit. Lab 2 credits. Total: 75 hours. 3 Credits Prerequisite: AB102

AB 106 AUTOMOTIVE BRAKE SYSTEMS

Study of the principles, terminology, and theory of brake designs. Emphasis placed on brake inspection, parts replacement, locating and interpreting specifications, proper use of tools and machine equipment for both conventional and disc, diagnosing malfunctions. Prerequisites: AB100, AB102 Lecture: 1 credit. Lab 2 credits. Total: 75 hours. 3 Credits Prerequisites: AB100, AB102

AB 121 COOPERATIVE EDUCATION I

This phase provides actual hands-on experience at a BMW dealership, covering one summer term. This co-op experience includes an employer's work week for twelve or more weeks in supervised on-the-job training at the dealership. 3 Credits Prerequisites: AB 103, AB 105, AB 106

AB 200 ADVANCED ENGINE PERFORMANCE

Proper procedures of tune-up and diagnosis of the automobile internal combustion engine and fuel system. Emphasis is placed on isolating malfunctions on a particular system and following the correct procedure to locate the exact problem. The student learns how to make an intelligent hypothesis according to the way in which the vehicle operates. Emphasis is placed on correct use of equipment, interpreting test results using specifications, their location and units of measure. Lecture: 1 credit. Lab 3 credits. Total: 105 hours 5 Credits Prerequisites: AB 103, AB 121

AB 201 ELECTRONICS FUEL AND IGNITION SYSTEMS

A study of the principles, terminology, and theory of electronic, fuel, and emission systems. Emphasis is placed on emission systems, part replacement, diagnosing malfunctions, locating and interpreting specifications, and proper use of test equipment. Lecture: 2 credits. Lab 2 credits. Total: 90 hours. 4 Credits Prerequisites: AB 200

AB 202 MANUAL TRANSMISSION DRIVE SYS

A course designed to teach the principals and operation of manual transmissions, drive axles, clutch discs, and pressure plates. The student will gain practical experience in the servicing and overhaul of manual transmissions and drive axles. 4 Credits

AB 203 AUTO TRANSMIS/AUTOMA

Designed to teach the student the principles and operations of automatic transmissions, transaxles, overdrive units, and electronically controlled transmissions. This course will also provide practical experience in diagnosing and overhauling automatic transmissions and transaxles. 4 Credits Prerequisites: AB121

AB 204 AUTOMOTIVE SUSPENSION SYSTEMS

A study of the principles and theory of suspension designs. Emphasis placed on part inspection and replacement, measuring and adjusting alignment angles, wheel balance, diagnosing procedures, and adjustment of steering and suspension units and components, using 2 and 4 wheel alignment techniques. Lecture: 2 credits. Lab 2 credits. Total: 90 hours. 4 Credits Prerequisites: AB200, AB205

AB 205 AUTOMATIC/MANUAL TRANSMISSIONS, AND DRIVE SYSTEMS

Designed to teach the student the principles and operations of automatic transmissions, transaxles, overdrive units, and electronically controlled transmissions, as well as, the principals and operation of manual transmissions, drive axles, clutch discs, and pressure plates. This course will also provide practical experience in diagnosing and overhauling automatic and manual transmissions and transaxles. Lecture: 1 credit. Lab 3 credits. Total: 105 hours. 6 Credits Prerequisite: AB 121

AB 208 ADVANCED AUTOMOTIVE ELECTRONICS

Designed to assist the student in mastering their troubleshooting skills. Covers basic principles of routine troubleshooting and diagnosis of electrical circuits, systems, and components. In addition the course covers complete usage of the Electrical Wiring Diagram and proper use of related diagnostic instruments. Prerequisites: AB102, AB200 Lecture: 1 credit. Lab 2 credits. Total: 75 hours. 3 Credits Prerequisites: AB 102, AB 200

Automotive: Chrysler

AY 100 FUNDAMENTALS OF AUTO TECHNOLOGY

Introduces the student to the basic automotive competencies required to be productively employed in the first cooperative work session. The course content is designed to develop familiarity with basic service shop operations, including safety, and to develop a reasonable degree of skill in lube-oil-filter and new-car-prep assignments. Lecture: 2 credits. Lab: 3 credits. Total: 120 hours. 5 Credits PreReq for AY100

AY 109 DEALERSHIP ORIENTATION

Provides actual hands-on work experience at a Fiat Chrysler Automobiles dealership. Co-op experience includes an employer's work week in supervised on-the-job training at the dealership. Full-time work experience. 1 Credits Prerequisites: AY 100, AY 110.

AY 110 AUTOMOTIVE ELECTRICITY

Introduces the student to the fundamentals of electricity, magnetism, and basic electronics. The course is designed to develop familiarity with basic concepts and theories and to develop a working knowledge of both the circuits that control the car and the component parts necessary for its operation. Emphasis is placed on locating and interpreting specifications, electrical testing, and the use of meters and test equipment. This course will include an introduction to starting and charging systems with an introduction to automotive electronics. Lecture: 1 credit. Lab: 3 credits. Total: 105 hours. 4 Credits AY110 PreReq

AY 115 COOPERATIVE EDUCATION I

This phase provides actual hands-on experience at a Chrysler dealership, reinforcing tasks learned in the previous semester. This coop experience includes twelve weeks in supervised on-the-job training. 2 Credits Prerequisites: AY 100, AY 109, AY 110

AY 120 AUTOMOTIVE ELECTRONICS

Prepares a student to diagnose and repair malfunctions using scan tool diagnostics. The student will be introduced to the electrical and electronic circuits and components in the current line of Chrysler-produced vehicles. Emphasis is placed on the inter-relationship of electronic circuitry and the need for a systematic, programmed approach to diagnosing electrical and electronic malfunctions. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits Prerequisite: AY115

AY 125 COOPERATIVE EDUCATION II

This is the second co-op phase to reinforce spring semester courses. The co-op experience includes 8 weeks at a Chrysler dealership in supervised on-the-job training. 3 Credits Prerequisites: AY115, AY120, AY140, AY170

AY 140 AUTOMOTIVE BRAKE SYSTEMS

Study of the principles, terminology, and theory of brake designs. Emphasis placed on brake inspection, parts replacement, locating and interpreting specifications, proper use of tools and machine equipment for both conventional and disc, diagnosing malfunctions. Lecture: 1 credit Lab: 2 credit Total: 75 hour 3 Credits Prerequisite: AY115

AY 170 ELECTRONIC FUEL AND ENGINE CONTROLS

Prepares a student to diagnose and repair malfunctions in the engine fuel and the electronic control systems. The course also covers fuel injection systems and basic emission controls. Lecture: 1 credit. Lab: 3 credit. Total: 105 hours. 4 Credits Prerequisite: AY110, AY115, AY120

AY 212 DIFFERENTIAL AND DRIVELINE REPAIR

This course covers all phases of Differential and Driveline service, repair and diagnosis. Both front and rear axle assemblies and components are covered in this course. 2 Credits Prerequisite: AY 215

AY 215 COOPERATIVE EDUCATION III

This is the third co-op phase to reinforce summer courses. The co-op experience includes 12 weeks at a Chrysler dealership in supervised on-the-job training. 3 Credits Prerequisites: AY 125, AY 221, AY 230

AY 221 HEATING, A/C & CLIMATE CONTROL SYSTEMS

This course will prepare the student to diagnose and repair malfunctions and perform maintenance tasks on the heating, air conditioning and climate control systems. Students will be made aware of the licensing requirements concerning air conditioning repair and the laws governing CFC's. Knowledge of R-134-A and R-12 systems and recovery and recycling procedures will be covered. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours 3 Credits Prerequisites: AY120, AY125

AY 225 COOPERATIVE EDUCATION IV

This is the final co-op experience before graduation. It provides hands on training at a Chrysler dealership that can include anything covered in the previous two years. This co-op experience includes twelve weeks in supervised on-the-job training. 3 Credits Prerequisites: AY215, AY245, AY253, AY270

AY 230 ENGINE PERFORMANCE

This course will provide the students with a basic knowledge of the components and function of automotive emission control systems. Students will engage in the removal and replacement of components as well as component failure diagnosis, use of appropriate diagnostic equipment and an introduction to IM 240 regulations. 0 Lecture: 2 credits. Lab: 3 credits. Total: 120 hours 5 Credits
Prerequisites: AY110, AY120, AY125, AY170

AY 245 ENGINE DIAGNOSIS AND REPAIR

This course will introduce the student to the current line of Chrysler engine systems. Emphasis will be placed on component identification, construction and function. Each student will be directly involved in the tear down, inspection, measurement and re-assembly of an engine. Horsepower, torque, engine configurations and special tool use are also covered. Lecture: 2 credits. Lab: 2 credits. Total: 90 hours. 4 Credits
Prerequisite: AY215

AY 253 AUTOMATIC TRANSMISSIONS, MANUAL TRANSMISSION AND DRIVE SYSTEMS

A course designed to teach the principles and operations of automatic and manual transmissions/transaxles. This course will provide practical experience in diagnosing, maintaining, and repairing automatic and manual transmissions/transaxles. Also included will be basic hydraulic principles and circuits, and electronically controlled transmissions. 4 Credits
Prerequisites: AY 212, AY 215

AY 270 STEERING & SUSPENSION SYSTEMS

This course will prepare the student to diagnose, repair and service the suspension and steering systems on current Chrysler products. Four-wheel computerized alignment and alignment geometry will be included along with rack and pinion and re-circulating ball steering systems and a variety of chassis support systems. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits
Prerequisite: AY215

Automotive: General Motors

AS 100 AUTOMOTIVE FUNDAMENTALS

A course to supply the background information needed to understand and perform minor services to the automobile. Topics include: auto shop equipment; wheels, hubs and tires; vehicle and part identification; battery service; ignition systems; fuel systems; and drive lines. This course also teaches shop safety, tool identification and use, basic engine design and construction, cooling systems, lubrication systems, and fundamentals of electrical systems. Lecture: 2 credits. Lab: 3 credits. Total: 120 hours. 5 Credits

AS 102 AUTOMOTIVE ELECTRICAL FUNDAMENTALS

Introduction to fundamentals of electricity, magnetism, and basic electronics. A working knowledge of circuits that make up the automobile and the component parts necessary for its operation. Emphasis placed on locating and interpreting specifications, electrical tests, and correct use of meters and test equipment. Lecture: 1 credit. Lab: 3 credits. Total: 105 hours. 4 Credits
Prerequisite: AS110

AS 105 HEATING AND AIR-CONDITIONING THEORY

Principles and operation of heating and air-conditioning systems and accessories to provide practical experience in testing, analyzing, installing, and repairing. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits
Prerequisite: AS110

AS 106 AUTOMOTIVE BRAKE SYSTEMS

Principles, terminology, and theory of brake designs including ABS and TCS systems. Brake inspection, parts replacement, diagnosing malfunctions, locating and interpreting specifications, proper use of tools and service equipment for both drum and disc brakes. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits Prerequisite: AS100

AS 108 AUTOMOTIVE IGNITION AND FUEL SYSTEMS

Prepares a student to diagnose and repair malfunctions in the engine fuel and the electronic control systems. The course also covers fuel injection systems and basic emission controls. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits Prerequisite: AS110

AS 110 COOPERATIVE EDUCATION I

Provides actual hands-on work experience at a General Motors dealership. Co-op experience includes an employer's work week in supervised on-the-job training at the dealership. Full-time work experience. ts 2 Credits Prerequisites: AS 100, AS 106, AS 113

AS 111 COOPERATIVE EDUCATION II

Provides actual hands-on work experience at a General Motors dealership. Co-op experience includes an employer's work week in supervised on-the-job training at the dealership. Full-time work experience. 3 Credits Prerequisites: AS102, AS105, AS108, AS110

AS 113 DEALERSHIP ORIENTATION

Provides actual hands-on work experience at a General Motors dealership. Co-op experience includes an employer's work week in supervised on-the-job training at the dealership. Full-time work experience. 1 Credits Prerequisites: AS 100, AS 106

AS 204 AUTOMOTIVE SUSPENSION SYSTEMS

A study of the principles and theory of suspension designs. Emphasis is placed on part inspection and replacement, measuring and adjusting alignment angles, wheel balance, diagnosing procedures, and adjustment of steering and suspension units and components, using 2 and 4-wheel alignment techniques. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. s 3 Credits Prerequisite: AS111

AS 206 ADVANCED ENGINE PERFORMANCE

This course will provide the students with a basic knowledge of the components and function of automotive emission control systems. Students will engage in the removal and replacement of components as well as component failure diagnosis, use of appropriate diagnostic equipment and an introduction to IM 240 regulations. Lecture: 2 credits. Lab: 3 credits. Total: 120 hours. 5 Credits Prerequisite: AS111

AS 208 ADVANCED AUTOMOTIVE ELECTRONICS

Designed to assist the students in mastering their troubleshooting skills. Covers basic principles of routine troubleshooting and diagnosis of electrical circuits, systems, and components. In addition, the course covers complete usage of the Electrical Wiring Diagram and proper use of related diagnostic instruments. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits Prerequisite: AS209

AS 209 COOPERATIVE EDUCATION III

Provides actual hands-on work experience at a General Motors dealership. Co-op experience includes an employer's work week in supervised on-the-job training at the dealership. Full-time work experience. 3 Credits Prerequisites: AS111, AS204, AS206

AS 210 COOPERATIVE EDUCATION IV

For second-year students, provides actual hands-on work experience at a General Motors dealership. Co-op experience includes an employer's work week in supervised on-the-job training at the dealership. Full-time work experience. 3 Credits Prerequisites: AS208, AS209, AS213, AS216

AS 213 AUTOMATIC/MANUAL TRANSMISSIONS & DRIVE SYSTEMS

A course designed to teach the principles and operations of automatic and manual transmissions/transaxles and ALL wheel 4-wheel drive systems. This course will provide practical experience in diagnosing, maintaining, and repairing automatic and manual transmissions/transaxles. Also included will be basic hydraulic principles and circuits, and electronically controlled transmissions. 4 Credits Prerequisites: AS 209, AS 215

AS 215 INTRODUCTION TO AUTOMATIC TRANSMISSIONS

This course covers automatic transmission basics, fluids and checking, torque converter and TCC clutch operation, powerflow, and planetary gear sets. 2 Credits Prerequisite: AS 209

AS 216 AUTOMOTIVE ENGINE DIAGNOSIS AND REPAIR

A course designed to teach the principles and procedures necessary to repair an automotive engine and to provide the practical experience in engine diagnosis, removal, disassembly, rebuilding, and dynamic check out. Lecture: 2 credits. Lab: 2 credits. Total: 90 hours. 4 Credits Prerequisite: AS209

Automotive: Toyota/Lexus

AT 101 INTRODUCTION TO AUTOMOTIVE SERVICE

Examines the role and opportunities of the automotive service professional in today's society. Shop environment, typical tools/equipment, and personal safety will be emphasized. Students will experience typical job-entry service skills and vehicle maintenance inspections. The necessary resources providing service information are examined. An Introduction of vehicle operation and support systems will be presented. This course provides the background information required to continue this program. Students may also earn University of Toyota / Lexus College credit. Lecture: 2 credits. Lab: 2 credits. Total: 90 hours. 4 Credits Prerequisites: AT101, AT102

AT 102 AUTOMOTIVE ELECTRICAL FUNDAMENTALS

Introduction to the fundamentals of electricity, magnetism, and basic electronics. A working knowledge of the electrical circuits which make up the automobile including the battery, starting, and charging systems. Emphasis will be placed on performing electrical tests, interpreting results, and the correct use of meters and test equipment. Lecture: 2 credits. Lab 2 credits. Total: 90 hours. 4 Credits

AT 103 AUTOMOTIVE ENGINE DIAGNOSTIC AND REPAIRS

A course designed to teach the principles and procedures necessary to repair an automotive engine and to provide the practical experience in engine diagnosis, removal, disassembly, rebuilding, and dynamic check out. 5 Credits Prerequisites: AT100, AT102

AT 105 HEATING AND AIR CONDITIONING THEORY

Designed to teach the fundamentals of the automotive heating and air conditioning systems. Special emphasis will be placed on the proper techniques for diagnosing air conditioning system problems as well complete instruction in the recovering, recycling, evacuation and recharging equipment. 3 Credits
Prerequisites: AT100, AT102

AT 106 AUTOMOTIVE BRAKE SYSTEMS

Study of the principles, terminology, and theory of brake designs. Emphasis placed on brake inspection, parts replacement, locating and interpreting specifications, proper use of tools and machine equipment for both conventional and disc, diagnosing malfunctions. 3 Credits Prerequisites: AT100, AT102

AT 109 TOYOTA TECHNICIAN PORTFOLIO TPORT

To improve student success in a Cooperative education program the Toyota Portfolio requirement was developed. The portfolio guides the student through the entire Co-Op process, including finding a sponsor dealer, understanding dealer expectations, maintaining a work journal and evaluations of their work experience. It is the student responsibility to maintain the portfolio and complete the assignments on time and obtain all necessary signatures. Completion of the portfolio is mandatory to complete the T-TEN Program. Total: 15 hours. 1 Credits

AT 113 AUTOMOTIVE ENGINE DIAGNOSIS AND REPAIR

A course designed to teach the principles and procedures necessary to understand the operation and repair of an automotive engine and provide a practical experience in engine diagnosis, disassembly, inspection and reassembly of a new model engine. Performing precision measurements and interpreting service specifications will be emphasized. Lecture: 2 credits. Lab: 2 credits. Total: 90 hours. 4 Credits
Prerequisites: AT101, AT102

AT 114 AUTOMOTIVE BRAKE SYSTEMS

Study of the principles, terminology, and theory of brake systems designs. Emphasis placed on brake inspection, parts replacement, locating and interpreting specifications. Proper use of tools and machine equipment for both drums and disc types will be experienced. Diagnosing system malfunctions is examined and students are introduced to Anti-Lock Brake Systems, Traction Control, Electronic Brake Distribution Vehicle Stability Control and other newer technologies. Students may also earn University of Toyota/ Lexus College credit. Lecture: 2 credits. Lab: 2 credits. Total: 90 hours. 4 Credits Prerequisites: AT101, AT102

AT 116 SUSPENSION, STEERING, AND HANDLING

A study of the principles and theory of suspension designs. Emphasis placed on part inspection and replacement, measuring and adjusting alignment angles, wheel balance, diagnosing procedures, and adjustment of steering and suspension units and components, using 2 and 4 wheel alignment techniques. Lecture: 1 credit. Lab: 2 credits. Total: 60 hours. 3 Credits Prerequisites: AT101, AT102

AT 120 COOPERATIVE EDUCATION I

This is a summer semester course, which provides hands-on job entry experience at a Toyota dealership. This co-op provides a fulltime employee's work schedule for 13 weeks or more. This real world work experience is supervised and graded. Co-op I is a mandatory requirement to return for the 2nd year of the T-TEN program. 3 Credits Prerequisites: AT109, AT113, AT114, AT116

AT 200 ADVANCED ENGINE PERFORMANCE

Proper procedures of tune-up and diagnosis of the automobile internal combustion engine and fuel system. Emphasis is placed on isolating malfunctions on a particular system and following the correct procedure to locate the exact problem. The student learns how to make an intelligent hypothesis according to the way in which the vehicle operates. Emphasis is placed on correct use of equipment, interpreting test results using specifications, their location and units of measure. 5 Credits Prerequisite: AT121

AT 201 ELECTRONICS FUEL AND IGNITION SYSTEMS

A study of the principles, terminology, and theory of electronic, fuel, and emission systems. Emphasis is placed on emission systems, part replacement, diagnosing malfunctions, locating and interpreting specifications, and proper use of test equipment. 4 Credits Prerequisites: AT200, AT205

AT 204 AUTOMOTIVE SUSPENSION SYSTEMS

A study of the principles and theory of suspension designs. Emphasis placed on part inspection and replacement, measuring and adjusting alignment angles, wheel balance, diagnosing procedures, and adjustment of steering and suspension units and components, using 2 and 4 wheel alignment techniques. 4 Credits Prerequisites: AT200, AT205

AT 205 AUTOMOTIC TRANSMISSION, AND DRIVE SYSTEMS

This is a two-part course covering automatic, manual transmissions and vehicle driveline systems. Part 1: is a study of the construction and operation of automatic transmissions and transaxles. Emphasis will be on the diagnostic techniques of electrical, hydraulic, and mechanical systems. Part 2: covers the components and operation of manual transmission/transaxles, clutches, differentials, drive shafts, and four-wheel drive systems. The disassembly and reassembly of selected transmissions and on vehicle activities will strengthen the students understanding of proper inspections, measurements and testing procedures required to perform successful service. Lecture: 3 credits. Lab: 3 credits. Total: 13 hour 6 Credits Prerequisite: AT120

AT 207 ENGINE CONTROL SYSTEMS I

This course is designed to increase the Technician's understanding and diagnostic skills related to engine control systems. Major areas to be covered are the identification, operation, function, and basic diagnosis of the following: Electronic Control Module (ECM): fuel injection systems: engine control system sensors and actuators: ignition systems: idle speed control systems, and EGR systems. Emphasis will be on solving drivability concerns using all available resources, i.e. manuals, DVOM, oscilloscope, diagnostic testers, and related special tools. Students may also earn University of Toyota/Lexus College credit. Lecture: 2 credits. Lab: 3 credits. Total: 120 hours. 5 Credits Prerequisites: AT102, AT120

AT 208 BODY ELECTRICAL DIAGNOSIS

Designed to assist the student in mastering their troubleshooting skills. Covers basic principles of routine troubleshooting and diagnosis of electrical circuits, systems, and components. In addition, the course covers usage of the Toyota Electrical Wiring Diagrams and proper use of related diagnostic instruments. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits Prerequisites: AT 102, AT 120, AT 205, AT 207, AT 213

AT 209 ENGINE CONTROL SYSTEMS II

Covers the use of the Toyota Techstream Tester and OBD II engine control. Schematic diagnostic approaches to Toyota engine control systems including use of on-board vehicle data will be emphasized. Students may also earn University of Toyota/Lexus College credit. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits Prerequisites: AT102, AT207

AT 212 AUTOMOTIVE AIR CONDITIONING & CLIMATE CONTROL

To cover basic (and advanced) concepts of mobile heating, air conditioning and climate control systems. Students will demonstrate their understanding of environmental issues prior to hands-on activities on the recovery, recycling, and evacuation and recharging of automotive refrigerants. Special emphasis will be placed on students learning the fundamentals of system operation, troubleshooting techniques and repair procedures on new model vehicles. Students may also earn University of Toyota/Lexus College credit. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits Prerequisites: AT102, AT208

AT 213 HYBRID VEHICLE GENERAL SERVICE

This course will introduce students to hybrid vehicle technology. Vehicle features, operating modes, and major hybrid components will be discussed. Safety issues and vehicle operation will be emphasized. Hybrid vehicle maintenance and general service procedures will be experienced. Students may also earn University of Toyota/Lexus College credit. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours 1 Credits Prerequisite: AT102, AT120

AT 220 COOPERATIVE EDUCATION II

To provide a 2nd real world experience at a Toyota or Lexus dealership. This full time work experience is for a minimum of 7-weeks prior to program completion. Emphasis is placed on the completion of a productivity worksheet and co-op completion surveys prior to final evaluation. This co-op is also graded and is mandatory to complete the Toyota T-TEN program. 3 Credits Prerequisites: AT120, AT208, AT209, AT212

Automotive: TSEP

AI 100 AUTOMOTIVE FUNDAMENTALS

Examines the role and opportunities of the automotive service professional in today's society. Shop environment, typical tools/equipment, and personal safety will be emphasized. Students will experience typical job-entry service skills and vehicle maintenance inspections. The necessary resources providing service information are examined. An Introduction of vehicle operation and support systems will be presented. This course provides the background information and is a prerequisite for all of the other courses. Total:3 hours 1 Credits

AI 102 AUTOMOTIVE ELECTRICAL SYSTEMS

Introduction to the fundamentals of electricity, magnetism, and basic electronics. A working knowledge of the electrical circuits which make up the automobile including the battery, starting, and charging systems. Emphasis will be placed on performing electrical tests, interpreting results, and the correct use of meters and test equipment. Lecture: 2 credits. Lab: 3 credits. Total: 120 hours. 5 Credits

AI 103 AUTOMOTIVE ENGINE DIAGNOSIS AND REPAIR

A course designed to teach the principles and procedures necessary to understand the operation and repair of an automotive engine and provide a practical experience in the diagnosis, disassembly, inspection and reassembly of a new model engine. Performing precision measurements and interpreting service specifications will be emphasized. Lecture: 2 credits. Lab: 3 credits. Total: 120 hours. 5 Credits

AI 105 HEATING/AIR CONDITIONING THEORY

To cover basic and advanced concepts of mobile heating, air conditioning and climate control systems. Students will demonstrate their understanding of environmental issues prior to hands-on activities on the recovery, recycling, and evacuation and recharging of automotive refrigerants. Special emphasis will be placed on students learning the fundamentals of system operation, troubleshooting techniques and repair procedures on new model vehicles. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits

AI 106 AUTOMOTIVE BRAKE SYSTEMS

A study of the principles, terminology and theory of brake system designs. Emphasis placed on brake inspection, parts replacement, locating and interpreting specifications. Proper use of tools and machine equipment for both drums and disc types will be experienced. Diagnosing system malfunctions is examined and students are introduced to Anti-Lock Brake Systems, Traction Control, Electronic Brake Distribution and other newer technologies. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits

AI 121 COOPERATIVE EDUCATION I

Provides actual hands-on work experience. Co-op experience includes an employer's work week in supervised on-the-job training at the dealership. Full-time work experience. 160 hours each. Total: 480 hours. 2 credits 2 Credits

AI 122 COOPERATIVE EDUCATION II

Provides actual hands-on work experience. Co-op experience includes an employer's work week in supervised on-the-job training at the dealership. Full-time work experience. 160 hours each. Total: 480 hours. 2 Credits

AI 123 COOPERATIVE EDUCATION III

Provides actual hands-on work experience. Co-op experience includes an employer's work week in supervised on-the-job training at the dealership. Full-time work experience. 160 hours each. Total: 480 hours. 2 Credits

AI 200 ENGINE PERFORMANCE

This course is designed to increase the Technician's understanding and diagnostic skills related to engine control systems. Major areas to be covered are the identification, operation, function, and basic diagnosis of the following: Electronic Control Module (ECM): fuel injection systems: engine control system sensors and actuators: ignition systems: idle speed control systems, and EGR systems. Emphasis will be on solving drivability concerns using all available resources, i.e. manuals, DVOM, oscilloscope, diagnostic testers, and related special tools. Lecture: 2 credits. Lab: 3 credits. Total: 120 hours. 5 Credits

AI 202 MANUAL TRANSMISSION & DRIVE LINES

This course covers the components and operation of manual transmission, transaxles, clutches, differentials, drive shafts, and four-wheel drive systems. Emphasis will be on the diagnostic techniques. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits

AI 203 AUTOMATIC TRANSMISSIONS

This course will study the construction and operation of automatic transmissions and transaxles. Emphasis will be on the diagnostic techniques of electrical, hydraulic, and mechanical systems. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits

AI 204 AUTOMOTIVE SUSPENSION SYSTEMS

Fundamentals principles and the operation of tires and wheels, suspension components, steering gear, linkage, and power assist systems are examined. Inspection and diagnostic methods are also reviewed for each major component area. The course incorporates a thorough review of wheel alignment geometry and wheel alignment correction and provides a diagnostic method for vehicle handling concerns. Lecture: 1 credit. Lab: 2 credits. Total: 75 hours. 3 Credits

Biology

BI 101 GENERAL BIOLOGY I w/LAB

Biological principles common to all organisms are examined. An in depth study of the cell is presented including the chemistry, structure and function of cell organelles, metabolism, photosynthesis, cell reproduction, Mendelian genetics, and patterns of inheritance, chromosomal inheritance, molecular genetics, DNA technology and protein synthesis. Lecture: 3 hours per week. Lab: 2 hours per week 4 Credits

BI 102 GENERAL BIOLOGY II w/LAB

For non-science majors, a study is made of the mechanisms of evolution. The origin and diversity of life is studied by examining the evolutionary development of organisms in the three domains - Eukarya, Bacteria, and Archaea. Animal structure and function is covered by studying the principles and evolution of each organ system and then focusing on the human. This is followed by a study of plant structure and function. The course ends with a study of the ecological interrelationships among organisms and organisms with their environment. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: BI 101 4 Credits Prerequisite: BI101

BI 105 DNA METHODS IN CRIMINOLOGY

This course primarily examines the science and statistics behind the use of DNA databases for human identification. Topics include mammalian DNA quantification; nucleotide sequencing; polymerase chain reaction; population genetics and allelic and genotypic frequencies; and calculations of exclusion probabilities for matches at multiple loci in genetic subpopulations. Lecture: 3 hours per week. 3 credits. Prerequisites: BI 101, or equivalent, or consent of instructor; MA 105. 3 Credits Prerequisites: BI 101, or equivalent, or consent of instructor; MA 105.

BI 106 DNA METHODS IN CRIMINOLOGY LABORATORY

This course examines the technologies behind the use of DNA databases for human identification. Laboratory exercises include DNA qualifications; DNA electrophoresis; and nucleotide sequence analysis. Lecture + Laboratory: 6 hours per week. 3 credits 3 Credits

BI 107 FRESHMAN SEMINAR: SCIENCE GATEWAY SEMINAR

This seminar course will enable students to understand the intricacies of complex mechanisms underlying biological processes through active learning and group discussions in a supportive learning environment that seeks to maximize student success in their future science careers. Topics will include concepts in biology, human anatomy and physiology, diseases, novel approaches to disease diagnostics and therapy, and ethics. Student participation and simple hands-on experiments and activities will be central to the course. Students will also learn how to manage stress and time to maximize their success in college. This will help the Freshman Success Community students to thrive in their academic endeavors and become a contributing member to the college's academic community. 2 Credits

BI 110 PRINCIPLES OF BIOLOGY I w/LAB

Principles of Biology is an in depth study of basic concepts of biology with emphasis on cellular processes. Topics covered include chemical make-up of the cell, structures and functions of biological macromolecules, organelle structure and function, metabolic pathways, protein synthesis, expression and regulation of genes, gene technology, and genetics. The laboratory entails molecular modeling and experiments for concepts covered in lecture. Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits

BI 113 ESSENTIALS OF ANATOMY AND PHYSIOLOGY w/LAB

Essentials of Anatomy and Physiology is an introduction to the basic anatomy and physiology of the human body. Material will be covered at the cellular, tissue, organ, and system levels. The interrelationships among the systems and their maintenance of homeostasis will be studied. The laboratory portion will reinforce lecture material through the use of anatomical models and computerized learning tools. Lecture: 2 hours per week. Lab: 2 hours per week. 3 Credits

BI 118 ELEMENTS OF MICROBIOLOGY

A study of the basic principles of microbiology including the characteristics of the major groups of microorganisms, and their role in infectious disease. The control of microorganisms and aseptic techniques are emphasized. Lecture: 1 hour per week. 1 Credits

BI 120 PRINCIPLES OF BIOLOGY II w/LAB

Principles of Biology II is a continuation of Biology 110. The course will cover the evolutionary process and a survey of the evolutionary diversity of organisms with an emphasis on the human body. Study of the metabolic pathways of the various organ systems of mammals will include the homeostasis and molecular regulation of these organ systems. The laboratory will entail a detailed study of these processes. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: BI 110 4 Credits Prerequisite: BI110

BI 131 HEALTH SCIENCE AND EMERGENCY CARE

An introduction to the study of the human organism. Emphasis placed on the maintenance of health and the recognition of minor disorders as they pertain to children. Common emergency situations along with appropriate first aid measures will be covered. Lecture: 3 hours per week. 3 Credits

BI 141 HUMAN REPRODUCTIVE BIOLOGY

Study of fundamental knowledge of the anatomy and physiology of human reproduction, means of birth control, development of the fetus and basic genetics including human genetic diseases. Population, venereal disease, and the evolution of sex discussed. 3 Credits

BI 170 PRINCIPLES OF BIOINFORMATICS I w/LAB

This course introduces students to the field of bioinformatics. The course covers the analysis of genetic sequences, genetic information from the human genome project & other model systems. Topics covered include data mining, data analysis and computational methods of DNA/RNA and proteins. Also covered are biological and chemical databases and searching, alignment tools, computational analysis of protein structure and function, and phylogenetics. The course also covers ethical issues associated with bioinformatics research and application. Lecture 3 hours per week. Lab 3 hours per week. 4 credits. Pre-requisites: BI 110 & CH 110. 4 Credits Prerequisites: BI 110 & CH 110

BI 171 PRINCIPLES OF BIOINFORMATICS II w/LAB

This is the follow up course for BI 170 (Principles of Bioinformatics I). The course covers genomics and proteomics. Genomics is the study of the functions and interactions of the genes in a genome, and proteomics is the study of all the proteins expressed by the genome. Students are introduced to the analysis of complex genomes, DNA sequencing, and acquisition of genetic sequences. The course also covers genome data and exploration of the organization, dynamics, and evolution of genes and genomes. The course includes topics such as microarray technology and its use in molecular profiling, cell expression, cell may and modular proteomics. Students also learn basic technologies used in protein separations as well as detection and protein characterization. Protein purification and analysis such as mass spectrometry, isoelectric point, ion exchange chromatography, gel filtration, hydrophobic interaction chromatography, electrophoresis, SDS-PAGE, and affinity chromatography are also studied. Lecture 3 hours per week. Lab 3 hours per week. 4 credits. Pre-requisites: BI 120 & BI 170. 4 Credits Prerequisites: BI 120 & BI 170

BI 210 MOLECULAR BIOLOGY w/LAB

This course is an in depth examination of the principles that govern the structure and function of both prokaryotic and eukaryotic genes. Emphasis is placed on gene structure, function, expression, and regulation. The laboratory presents a concise presentation of the state-of-the-art methods utilized in molecular biology, as well as an overview of the far-reaching applications of recombinant DNA technology. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisites: BI 120, CH 120 4 Credits Prerequisites: BI120, CH120

BI 215 ANATOMY AND PHYSIOLOGY I w/LAB

Studies the structural and functional relationships of the human body systems, emphasizing concepts of the regulatory processes that integrate body cells, tissues, and organs. Topics include: organization of the body; cell structure and function; development of the tissues; the integumentary, skeletal, muscular, and nervous systems; and the senses. Students will perform selected laboratory exercises in correlation with the lecture material. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: BI 101 or BI 110 4 Credits Prerequisite: BI101 or BI110

BI 217 ANATOMY AND PHYSIOLOGY II w/LAB

Studies the structural and functional relationships and homeostatic mechanisms of various human systems in their normal physiological states. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Related laboratory experiments will be performed by the students. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: BI 215 4 Credits Prerequisite: BI215

BI 220 IMMUNOLOGY w/LAB

This course emphasizes the molecular and cellular interactions involved in immune responses. Topics covered include antibody structure and function; applications of monoclonal antibodies in biotechnology and medicine; gene rearrangements in B and T cells; cellular cooperation and the role of the MHC; tolerance; and immunopathology (hypersensitivity, autoimmunity, transplantation, cancer immunity and immunotherapy, AIDS). Laboratory involves antibody purification, immunoprecipitation assays, immunoblotting, and ELISAs (indirect, sandwich, and competitive). Lecture 3 hours. Lab 3 hours. Prerequisite: BI 210. 4 Credits Prerequisite: BI210

BI 223 FUNDAMENTALS OF MICROBIOLOGY w/LAB

Fundamentals of microbiology is the study of the microorganisms, which cause human disease from both a scientific and medical perspective. Studied will be the concepts regarding a) molecular structure, physiology, metabolism, growth, and genetics of microorganisms - bacteria, viruses, protozoans, and fungi; b) mechanisms of infection, toxicity, and disease; c) the immune system; d) physical and chemical control of microorganisms; and the structure, function, and action of antimicrobial drugs and drug resistance. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisite: BI 101 or BI 110 4 Credits Prerequisite: BI101 or BI110

BI 240 FORENSIC MICROBIOLOGY w/LAB

This course teaches the identification and tracing of microbial pathogens used in bio-terrorism and the use of site and/or region-specific microbes as evidence to uncover circumstances of interest to the law, often related to a crime such as in the movement of bodies and the location of original crime scenes. The course covers the study of pathogenic microbes and their toxins, their spread and methods of detection, as well as legal procedures. The structure, biochemistry, physiology and classification of the microorganisms that have pathogenic significance and the immune response are emphasized. Mechanisms of infection, toxicity and disease are covered with attention to various human body systems that are targets of such pathogens. Students learn methods of handling Biological Samples in the lab, methods of identification both through molecular microbiology and traditional microbiology. Mechanisms of pathogenesis and spread of microorganism and the epidemiology of tracing the sources of such spread are covered along with structure, function, and action of antimicrobial drugs and drug resistance and other treatment techniques. Students will defend their laboratory findings in a mock trial. 4 Credits: 3 hours lecture and 3 hours Lab. Prerequisites: BI110, CH110. 4 Credits Prerequisites: BI110, CH110.

BI 270 DIRECTED RESEARCH/INTERNSHIP

This course provides an opportunity for students to work on real-life problems of bioinformatics applying their technical, communication and academic skills in solving these problems. Students will apply these skills in solving issues and problems that are or could face biotechnology and pharmaceutical companies. 4 Credits

Biotechnology

BT 101 INTRODUCTION TO BIOTECHNOLOGY

In this hands-on laboratory course students are introduced to the scientific method, key biotechnology methodologies, and data analysis through their participation in an ongoing molecular research project(s) conducted by the Biotechnology Program called the "Grand Project". The research and training emphasis will be on gene structure and function and the analysis of gene expression using the electrophoresis based methodologies: Western-, Northern-, and Southern-blot hybridization analysis. Students will also be introduced to mammalian cell culture and the selection of cell lines to meet research purposes. In addition, this course will place considerable emphasis on the teaching of bio ethics. Co-requisites: CH 110, BI 110 3 Credits Co-requisite: CH110, BI110

BT 107 FORENSIC DNA ANALYSIS I

In this hands-on laboratory course students learn DNA typing and allele frequency analysis through the most commonly used allelic analysis methodologies for human identification in criminal cases involving DNA evidence such as Ident-File. This course also teaches students how to build, maintain, and utilize an actual DNA database and realize their implications in the constitutional rights of individuals. The database component of the course teaches? How DNA databases are built, by the collection and retention of derived allelic profiles, SNPs and STRs and their placement into retrievable computer records. Use of DNA database in real criminal and missing person cases. Expansions of DNA databases The creation of organismal DNA databases for forensic and research Lab: 6 hours per week. Prerequisites: CH 110, BI 110, BT 101 3 Credits Prerequisites: CH 110, BI 110, BT 101

BT 108 MARINE BIOTECHNOLOGY I

This course teaches the student basic surface and underwater marine navigation with an emphasis on robotic submersible technology as a tool for marine specimen and sample collection. The course also teaches underwater transects and quadrats as research tools that allow quantification of the relative abundance of marine organisms in a research area. The course provides primarily open-water skills exercises, developing the student's field research proficiency through hands-on practice and learning. Lab: 6 hours per week. Prerequisites: CH 110, BI 110, BT 101 3 Credits Prerequisites: CH110, BI110, BT101

BT 201 CELL CULTURE

In this hands-on laboratory course students are trained to establish and maintain mammalian cell lines and perform sophisticated molecular experiments in mammalian cells systems. Proficiency in cell culture will be conferred through the student's semester-long advancement of a molecular sub-project to be assigned by the instructor. Each sub-project will converge on the ongoing Grand Project conducted by the Biotechnology Program. Through their individual research sub-projects students will learn to apply the key molecular methodologies learned in Rotation I to addressing real scientific problems through the use of cell systems. Research training emphasis will be placed on extraction, purification and analysis of cellular proteins and nucleic acids, transfection, short-term and long-term cell storage, and cell fusion. Lab: 6 hours per week. Prerequisites: CH 110, BI 110, BT 101 3 Credits Prerequisites: CH 110, BI 110, BT 101

BT 205 FORENSIC DNA ANALYSIS II

This is a highly rigorous, hands-on laboratory course in which students learn mitochondrial DNA (mtDNA) analysis of human remains and human mtDNA haplotyping. DNA sequence polymorphisms at human loci are examined using the PRC based technique, Small Tandem Repeat (STR) analysis. Emphasis will be placed on the sequencing and characterization of the hyper variable region (HVR)-1 and HVR-2 of human mtDNA for purposes of establishing identity, determining ethnic origin, and linking remains to maternal family lineages. Students will be trained by their involvement in actual criminal cold-cases, missing person cases or anthropological cases. Students will be graded based on their performance in mock testimony in a moot court under cross-examination by a lawyer or law student in which the student must defend his/her forensic DNA findings. Lab: 6 hours per week. 3 credits. Prerequisites: CH 120, BI 110, BT 107. 3 Credits Prerequisites: CH120, BI110, BT107

BT 206 MARINE BIOTECHNOLOGY II

This course teaches students the molecular research methodologies that are used to derive or develop pharmaceuticals, food, fuel, biomarkers, and other products from marine organisms. Emphasis in this course will be on the production of biofuel from marine algae as a strategy for an economically sustainable form of alternative energy. In addition, the course will teach genetic engineering methodologies designed to improve energy production phenotypes in eukaryotic microalgae and establish microalgae model systems for biofuel production. Lab: 6 hours per week. Prerequisites: CH 120, BI 120, BT 108 3 Credits Prerequisites: CH 120, BI 120, BT 108

BT 215 GENE EXPRESSION LABORATORY COURSE

This course teaches state-of-the-art strategies and techniques employed in the field of gene regulation and gene expression. Emphasis is placed on the analysis of the regulation of gene expression at the transcriptional and post-translational levels and teaches the novel methodologies used to study these processes such as qRT-PCR, RNAi for specific knock-down experiments, mRNA turnover and stability analysis using Northern-blot analysis, RNA primer extension, serial analysis of gene expression (SAGE), and Western Blot analysis. Emphasis will be placed on teaching students on the advantages and limitations of expression analysis techniques taught in the class their use in the development of methodologies that inhibit or induce gene expression. Lab: 6 hours per week. Prerequisites: CH 110, BI 110, BT 101 3 Credits Prerequisites: CH 110, BI 110, and BT101

BT 240 RESEARCH INTERNSHIPS

All students are required to undertake one Research Internship. The typical internship will be ten to twelve weeks in duration. The training of students interns will be determined by the host mentor and Biotechnology Program coordinator in a written agreement. Grade will be assigned by Program faculty, based on evaluations by mentor. Students may be required to assume the total costs of internships. The internship hours must meet the requirements set forth in the College's internship agreement. 4 credits. Prerequisites: CH 120, BI 120 or BI 240, BT 201, and BT 215. 4 Credits Prerequisites: CH 120, BI 120 or BI 240, BT 201, and BT 215.

BT 241 FORENSIC INTERNSHIP

Students will apply their forensic DNA training by engaging in criminal forensic or forensic anthropological work conducted at off-site forensic or anthropology laboratories. Internships will range from 8 to 12 weeks in duration at sites such as: The Armed Forces DNA Identification Labs (AFDIL), the FBI Forensic Laboratories at Quantico (VA), Royal Barbados Police and Forensic Service, Royal Montserrat Police, Forensic DNA Service of the Czech Republic, Royal Canadian Mounted Police, Massachusetts Medical Examiner Morgue, and other police and anthropological agencies and laboratories. All internships require a signed Memorandum of Understanding between the forensic faculty and mentor of the host institution. Internship grades will be based on an evaluation of the student's performance by the host institution and assigned by the forensic faculty. The internship hours must meet the requirements set forth in the College's internship agreement. 4 credits. Prerequisites: CH 120, BI 120 or BI 240, BT 107, BT 205 4 Credits Prerequisites: CH 120, BI 120 or BI 240, BT 107, BT 205

Business

BF 203 PRINCIPLES OF FINANCE

This foundational course in finance introduces the basic knowledge, concepts, terms, and practice associated with the three major areas of finance; financial institutions, investments, and business finance. The student gets an integrated view of the interrelationships among financial markets, financial institutions, and financial management. The course provides insight into how both businesses and individuals are affected by markets and institutions, and also how markets and institutions may be used to help meet the goals of an individual or a firm. Prerequisite: AC102 4 Credits Prerequisite: AC102

BF 232 PERSONAL FINANCE

This course provides students with basic concepts and tools individuals to use in conducting their financial affairs. Topics include budgeting, consumer protection, borrowing alternatives, automobile and housing approaches, insurance strategies, high-return savings alternatives, and income tax considerations. An opportunity cost approach used to relate specific knowledge to appropriate individual strategies. Lecture: 3 hours per week 3 Credits

BU 100 INTRODUCTION TO BUSINESS

Introduction to the basic business functions of Small Business Management, Marketing, Finance, and Information Management and to the forms of business ownership. Elementary study of the separate disciplines of a business and how they are interrelated with one another, for the benefit of the customer/buyer and within the context of free-market pricing principles and government regulation. Introduction to the relevance of accessing data and information, critical analysis and use for business problem solving, and the importance of communication to business practices. Course provides the basis for students' decisions to elect more advanced courses, depending upon their interests. Lecture/Group & individual out of class work. 3 Credits

BU 120 PRINCIPLES OF CUSTOMER SERVICE

Introduction to the basic customer service tools and techniques needed to provide excellent customer service support; Deliver products services in a manner that satisfies identified and unidentified needs with ultimate results in positive return business. The base of customer service practices and how they are integrated and interact with one another creates a balance of business, technical, soft and self-management skills. Customer Service Skills are applied through critical analysis, problem solving and communication skills satisfying the need for qualified customer service professionals. Customer service case studies and present-day examples are used to illustrate the application of customer service principles. 3 Credits

BU 201 GLOBAL BUSINESS

This course familiarizes students with the world of international business. It introduces students to the unique problems and issues organizations encounter when they operate abroad. It focuses on such concerns as relationships with host governments, foreign country cultures and attitudes toward business, and the complexities of planning, organizing, leading, communicating, and controlling in the international marketplace. The course is very interactive and the students will have the opportunity to create an International Business Export Plan. 3 Credits

BU 250 SERVICE INDUSTRY INTERNSHIP

This is an independent study course students usually take during the fourth-semester of the General Business Management Program. Participants are given an opportunity to practice principles presented in the classroom through a minimum of 120 internship hours in a service business setting. Hospitality internship placements may include hotels, convention and visitors bureaus, and travel and tourism related agencies. Retail internship placements may include department stores, specialty retailing companies, supermarkets, merchandising and distribution establishments, and chambers of commerce. Internship contract, written reports, and internship seminars required. 4 Credits Prerequisite: At least one HM or RM course and a 2.0 grade average.

BU 901 BUSINESS INTERNSHIP - VARIOUS TOPICS

The Internship Course provides students with the opportunity to apply their business education within a structured organizational environment and, thereby, gain valuable work experience that enhances their course work and identifies areas of business in which they might be interested in as a career. Students learn by completing experiential learning assignments and activities and working with both a Faculty Advisor and a Mentor at their Internship employment. Students will complete a minimum of 120 internship hours, document their learning objectives, participate in scheduled meetings, complete evaluations of their Internship experiences, and write and present a formal capstone Internship Report. 3 Credits

OA 201 BUSINESS COMMUNICATION

This course is an introduction to the philosophy of business communication. It consists of practice in planning, analyzing, and writing effective business letters, memoranda, and reports, using traditional and/or automated equipment. It is designed to be of assistance to students seeking employment opportunities. Lab: 3 hours per week. 3 Credits

Central Processing

CY 101 PRINCIPLES OF CENTRAL PROCESSING TECHNOLOGY

This course prepares the central processing technologist for the international certification exam offered by the International Association of Healthcare Central Service and Material Management. The student will learn, through didactic, lab and clinical experience, sterilization, decontamination, disinfection, sterile packaging and monitoring. Medical and surgical terminology, anatomy and physiology, communication skills, and instrumentation and equipment. Emphasis is on microbiological principles and infection control and FDA, OSHA, EPA, and other regulatory agencies standards. Lecture: 4 hours per week; Clinical: 24 hours each week. 4 Credits

Chemistry

CH 101 COLLEGE CHEMISTRY I w/LAB

College Chemistry I is the first semester of a two-semester college course on the facts and principles of chemistry at the introductory level, (no previous background in Chemistry is assumed). The course has a mandatory lab that complements the lecture. This course is designed to meet the needs of non-STEM major programs. Typical majors taking this course include liberal arts and nursing. Topics include lab safety; metric system and density; scientific method; classification of matter; basic atomic structure; nuclear chemistry; nomenclature; chemical equations; patterns of chemical reactions; mole concept; compound stoichiometry; acids, bases and salts; gas laws; solutions; concentration units; pH scale. Basic math skills, including introductory algebra, are suggested for success in this course. Lecture: 3 hours per week Lab: 3 hours per week 4 credits 4 Credits

CH 102 COLLEGE CHEMISTRY II w/LAB

College Chemistry II is the second semester of a two-semester college course on the facts and principles of chemistry at the introductory level. The course has a mandatory lab that complements the lecture. This course is designed to meet the needs of non-STEM major programs. Typical majors taking this course include liberal arts and nursing. Topics include re? emphasis of lab safety; math skills and graph analysis; measurements; reaction stoichiometry; atomic orbital theory and electron configurations; chemical bonding; intermolecular forces; chemical kinetics; periodicity; chemical equilibrium and its application to acid-base and ionic systems; redox reactions and electrochemistry; and organic chemistry. Basic math skills, including introductory algebra, are suggested for success in this course. Prerequisite: CH 101 or the equivalent. Lecture: 3 hours per week Lab: 3 hours per week 4 credits 4 Credits Prerequisite: CH101

CH 110 PRINCIPLES OF CHEMISTRY I w/LAB

Principles of Chemistry I is the first semester of a two-semester college course on the facts and principles of chemistry at the general chemistry level, (some previous experience with the discipline of Chemistry is assumed). The course has a mandatory lab that complements the lecture. This course is designed to meet the needs of STEM major programs. Typical majors taking this course include biotechnology, life science, computer science, environmental science, and engineering. Topics include lab safety; classification of matter; measurements; representing compounds and reactions; patterns of chemical reactions; mole concept; compound and reaction stoichiometry; thermochemistry; solutions and concentrations; theories of atomic structure through quantum theory; periodicity; Lewis, Valence and Molecular Orbital bonding theory; molecular geometry; physical chemistry of gases; kinetic? molecular theory. Co-requisite: A one-hundred-level MA course or higher (not MAC) Lecture: 3 hours per week Lab: 3 hours per week 4 credits 4 Credits Co-requisite: A one-hundred-level MA course or higher (not MAC)

CH 120 PRINCIPLES OF CHEMISTRY II w/LAB

Principles of Chemistry II is the second semester of a two? semester college course on the facts and principles of chemistry at the general chemistry level. The course has a mandatory lab that complements the lecture. This course is designed to meet the needs of STEM major programs. Typical majors taking this course include biotechnology, life science, computer science, and environmental science, and engineering. Topics include re? emphasis of lab safety; intermolecular forces of attraction; kinetic-molecular theory, structure and properties of solids, liquids and gases; solutions and colloidal suspensions; colligative properties; thermodynamics; chemical kinetics; chemical equilibrium and its applications; acid-base chemistry; buffers; redox and electrochemistry; descriptive chemistry. Prerequisites: CH 110, and a one-hundred-level MA course or higher (not MAC). Lecture: 3 hours per

week Lab: 3 hours per week 4 credits 4 Credits Prerequisites: CH 110, and a one-hundred-level MA course or higher (not MAC).

CH 140 CHEMISTRY FOR ENGINEERS w/LAB

This is a one-semester course for a foundation in chemistry for students in engineering fields. The course covers measurements and error theory; patterns of chemical reactions; mole concept, concentrations and stoichiometry; thermochemistry; theories of atomic structure; orbitals and periodicity; bonding theories; molecular geometry; and intermolecular forces of attraction. Students will learn physical chemistry of gases; kinetic molecular theory; structure and properties of solids, liquids and gases; colligative properties; thermodynamics; chemical kinetics; chemical equilibrium and its applications; acid-base chemistry; buffers; and redox and electrochemistry. Other selected topics, at the discretion of the instructor, may include molecular orbital theory, coordination chemistry, nuclear chemistry and organic compounds. Lecture: 3 hours per week. Lab: 3 hours per week. 4 Credits Prerequisite: MA 104

CH 201 ORGANIC CHEMISTRY I w/LAB

Organic Chemistry I is the first semester of a two-semester science majors level course on the facts and principles of chemistry as they apply to carbon-based compounds. The course has a mandatory lab that complements the lecture. This course is designed to meet the needs of STEM major programs. Typical majors taking this course include biotechnology and life science. Topics include re-emphasis of lab safety; mixture separation techniques; spectroscopy; Lewis, Valence and Molecular Orbital bonding theory; representing organic compounds; acid-base theory; relationship between structure and properties - including polarity, stability, acidity and physical properties; stereochemistry; nomenclature; patterns in the physical and chemical properties of aliphatic cyclic and acyclic alkanes, alkenes, alkynes, alkyl halides and alcohols; applying the principles of thermodynamics, kinetics and mechanism to substitution, addition, redox and elimination reactions. Math skills of at least a one-hundred-level MA course are required. Prerequisites: CH 110, CH 120, and a one-hundred-level MA course or higher (not MAC). Lecture: 3 hours per week Lab: 3 hours per week 4 credits 4 Credits Prerequisites: CH 110, CH 120, and a one-hundred-level MA course or higher (not MAC).

CH 202 ORGANIC CHEMISTRY II w/LAB

Organic Chemistry II is the second semester of a two-semester science majors level course on the facts and principles of chemistry as they apply to carbon-based compounds. The course has a mandatory lab that complements the lecture. Typical majors taking this course include biotechnology and life science. Topics include re-emphasis of lab safety; synthetic techniques; spectroscopy; patterns in the nomenclature, structure, physical properties, spectra; reactivity, stability, stereochemistry and chemical reactions of conjugated systems, benzene and its derivatives, aromatic systems, ethers, carbonyls, amines, carboxylic acids, esters, amides; acid chlorides; anhydrides; nitriles, enols, steroids, lipids, carbohydrates and amino acids; applying the principles of thermodynamics, kinetics and reaction mechanisms to the substitution, addition, redox, condensation and elimination reactions of these compounds. Math skills of at least a one-hundred-level MA course are required. Prerequisite: CH110, CH 120, CH 201, and, a one-hundred-level MA course or higher (not MAC) Lecture: 3 hours per week Lab: 3 hours per week 4 credits 4 Credits Prerequisite: CH110, CH 120, CH 201, and, a one-hundred-level MA course or higher (not MAC)

CH 210 BIOCHEMISTRY I w/LAB

A one-semester study of the facts and principles of chemistry as they apply to biological macromolecules and biological systems, with emphasis on the structure-function correlation. This course has a mandatory lab that complements the lecture. Topics include re-emphasis of lab safety; water in biological systems; protein chemistry ? including the structure, function, purification, sequencing and synthesis of peptides; carbohydrate chemistry ? including thermodynamics and mechanism of glycolysis and the Krebs cycle; nucleic acids ? including solid phase nucleotide synthesis; enzymes ? including, mechanism, kinetics and regulation; lipids ? including biological membranes and transport, fatty acid metabolism; bio signaling; oxidative phosphorylation; endocrine regulation. Lecture: 3 hours per week. Lab: 3 hours per week.

Prerequisite: CH 201 or the equivalent, MA 102 or higher 4 Credits Prerequisite: CH 201 or the equivalent, MA 102 or higher

Chinese

CHI 101 CHINESE I

With over 800 million speakers, Mandarin Chinese is the most spoken language in the world and one of the six official languages of the United Nations. Learning Chinese culture and language will arm you with a global perspective, a more well-rounded personality and most importantly a mind that tolerates and flourishes on differences. Designed for students who have very little or no prior knowledge of Chinese, provides a lively introduction to basic oral expression, listening comprehension, and elementary reading and writing. The audio-lingual approach, using practical vocabulary drawn from realistic situations, aims at good pronunciation and ease in response. Each lesson incorporates helpful information about daily life in China and the varied cultures within the world of Chinese speakers. Audio practice complements class work, enable students to work aloud at their own speed, reinforce their acquisition of essential structures, and acquaints them with a vast hand on resources. A beginning course of modern standard Chinese (Mandarin). Introduction to the Romanization phonetic system of Chinese (Hanyu pinyin.), essential sentences, basic vocabulary, and approximately 180 characters in traditional form. Develops the basic skills in listening, speaking, reading and writing. Lecture: 3 hours per week. 3 credits. 3 Credits

Communication

CO 100 INTRODUCTION TO COMMUNICATION

An introduction to the history and principles of human communication. The course will cover the development of communication from signals, to speech, to writing, and to the mass communication technologies of print, broadcast media, and computers. Contemporary models and theories of human communication will be emphasized. Finally, the course will consider the growing field of communication as both an academic discipline and a career focus. This will enable students to make informed choices about their future study and job options. Lecture: 3 hours per week. 3 Credits

CO 101 INTRODUCTION TO MASS MEDIA

History of the development and utilization of mass media: newspapers, magazines, television, radio, book publishing, public relations, advertising, film, and music. Mass media as a form of human communication is explored through historical developments, definitions, and evolving technologies. Lecture: 3 hours per week. 3 Credits

CO 103 INTERCULTURAL COMMUNICATION

There is an irrefutable imperative for all of us to understand not only those with similar background to our own, but even more importantly, those whose cultural identity differs from our own. Conflict based on political or religious difference, the growth of international business, increased global communication, inequities of access to such communication, the abundance of written and visual communication assaulting us on a daily basis, make intercultural communication a captivating and necessary field of study. This introductory course provides the theoretical and practical foundation for a degree in Communication, as well as being relevant to courses of study in other disciplines. It provides students with a strong sense of their own complex cultural identities before moving on to teach them the principles underlying the study of intercultural communication. There will be opportunities offered for practical applications of those theories in case studies, group and pair work and project work. 3 Credits

CO 105 JOURNALISM I

Introduction to journalism with emphasis on news and feature writing. Examines the function of the editorial department, the use of various newsgathering techniques, the role of the journalist in gathering news, and ethical concerns in journalism. Lecture: 3 hours per week. Prerequisite: EN 101 3 Credits
Prerequisite: EN101

CO 106 GLOBAL JOURNALISM

A continuation of CO 105. Emphasizes the writing of feature-length articles with a special concentration on global affairs, world geography, and current events. Lecture: 3 hours per week. Prerequisite: EN 101 3 Credits
Prerequisite: EN101

CO 107 BROADCAST JOURNALISM

Broadcast Journalism introduces students to the basic skills in writing and producing TV news, including beat reporting, interviewing and editing with the needs and demands of the electronic media in mind. Students work independently and collaboratively on newscasts. Students critically evaluate newscasts and are introduced to the components of producing them. They also examine ethical challenges that arise when manipulation of images and sound can distort reality and compromise journalistic integrity. Students will be expected to narrate their own scripts, handle microphones, video cameras and other equipment, and edit their segments on computer to produce professional quality reports. They may be expected to cover news stories on and off campus and go on field trips to observe professional news operations. 3 Credits

CO 131 ORAL COMMUNICATION

This course provides training and practice in both verbal and nonverbal communication. Methods of speech organization and delivery in the development of informative and persuasive speeches will be emphasized. The course will also offer opportunities to work in groups for panel discussions and debate. 3 Credits

CO 200 PRINCIPLES OF PERSUASION

This course is designed to examine the study of persuasive communication, which evolved from the disciplines of psychology and sociology. Emphasis is placed on types of social influence and how people try to influence one another through attitudinal and behavioral techniques. Some of the topics covered include how people convince one another, persuade others to like them, or end personal relationships. The course will also investigate the tactics of resisting another's attempt to persuade, the relationship between choice and coercion, how verbal aggression facilitates or disables persuasion. Learning theory, fear appeals, propaganda, and compliance-gaining techniques are other areas critically assessed. Prerequisite: CO100 or consent of the instructor. 3 Credits Prerequisite: CO100 or consent of the instructor.

CO 201 FUNDAMENTALS OF PUBLIC RELATIONS

Principles and techniques of communication used by organizations and individuals. Includes television, news releases, community and customer relations, interaction between companies and employees. Lecture: 3 hours per week. 3 Credits

CO 210 COMMUNICATION INTERNSHIP

The aim of this course is to provide students with experience working in the field of communications. The internal internship will involve students as members of the Mass Bay student newspaper. Working as staff writers, students will be assigned a local Mass Bay beat to report on as well as work together as a group to decide on the direction the student newspaper will take. The external internship will be a more traditional internship in which students will secure internships with local businesses working in positions related to the communication process including but not limited to public relations, journalism, advertising, human resources and corporate communication. Working under the guidance of the faculty advisor and an off-campus supervisor, students will be required to spend 70-80 hours a semester and complete tasks as assigned by their supervisor. 3 credits. Prerequisite: CO105. 3 Credits Prerequisite: CO105

Computer Science

CS 100 COMPUTERS AND TECHNOLOGY

This course introduces students to computers and technology. Students learn the basics of microcomputer windows, operating system software and application software. Students complete hands-on computer projects to gain experience using the operating system, e-mail, the internet, word processing, electronic spreadsheets, and basic presentation graphics software. After successful completion of this course, students will be familiar with business and personal computer applications and commonly used computer terminology. The history and future development of computing and technology are reviewed, as well as a look at the future of computers along with the legal, ethical and privacy issues associated with computers. 3 Credits

CS 101A MAKING IT HAPPEN WITH CODE

Through a series of projects students are introduced to computational problem solving. Students will create animations, control multimedia displays, provide interactive user experiences, and command mechanical artifacts. Behind the scenes they will be using variables, control structures, loops and functions as they develop programs to perform these tasks. 1 Credits

CS 101B MAKING IT HAPPEN WITH ARTIFACTS

Through a series of projects students are introduced to the devices which they can control with their code. They build interactive artifacts with motors, sensors, lights, speakers, and switches inside. Then they bring their creations to life by sending commands to micro-controllers. Prerequisite: CS 101A Making it Happen with Code. 1 Credits Prerequisite: CS 101A Making it Happen with Code.

CS 101C MAKING IT HAPPEN WITH ROBOTS

Through a series of projects students control the behavior of a mobile robot as it moves around, senses its environment and performs various tasks. Prerequisite: CS 101A Making it Happen with Code. 1 Credits Prerequisite: CS 101A Making it Happen with Code.

CS 101D MAKING IT HAPPEN WITH DATA

This course explores different ways in which data can be manipulated and visualized to help with design decisions. At the core of these decisions is the data that is needed to create usable artifacts, along with associated costs. Students learn to evaluate designs via effective visualization techniques. Prerequisite: CS 101A Making it Happen with Code. 1 Credits Prerequisite: CS 101A Making it Happen with Code.

CS 104 MICROCOMPUTER APPLICATIONS/BUSINESS

This course deals with computer/technological literacy with an emphasis on business applications using the microcomputer. It is required for Business and Computer Information Systems majors. The basics of microcomputer operations including: hardware, windows, operating system software, and application software, will be introduced. Students will complete projects in the areas of word processing, in-depth spreadsheeting, e-mail, the Internet, databasing and some presentation graphics software. A look at the future of computers, including the legal and ethical impact on society will be covered. The labs will be structured toward practical day-to-day business problems. Lecture/Lab: 3 hours per week 3 credits 3 Credits

CS 105 MICROCOMPUTER APPLICATIONS

A second course designed for students with experience in using microcomputer applications software in the areas of wordprocessing, electronic spreadsheets, presentation graphics, and database management. Students complete hands-on training at the intermediate level in the types of application software listed above. In addition, material will be presented in areas of disk management, the assessment of productivity software, and utilizing the Internet including elementary Web page creation and design. Lecture/Lab: 3 hours per week. Prerequisite: CS 100 or CS 104, or permission of instructor 3 Credits Prerequisite: CS100 or CS104 or CS150

CS 106 SECURITY AWARENESS

This course provides a basic survey of data, computer, Internet, and wireless security. The security principles: confidentiality, integrity and availability are introduced as well as threats and attacks that undermine these principals. This course introduces students to the steps taken to secure data and information and the liability of individuals and organizations as it relates to data confidentiality and integrity. Other security topics, such as: securing personal information, identifying incidents, and computer ethics are also covered. 2 Credits

CS 107 FUNDAMENTALS OF THE INTERNET

The course introduces the Internet, its services and the World Wide Web Consortium (W3C) standard markup language. Topics include file management, organization and structure of website, fundamentals of design and navigation, sharing and transferring files (FTP) and HTML basics. Upon completion, students should be able to implement and deploy a web page with an image using mark-up language. Students will develop basic knowledge of file management and learn how to search for resources on the on the Internet. Web Mass Communication, Real? Time Communication, and web security will be introduced. 1 Credits

CS 108 FUNDAMENTALS OF WEB DESIGN

This course provides an in-depth look at the best practices for writing and editing HTML and CSS code and syntax. Students will review the structure of a typical HTML document. The course covers the basic concepts and terminology needed to read and write Basic HTML and CSS. Students will create their own content using simply styled or more complex designed web site. 1 credit. Prerequisite: CS 107 or permission of the instructor 1 Credits Prerequisite: CS 107 or permission of the instructor

CS 109 WEB AND SOCIAL MEDIA

This course covers the basics of content creation and management for social media including blogs, podcasts, and posts. Students will be introduced to the most popular social media platforms and learn which are the best fits for their needs, as well as metrics for measuring social media marketing success. This course will address search-engine optimization and crowdsourcing as well as privacy. Topics related to integration of third-party social networks, the use of timeline widgets and technologies to embed them as live feed will be covered. 1 Credits

CS 110 INTRODUCTION TO COMPUTER SCIENCE

This course is a broad overview of computer science from a problem-solving perspective. Topics include: solution strategies and algorithms, the hardware basis and organization of computers, operating systems and networks including the Internet, programming language paradigms and programming fundamentals, the many applications of software to real-world problems, and the social, historical, and ethical context of computing. Students receive a hands-on introduction to basic programming concepts (objects, classes, data types and expressions, loops, conditionals, and functions/methods). Also included are case studies about information rights, privacy, security, and the ethical (mis)behavior of corporations and individuals with respect to these issues. Lecture: 3 hours per week. Laboratory: 2 hours per week. 4 Credits

CS 113 FUNDAMENTALS OF INFORMATION TECHNOLOGY

Fundamentals of Information Technology (FIT) provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level IT professionals. The curriculum covers the fundamentals of computer hardware and software as well as advanced concepts such as security, networking, and the responsibilities of an IT professional. This course emphasizes practical experience to help students develop fundamental computer and career skills. This course helps students prepare for entry-level career opportunities in IT and industry standard certification. 4 Credits

CS 116 FUNDAMENTALS OF CYBER SECURITY

This course covers introductory concepts, terminologies, and protection methods in computer and network security field. In addition to fundamentals, overview of topics such as cryptography, security infrastructures and protocols (such as different digital identification techniques, PKI, digital certificates, IPSec, and SSL), countermeasure technologies and systems (such as intrusion detection and protection methods) are covered. Prerequisites: CS 106 Security Awareness, CS 110 Introduction to Computer Science, or Faculty permission. 3 Credits Prerequisites: CS 106 Security Awareness, CS 110 Introduction to Computer Science, or Faculty permission.

CS 117 CYBER ETHICS

This course introduces ethical theories and moral obligations as they relate to information technology issues. The application of ethical, moral, and legal standards to information technology and security in a global context is the basis of this course. Ethical concepts are presented and information technology cases and scenarios are introduced to students to provide ethical solutions. 3 Credits

CS 118 SCRIPTING

This course introduces fundamental programming concepts. Students learn to design and implement platform-independent scripts. Students will learn scripting for system-administration, database communication, and to provide user interactivity through the use of multimedia resources. By the end of the course students will have a concrete understanding of programming in several important scripting contexts. 3 Credits

CS 120 PROGRAMMING I

This foundational course for computer science majors introduces the fundamental concepts of programming from an object-centric perspective using Java. Includes a brief introduction to computing (historical development, computing systems, algorithms, and the nature of programming languages) and the object-oriented paradigm for software development. Topics include: objects, classes, methods, simple data types, control structures, and the use of indexed-list data structures such as arrays or strings. Includes discussion of the ethics and responsibility of computer professionals with respect to information rights. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisites: MassBay placement into a 100-level Math (not MAC) and CS 110 Introduction to Computer Science, or instructor's permission. 4 Credits Prerequisites: MassBay placement into a 100-level Math (not MAC) and CS 110 Introduction to Computer Science, or instructor's permission.

CS 126 DIGITAL IMAGING

This is the foundation course for students interested in digital imaging. This course explores principles of design and composition while enhancing familiarity with image creation and manipulation software, digital image capture, and the inclusion of images in web design. It emphasizes visual communication using digital art, graphic design, and color. In addition to classwork, it requires independent computer lab time. Each student presents and defends an end-of-term project. Lecture: 3 hours per week. Open Lab. 3 Credits

CS 130 PUBLICATIONS MANAGEMENT

Preparation and production of professional-looking publications, including manuals, newsletters, ads, and journals. Topics include selecting a desktop publishing package and using graphics and specialized equipment such as scanners and laser printers. Additionally, students will learn how to manage other professionals in the desktop publishing field, including graphic artists and printers. 4 Credits

CS 140 INTERACTIVE MULTIMEDIA

This course provides students with the knowledge to create interactive applications and web pages that include animation, video, and sound. It emphasizes designing and creating dynamic content using various multimedia technologies. Topics include HTML 5, vector images, animation by keyframes and by tweens, layers, masks, and streaming media. Students add interaction by integrating video technology into an overall multimedia solution, by applying Java script and social media. Students also record, edit, and synchronize audio and video for use on the World Wide Web. Lecture: 3 hours per week. Open lab. 3 Credits

CS 141 LINUX SYSTEM MANAGEMENT

A hands-on, system-administration course with the practical goal of enabling the student to install and run an effective and secure Linux platform for use in a business or home-office context. Core topics include: the history, philosophy, and legal status of Linux, the operating system concepts that underpin Linux, basic installation, and management of files, and processes, log files, user accounts, and printers. Other topics include: configuring the boot process, configuring a desktop environment, performance monitoring and troubleshooting, system maintenance (backups, upgrades, and deployment), and basic network connectivity. Throughout an emphasis is placed on understanding and maintaining local system security. 3 Credits

CS 145 COMPUTER SYSTEMS CONFIGURATION

In-depth understanding of microcomputers and small systems architecture. Topics include hardware selection, setup, maintenance, and repair. Also included are upgrading systems, installing printers, boards and other peripheral devices such as CD ROM, laser disks, and scanners. Prerequisite: CS100 or CS104 or CS110 4 Credits Prerequisite: CS100 or CS104 or CS110

CS 160 APPLICATIONS SOFTWARE STRATEGIES

The application software strategies course introduces students to the essential skills required in developing and maintaining a software library. Students learn the basics of selecting the appropriate software, e.g., productivity, education and reference, entertainment, business and specialized and computer(s) for a particular business application. This includes desktop publishing using graphics and specialized equipment such as scanners and laser printers. Students complete hands-on computer projects while researching other topics, such as software licensing, piracy, maintenance, and the exchanging of data between applications. Demonstrations are conducted on a student's research using a presentation graphics program. Upon completion of this course, students will be familiar with different software applications, operating systems and computers. Prerequisite: CS100 or CS104 or CS110 4 credits 4 Credits Prerequisite: CS100 or CS104 or CS110

CS 176 WEB DESIGN

This course presents web design fundamentals and essential development skills to create interactive web sites. Students will learn how to organize content, incorporate graphics and multimedia, and create interactive forms that capture and validate user input. Web technologies such as XHTML, Cascading Style Sheets, XML, and JavaScript will be presented. This course will provide students with a guide to designing the presentation, navigation and organizing the content of powerful Web pages that attract users and effectively convey a message. Legal issues and web accessibility topics will be covered. Professional tools will be presented to enhance and accelerate the design and implementation of Web content. Lecture: 3 hours per week. Laboratory: 2 hours per week. 4 Credits

CS 180 INTRO TO OPERATING SYSTEMS

This course introduces current (Windows, Linux, Mac) and not so current (DOS) operating environments, which include basic and advanced concepts, operations, and the use of system utilities as well as use of GUI-based tools that allow exploring LINUX and DOS command structures. Prerequisite: CS110 3 Credits Prerequisite: CS110

CS 200 PROGRAMMING II

The object-oriented approach to programming with Java is developed in full. Topics include: practical object design, object-oriented principles (interfaces, composition, inheritance, polymorphism, and encapsulation), and container/collection objects (including arrays) and associated algorithms. As exemplars of these topics, the basis of GUI interfaces, event-driven programming, and graphics are examined. Exceptions and file access are introduced as well. The emphasis is on developing good software craftsmanship along with an awareness of the implications for the user of software design choices. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: C or better in CS 120 Programming I. 4 Credits Prerequisite: "C" or better in CS120 Programming I.

CS 205 INTRODUCTION TO COMPUTATION

A concrete approach to the mathematics and logic needed to understand algorithmic problem solving. Introduction to the discrete math needed in computer science. Includes a proof-and-algorithm-oriented, but elementary, introduction to logic, foundational concepts (sets, relations, maps, integers, divisibility and congruence), as well as sequences, induction, recursion, counting, and discrete probability. Prerequisite: Eligible to take a 100 level math course 4 Credits Prerequisite: Eligible to take a 100 level math course

CS 208 DATA STRUCTURES

This programming course develops the ability to design, implement, and use Java collection classes, their underlying data structures, and the associated data manipulation strategies most effective in solving a given problem. The course includes the study of stacks, queues, lists, trees, and maps, as well as hashing, recursion, sorting and search algorithms. Prerequisite: C or better in CS 200, or permission of instructor 4 Credits Prerequisite: "C" or better in CS200

CS 209 C PROGRAMMING

An introduction to the C programming language using either the VAX C compiler or a microcomputer C compiler. Topics will include: types, operators and expressions, control flow, functions and programs structure, pointers and arrays, structures, and input/output. 4 Credits Prerequisite: "C" or better in CS110

CS 211 C++ PROGRAMMING

Object-oriented introduction to computer programming. Design, code, compile, and test programs. Use comments, meaningful identifiers, modular design, and classes to produce readable, structured code. Input/output, data types, functions, object classes, branches loops, parameters, arrays, and algorithm analysis. 4 Credits Prerequisite: CS110

CS 212 SYSTEMS PROGRAMMING WITH C

An introduction to operating systems and systems programming via an in-depth introduction to and examination of the Linux operating system. The C language is learned as a tool for Linux systems programming. Topics include: history of operating systems, features of Unix and Linux, C programming, shells and user-level commands, files, terminals, processes, memory management, sockets, and servers. Prerequisite: CS118 or CS120 4 Credits Prerequisite: CS 118 or CS 120

CS 213 DATABASE MANAGEMENT SYSTEMS

The course covers characteristics of database management systems, including design and implementation techniques. Students study various database models and focus on issues related to the fundamental concepts of the relational model. Topics include data analysis, data modeling, database management systems, the normalization process, security and integrity issues; and data manipulation using the SQL query language. Pre-requisite: CS 120 Programming I or CS 118 Scripting 4 Credits Pre-requisite: CS 120 Programming I or CS 118 Scripting

CS 214 COMPUTER ARCHITECTURE AND ASSEMBLY LANGUAGE

This course covers the internal organization and operation of a representative von Neumann computer including instruction types, data representation, and addressing-modes. Assembly language programming will introduce symbolic addresses, assembler directives, input/output, system calls, and a call/return mechanism. The course concludes with an introduction to the C programming language and the way in which its high-level-language constructs are represented in assembly language. Prerequisite: CS120 or CS118 4 Credits Prerequisite: CS120 or CS118

CS 216 TECHNOLOGICAL ENTREPRENEURSHIP

In this course, we will cover the concepts needed to transform a technological idea into a viable business. The course focus is software-based IT enterprises, and the specific challenges and opportunities they present. The syllabus would cover a wide range of topics including; Creativity and Innovation - how to recognize good transformative ideas; the Product Development Cycle including the role of rapid prototyping as a tool to generate interest and solidify your plans; the Business Plan Cycle, Revenue models for Information goods, IT marketing and the over-arching issue of pricing in the Information Economy. In addition, the course will cover IT specific issues such as enterprise Computing architectures, security engineering, and traffic analysis techniques. The course will be conducted using case studies, lectures by successful entrepreneurs across the Information Technology industry, as well as project work. Prerequisite: CS 200 Programming II 3 Credits Prerequisite: CS 200 Programming II

CS 225 SOFTWARE DESIGN

Project approach to the software development life cycle: Small teams of students write a description of a software application to be created, develop an object design, implement this design in Java, and present the result in an open forum. Lecture topics are chosen to support this process. Lecture: 3 hours per week. 3 credits. Prerequisite: CS 200. 3 Credits Prerequisite: CS200

CS 230 INFORMATION SYSTEMS ADMINISTRATION AND MANAGEMENT

This course deals with the management and maintenance of computer based information systems (CBIS). Students examine the differences between various types of information systems and develop proficiency solving IS problems using productivity software, the Internet and Case-Study analysis. Topics include purchasing supplies, working with vendors, contracting outside computer services, assessing user needs, and management of computer personnel. Lecture: 3 hours per week. Laboratory: 2 hours per week. Prerequisite: CS100 or CS104 or CS110 or Instructors permission 4 Credits Prerequisite: CS100 or CS104 or CS110 or Instructors permission

CS 235 INFORMATION SYSTEMS ANALYSIS AND DESIGN

This course deals with the methods (both theory and practice) used by systems analysts in planning and operating a computer system. Students examine the role of the analyst in the investigation, analysis, design, development, implementation and evaluation of computer systems and procedures. Techniques used for evaluating computer needs, project planning, information policies and practices, and upgrading systems will be covered. Lecture: 3 hours per week. Laboratory: 2 hours per week. 4 credits Prerequisite: CS100 or CS104 or CS110 4 Credits Prerequisite: CS100 or CS104 or CS110

CS 241 WEB SITE DEVELOPMENT

This course introduces the fundamentals of web programming. Students will build database driven Web sites that retrieve, integrate and present database content. Students will use professional tools used to enhance and accelerate the development of web sites. Client-side and server-side scripting will be presented using current web technologies. Pre-requisite: CS 120 Programming I or CS 118 Scripting. 4 Credits Pre-requisite: CS 120 Programming I or CS 118 Scripting

CS 242 COMPUTER NETWORKS

How computer networks and the Internet work. This course presents a description of the various levels of networking, from the lowest levels of data transmission and wiring to the highest levels of application software. Topics covered include data transmission, how the hardware works; packet switching, network topologies and wiring schemes; internetworking, internet architecture, TCP/IP; and various network applications. Lecture: 3 hours per week. Lab: 2 hours per week. 4 credits. Prerequisites: CS 120 Programming I or CS 118 Scripting. 4 Credits Prerequisites: CS 120 Programming I or CS 118 Scripting.

CS 243 COMPUTER NETWORKS II

Building upon the knowledge gained from the first computer networks course, this course provides students with more in-depth knowledge and hands-on experiences on important networking topics, such as frewalls, IPsec, VPN, ACLs, Wireless APs, Routers and router configuration. Students completing this course will be prepared to take industry standard networking and/or routing certificate examinations. Prerequisite: Grade of C or better in CS242. 4 Credits Prerequisite: Grade of C or better in CS242.

CS 246 WEB SERVER ADMINISTRATION

This course teaches students how to set up and manage a Web server using Linux/Apache and Microsoft Windows 2000/IIS. Students gain real-world experience with these platforms by configuring, maintaining, and troubleshooting Internet services. The administrator's role supporting Web developers is introduced through hands-on exercises with application servers (PHP and Microsoft ASP) and the my SQL relational database. The course also covers important server technologies besides HTTP (Web protocol), including FTP (file transfer) and SMTP/POP3 (e-mail). Lecture/Lab: 3 hours combined. 3 credits. Prerequisites: CS 110 or CS 176. 3 Credits Prerequisite: CS120 or CS176

CS 247 PERIMETER DEFENSE

This course focuses on understanding the layers of hardware and software required to control the flow of traffic into and out of the network perimeter and ways to defend it. This course is designed to provide students a solid foundation in advanced network security fundamentals to include routing, packet filtering, proxy servers, firewalls, virtual private networks (VPN), and Intrusion Detection Systems (TDS). Prerequisites: CS116 and CS243. 3 Credits Prerequisites: CS116 and CS243

CS 248 SECURING ACCESS

The focus of this course is on controlling access to a network and providing security and privacy for any communication through a network. This course is designed to provide students with knowledge and practical skills in identifying the risks in providing access, setting up and testing ACLs and access control systems, authentication methods, and Public Key Infrastructure (PKI). Prerequisites: CS116 and CS243 3 Credits Prerequisites: CS116 and CS243

CS 280 COMPUTER SCIENCE INTERNSHIP

This course provides actual hands-on work experience. Co-Op experience of at least 80 hours within a supervised setting is required. Grading is pass/fail. 1 credit 1 Credits

CS 281 CAPSTONE EXPERIENCE

This course is the culmination course for the Cyber Security Associate in Science degree. Students will make use of knowledge and skills gained from previous or current networking and security courses to complete a semester-long project. 3 Credits Pre-requisite: CS243 Computer Networks II

Co-requisites: CS248 Perimeter Defense, CS250 Securing Access

Criminal Justice

CJ 101 INTRODUCTION TO CRIMINAL JUSTICE

An introduction to the history, development, and philosophy of criminal justice. Topics covered include constitutional limitations, agencies of criminal justice, and the process of criminal justice. Lecture: 3 hours per week. 3 Credits

CJ 131 INTRODUCTION TO SECURITY SCIENCE

A discussion of the historical, theoretical, and legal basis of security, including the purpose of security in modern society, standards and goals for the security industry, and an investigation of the social sources and consequences of the private provision of policing. 3 Credits

CJ 141 INTRODUCTION TO CORRECTIONS

An overview and critical analysis of contemporary correctional theory and practice. Controversial issues in contemporary corrections, including prisoner rights, victimization, the death penalty, and unionization are addressed. Lecture: 3 hours per week. 3 Credits

CJ 151 INTRODUCTION TO LAW ENFORCEMENT

Line activities of law enforcement agencies with emphasis on the patrol function and prevention of crime. Topics covered include specialized operational units, such as, investigative, juvenile, and vice, and other specialized operational units. Lecture: 3 hours per week. 3 Credits

CJ 209 ORGANIZATION AND MANAGEMENT OF POLICE

Topics covered include personnel management, records and reports, public relations, budgets, administrative procedures employed by police departments, and a general review of the police departments relationship to other municipal agencies. Lecture: 3 hours per week. 3 Credits

CJ 215 CRIMINAL INVESTIGATION

Topics covered include the elements of crime with emphasis on police duties, identification of persons and property, interviewing and interrogating, as well as case management and presentation. 3 Credits

CJ 217 CRIMINAL EVIDENCE

An introduction to the Federal and Massachusetts rules of evidence. Topics covered include hearsay rules and its exceptions, (corpus delicti), real evidence, circumstantial evidence, and privilege. Lecture: 3 hours per week. 3 Credits

CJ 221 INTRODUCTION TO CRIMINOLOGY

Topics covered include criminal and delinquent behavior in the United States, including the variations, ramifications, and measures of prevention; control, and treatment. Crime and delinquency as social problems and study of methods that bring about more expedient amelioration and control are explored. Lecture: 3 hours per week. 3 Credits

CJ 241 JUVENILE OFFENDERS

An introduction to the causes of delinquency with concern for delinquency control, detention, and legal confinement. The Federal and Massachusetts juvenile court systems as well as the protective services of metropolitan Boston are discussed. Lecture: 3 hours per week. 3 Credits

Critical Thinking

CT 100 CRITICAL THINKING

Introduction to critical thinking in college. Designed to provide students with practice in interpreting, analyzing, synthesizing, and assessing new information and its relationship to previous knowledge. Students will evaluate classic and contemporary arguments and learn how to construct sound arguments. Small group participation is an integral part of this course. This course is required for completion of an A.S. or A.A. degree program. 3 Credits

Economics

EC 104 CONTEMPORARY ECONOMIC ISSUES

Economic issues are analyzed and discussed including current major issues and problems of the economy. Primary analytical tools include: demand and supply theory, elementary Keynesian economics, and basic monetary policy. Topics covered include: government price fixing, pollution, the role of government, inflation, unemployment, the national debt and international trade. Emphasis will be given to current economic events in the news. Students who plan to, or have taken, EC 201 or EC 202 should not take this course for credit. 3 Credits

EC 201 PRINCIPLES OF MACROECONOMICS

This course will address two major questions: (1) what are the causes of recessions, unemployment and inflation; and (2) what can governments do to combat business cycles and reduce unemployment? Topics covered include: fiscal policy, federal debt, monetary policy, and the Federal Reserve System. We will also look at the impact of international trade and the balance of payments. It is recommended that the student take this before EC 202. Lecture: 3 hours per week. 3 Credits

EC 202 PRINCIPLES OF MICROECONOMICS

This course will analyze the four basic market structures or perfect competition, monopoly, monopolistic competition, and oligopoly. We will see how each industry's structure impacts decisions on pricing and production. Topics covered include: business costs, price elasticity, anti-trust laws, privatization, labor law, income distribution and poverty. It is recommended that the student take EC 201 before this course. Lecture: 3 hours per week. 3 Credits

EC 205 MONEY AND BANKING

This course is a general survey of money and banking, covering the nature and functions of money, monetary standards, structure and functions of the Federal Reserve System, monetary and fiscal policy, recent monetary problems and international financial issues. Prerequisite: EC201 3 Credits Prerequisite: EC201

Education

ED 108 ART AND MUSIC FOR YOUNG CHILDREN

This course presents techniques for stimulating creative experiences for young children in art, music and movement. Direct participation with varied media is included to demonstrate appropriate programming for young children. Lecture: 3 hours per week. 3 Credits

ED 112 INTRODUCTION TO EARLY CHILDHOOD EDUCATION

This course presents the purposes of early childhood education, major theories, and models of significant early childhood programs and current issues affecting the field. Students explore developmentally appropriate practices for early childhood education programs and participate in 12 hours of field study. Lecture: 3 hours per week. 3 Credits

ED 115 EDUCATION IN AMERICAN SOCIETY

An examination of the historical, cultural, and philosophical foundations of education in the United States from the 1700's to the present. The purposes and organization of the delivery of schooling will be discussed and contemporary topics in education explored, including the roles of the American school in a democratic, multicultural society. The course is designed to help students decide whether the teaching profession is suited to their individual interests and abilities. A three-hour field study in schools is required each week in addition to lecture hours. Lecture: 3 hours per week. 4 Credits

ED 170 THE INCLUSIVE EARLY CHILDHOOD CLASSROOM: STRATEGIES FOR EFFECTIVE TEACHING

This course provides an overview of instructional and curricular strategies for supporting students with disabilities in inclusive school settings. A review of relevant legislation and state services will be addressed. The use of screening and assessment tools and the role of Individualized Education Plans and Family Service Plans in program planning will be explored. There will be a focus on classroom strategies for early childhood educators who will serve young children with varied developmental challenges in regular school programs. An understanding of the needs of families and strategies for collaboration with them will be included. Lecture: 3 hours per week. 3 Credits

ED 203 EARLY CHILDHOOD CURRICULUM

This course develops skills for creating appropriate learning environments for young children. Students plan and prepare activities in specialized curriculum areas including science, social studies, math, health and nutrition, and language arts for individual children and groups. Additional curriculum planning topics include identifying and planning for individual needs and interests, assessment, providing for a range of abilities, incorporating multicultural and nonsexist elements, incorporating play in learning, and the role of family communication. Lecture: 3 hours per week. Prerequisite or co-requisite: PS 222 3 Credits Prerequisite or co-requisite: PS 222

ED 211 YOUNG CHILDREN AND TECHNOLOGY

A course to provide knowledge and understanding of the role of computer technology in the early childhood classroom. Hands on exploration of current children's software will offer skills in designing a developmentally appropriate technological environment for young children. Assistance will be given to identifying appropriate resources for the early childhood teacher. 1 Credits

ED 212 GATEWAY TO CULTURAL COMPETENCE

The course will introduce the concept of cultural (or cross-cultural) competence and its impact on the provision of educational services to children. The development of culturally responsive dispositions and skills will be encouraged through pre-practicum field experiences and exploration of their cultural context, including the effects of customs, history and languages. Students will gain insight into the formative effects of culture on teaching and learning and engage in service learning in preschool and kindergarten classrooms. Note: This course is designed for Education majors. It is recommended that students complete at least one other Education course in addition to the prerequisite. Prerequisite: PS 222. 3 Credits Prerequisite: PS 222.

ED 221 ADMINISTRATION OF EARLY CHILDHOOD PROGRAMS

This course acquaints participants with critical elements in establishing and operating a childcare center. It will explore state regulations, staff relationships, business practices, parent contacts, and community relationships. This course meets the requirements of the Department of Early Childhood Education and Care for the Director I Certificate. Lecture: 3 hours per week. 3 Credits

ED 223 INFANTS AND TODDLERS

Examination of the specialized needs of infants and toddlers with regard to intelligence, language development, nutrition, motor and social abilities, and parent-child relations. Types of programs serving infants, toddlers and their families, focusing on the design of optimum environments and curricula, will be studied. Lecture: 3 hours per week. 3 Credits

ED 227 SUPERVISION IN EARLY CHILDHOOD PROGRAMS

This course will provide an overview of strategies for effective staff supervision in early childhood settings. A theoretical framework will be presented focusing on the role and responsibilities of supervisors and mentors. Students will reflect on their personal experiences with supervision and develop coaching and mentoring skills through practice both in-class and onsite. EEC Lead Teacher certification is suggested. Course will count towards EEC Director II. Prerequisite: ED221 Administration of Early Childhood Programs. 3 Credits Prerequisite: ED221 Administration of Early Childhood Programs.

ED 228 BEHAVIOR MANAGEMENT

To assist the Early Childhood educator to understand the behavior of young children and to develop a plan to optimize classroom communication and discipline. Emphasizes methods and strategies that improve classroom communication and discipline while also building the child's self-image. Lecture: 3 hours per week. 3 Credits

ED 230 PRACTICUM AND SEMINAR IN EARLY CHILDHOOD

This practicum is a supervised field work experience in an early childhood education setting, such as a child care center, nursery school, kindergarten class, early elementary classroom, infant/toddler program or program for children with special needs. Students will gain competencies working with young children 12 hours per week, 150 hours per semester. The course includes a two-hour seminar each week, weekly conferences with the cooperating teachers and regularly scheduled conferences with the College supervisor. Waiver of ED 240 is granted if the student worked as a teacher in a childcare center for at least two years and has demonstrated appropriate competencies working with young children, and has received a grade of B or above in the first semester of student teaching. The student may substitute two Early Childhood electives for ED 240 in the second semester of the fieldwork course. The seminar is available in classroom or online format. Students should contact instructor regarding the ED 240 waiver. Field Experience: 12 hours per week. Seminar: 2 hours per week. Prerequisite or co-requisite: ED 203 6 Credits Prerequisite or co-requisite: ED 203

ED 240 PRACTICUM/SEMINAR EARLY CHILDHOOD ED

This practicum is a supervised field work experience in an early childhood education setting, such as a child care center, nursery school, kindergarten class, early elementary classroom, infant/toddler program or program for children with special needs. Students will gain competencies working with young children 12 hours per week, 150 hours per semester. The course includes a two-hour seminar each week, weekly conferences with the cooperating teachers and regularly scheduled conferences with the College supervisor. Waiver of ED 240 is granted if the student worked as a teacher in a childcare center for at least two years and has demonstrated appropriate competencies working with young children, and has received a grade of B or above in the first semester of student teaching. The student may substitute two Early Childhood electives for ED 240 in the second semester of the fieldwork course. The seminar is available in classroom or online format. Students should contact instructor regarding the ED 240 waiver. Field Experience: 12 hours per week. Seminar: 2 hours per week. Prerequisite or co-requisite: ED 203 6 Credits Prerequisite or co-requisite: ED 203

Electrical Engineering

EE 110 CIRCUIT ANALYSIS I

This is the first half of a calculus-based circuit theory sequence. The combination of theory and lab experiments will meet the needs of students planning to transfer to four-year programs. Topics to be covered: basic circuit analysis, network theorems (superposition, Thevenin/Norton, etc.), active (transistor and OpAmp) circuits, mesh/node analysis, waveforms (sinusoid, step, exponential, etc.), capacitance and inductance, and response of first- and second-order circuits. Extensive lab work along with various circuit simulations S/W (PSPICE, B2SPICE). Lecture: 3 hours per week. Lab: 2 hours per week. Co-requisite: MA 201 4 Credits Co-requisite: MA201

EE 115 CIRCUIT ANALYSIS II

This is the second half of a calculus-based circuit theory sequence. The combination of theory and lab experiments will meet the needs of students planning to transfer to four-year programs. Topics to be covered: Laplace Transforms and s-domain circuit analysis, network functions, sinusoidal steady-state response, filter design, and Fourier Transforms. Extensive lab work along with various circuit simulations S/W (PSPICE, B2SPICE). Prerequisite: EE110 4 Credits Prerequisite: EE110

EE 120 DIGITAL ELECTRONICS

This is the first half of a digital systems sequence. The combination of theory and lab experiments will meet the needs of students planning to transfer to four-year programs. Topics to be covered: Number systems, Boolean Algebra and basic logic functions, combinational logic minimization (including K-Map and Quine-McCluskey), flip-flops, and digital arithmetic. Extensive lab work along with circuit simulation S/W (B2LOGIC). Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits

EE 125 DIGITAL COMPUTER SYSTEMS

This is the second half of a digital systems sequence. The combination of theory and lab experiments will meet the needs of students planning to transfer to four-year programs. Topics to be covered: counters and registers, sequential circuit design, basic logic families (TTL, CMOS, DTL, RTL, IIL), decoding/encoding, MUX/DEMUX, ADC/DAC, memory (RAM/ROM), PLDs (PROM, PLA, PAL), memory systems, and an introduction to the microprocessor. Extensive lab work along with digital simulation S/W (B2LOGIC, CUPL). Lecture: 3 hours per week. Laboratory: 2 hours per week. Prerequisite: EE 120 4 Credits Prerequisite: EE120

EE 150 MICROPROCESSORS

This is the first half of a microprocessors sequence. The combination of theory and lab experiments will meet the needs of students planning to transfer to four-year programs. Emphasis starts with a generic microprocessor and then considers the Motorola 6800. Topics to be covered: programming techniques, transfer-of-control instructions, loops and subroutines, data I/O techniques, interrupts, PIA, serial communication and the ACIA, interfacing the 6800, and an introduction to the MC6840 programmable timer module. Extensive lab work. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: EE 125 4 Credits Prerequisite: EE125

EE 231 HARDWARE ORGANIZATION AND DESIGN

This is the second half of a microprocessors sequence. The combination of theory and lab experiments will meet the needs of students planning to transfer to four-year programs. Emphasis is on the Intel family of microprocessors, particularly the 8086/8088. Topics to be covered: S/W architecture of the 8086/8088, machine language and assembly language coding, review of programming techniques, memory interfacing, I/O interfacing, interrupt interfacing, and an introduction to the IBM PC microcomputer. Extensive lab work. Prerequisite: EE150 4 Credits Prerequisite: EE150

Electronics

EL 101 FUNDAMENTALS OF ELECTRONICS

This course is designed to consider electronic devices and their applications in electrical, electronic, and electro-mechanical systems. This course includes the study of voltage, resistance, current, and power as it applies to DC circuits. In addition, electrical circuits are analyzed by Thevenin's and Norton's theorems and superposition. Laboratory problems are designed to emphasize classroom instruction and provide students with experience using meters, signal generators, oscilloscopes, and bread boarding techniques. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: MA098, or MA131, or MA200, or MA201, or MA202, or MA210, or MA211 4 Credits Prerequisite: MA098, or MA131, or MA200, or MA201, or MA202, or MA210, or MA211

EL 102 FUNDAMENTALS OF ELECTRONICS II

This is the second half of an algebra based circuit theory and analysis sequence. The combination of theory and laboratory experiments emphasizing AC analysis, phaser, resonance, linearity and power in AC circuits, RL, RC and RLC circuits, step response of inductors and capacitors, tuned amplifiers and oscillators. Lecture: 3 hours per week. Laboratory: 2 hours per week. Prerequisite: EL101 4 Credits
Prerequisite: EL101

EL 125 INTERNSHIP

A six to ten week internship will be required for all Electronic Technology students. The internship may be done at Digital, EMC, or at any other high tech companies. 4 Credits Prerequisites: EL102, EE125, EL150

EL 151 ELECTRONICS I

Semiconductor theory; junction, tunnel and zener diodes; bipolar, FET and MOSFET transistors; biasing and stability of devices, small-signal and large-signal behavior are studied together with frequency response. Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits

EL 152 ELECTRONICS II

Continuation of EL 151. Operational and differential amplifiers, the analysis of the behavior of multistage amplifiers, power amplifiers, integrated circuit timers, comparators, signal generators, oscillators, tuned circuit amplifiers, modulators, and thyristor control circuits. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: EL151 4 Credits Prerequisite: EL151

EL 220 SEMICONDUCTOR DEVICES

This laboratory research-based course is designed to familiarize the students with the techniques employed in the process of manufacturing semiconductors or integrated circuits (commonly called ICs or chips). Topics covered in this class include wafer production and fabrication, thermal oxidation, masking, doping, dielectric deposition, and metallization, electric test, and assembly. Design for basic IC components such as transistors, resistors, and capacitors are covered. Field trips to IC manufacturing facilities and guest lectures by IC layout designers are part of this course. Lecture: 3 hours lecture. Laboratory: 2 hours lab. Prerequisite: EL 215 4 Credits Prerequisite: EL 215

Emergency Medical Technician

EM 101 PRINCIPLES OF PREHOSPITAL CARE FOR THE EMT

This course focuses on the fundamental theory, principles, and practice underlying the provision of prehospital emergency care as Emergency Medical Technicians (EMTs) based on current Massachusetts and national guidelines and evolving evidence-based practice recommendations. This course explores EMS systems and operations, airway and ventilation management, resuscitation, patient assessment and treatment of common medical, trauma, and behavioral emergencies throughout the lifespan, and connects pathophysiology to prehospital management. Students must successfully complete both EM 101 and EM 105 in the same semester to be eligible to take the National Registry of EMTs (NREMT) EMT certification examination. Lecture: 4 hours per week. Lab: 4 hours per week. Co-requisite: EM 105 Prerequisite: Admission to EMT, HS Diploma or GED, CORI/SORI requirements, health and vaccination compliance, 18 years of age or older to take the certification exam. 6 Credits Co-requisites: EM 105 Prerequisite: Admission to EMT, HS Diploma or GED, CORI/SORI requirements, health and vaccination compliance, 18 years of age or older to take the certification exam.

EM 105 EMT CLINICAL AND FIELD PRACTICE

This course provides students with clinical education experiences through simulation and clinical/field rotations to enhance knowledge and skills acquired in EM 101 and prepare for the National Registry of EMTs exam and professional practice as EMTs. Students will develop portfolios documenting all patient care activities, preceptor evaluations, and self-reflections. Students will participate in and document comprehensive patient care for no less than 20 patients through simulation and clinical/field experience. Please note that students must be compliant with all health and vaccination requirements in order to be placed in a clinical/field rotation. Students must successfully complete both EM 101 and EM 105 in the same semester to be eligible to take the NREMT EMT certification examination. Lab: 40 hours Clinical/Field: 20 hours Co-requisite: EM 101, 77% (C+) or higher in EM 101 in order to continue in course. Prerequisite: Admission to EMT, HS Diploma or GED, CORI/SORI requirements, health and vaccination compliance, 18 years of age or older to take the certification exam. 2 Credits Co-requisites: EM 101, 77% (C+) or higher in EM 101 in order to continue in course. Prerequisite: Admission to EMT, HS Diploma or GED, CORI/SORI requirements, health and vaccination compliance, 18 years of age or older to take the certification exam.

English

EN 90 FUNDAMENTALS OF COMPOSITION I*

Preparation for college reading, writing, and success. Includes developing reading strategies necessary for understanding and using complex texts; practicing methods for generating, revising, and polishing original writing; and strengthening the academic competencies of setting goals, participating in class activities, and managing workload. Students produce approximately 2500-3500 words of formal writing, including essays written in multiple drafts using multiple sources. A writing sample is required of all students at the beginning of the course, and students are required to submit an exit portfolio that may determine their placement into EN 098 or EN 101. Students must be placed into EN 090 through the College's placement process or the English Department's end of semester portfolio assessment. Credit earned in this course cannot be applied toward graduation. 6 Credits EN090 Prerequisite

EN 98 FUNDAMENTALS OF COMPOSITION II*

Preparation for college writing, including practice in critical reading and research, invention strategies, focus, development, audience awareness, MLA style, and editing. Activities include lecture, small group discussions, instruction in word processing and online research, collaborative peer review, and self-assessment. Students produce approximately 3000-4000 words of formal writing, including essays written in multiple drafts using multiple sources. A writing sample is required of all students at the beginning of the course, and students are required to submit an exit portfolio that may earn students credit for EN 101 and placement in to EN 102. Prerequisite: Students must place into EN 098 through the College's placement process, the English Department's end of semester portfolio assessment, or by completing EN 090. Credit earned for EN 098 cannot be applied toward graduation. 4 Credits Prerequisite: Students must place into EN 098 through the College's placement process, the English Department's end of semester portfolio assessment, or by completing EN 090.

EN 101L ACCELERATED ENGLISH LAB*

This course is designed for students who place into EN100 and who opt to take EN101; Freshman English-I and the corresponding Accelerated English Lab. Activities may include writing workshops, individual conferencing, the development of an electronic portfolio, journal writing, group presentations, as well as small group and whole class reading and research assignments. Grading for the lab is Satisfactory/Unsatisfactory. (Please note that eligible students must co-enroll in the Accelerated English Lab and the corresponding section of Freshman English-I). Co-requisite: Students are required to take EN101L Lab and the corresponding section of EN101: Freshman English-I. Prerequisite: Students must be placed into EN100 through the College's placement test or the Department of English's end of semester portfolio assessment. 3 Credits Co-requisite: EN101L Lab and the corresponding section of EN101: Freshman English-I. Prerequisite: Students must be placed into EN100 through the College's placement test or the Department of English's end of semester portfolio assessment.

EN 101 FRESHMAN ENGLISH I

The first of a two-semester course to improve writing. Students write a minimum of four essays in multiple drafts with emphasis on critical thinking, reading, focus, organization, clarity, and grammatical correctness. Students become familiar with the process of composing academic writing: producing rough draft material, revising, and editing. Readings across the curriculum provide material for discussion and analysis of ideas. By the end of this course, students should be prepared for the longer essays and research papers that EN 102 requires. A writing sample is expected of all students at the beginning and the end of the course to assess student-writing competency and determine progress in writing course sequence. Prerequisite: Students must be placed in to EN101 through the College's placement process or the Department of English's end of semester portfolio assessment. 3 Credits EN101 Prerequisite

EN 102 FRESHMAN ENGLISH II

Further development of writing skills, with additional exposure to library research. Students produce a minimum of four longer papers, with emphasis on critical thinking, academic research, audience awareness, critical reading, unity, coherence and style. Papers give practice in making reference to readings from a variety of academic disciplines, including literature. Students will demonstrate the ability to read with increased understanding and insight. Prerequisite: EN 101 3 Credits Prerequisite: EN101

EN 120 INTRO TO DIGITAL WRITING

An introduction to writing in digital environments. Students will analyze and compose multimedia texts using a variety of applications, including blogs, wikis, websites and social media, to gain awareness of their different uses and suitability for various audiences. Topics will include digital aesthetics and design, ethics and fair use policy, and internet identity and presence. Students will create a digital portfolio of their work. Prerequisite: EN 101. Completion of EN 102 is recommended. 3 Credits Prerequisite: EN 101. Completion of EN 102 is recommended.

EN 195 CREATIVE WRITING

This course gives students the opportunity to analyze and experiment in a number of creative writing genres, which may include creative non-fiction, fiction, poetry and drama, among others. The class will read and discuss the work of various writers and will participate in exercises designed to generate and craft original material. Students will share their own pieces with their peers and instructor, and will be given the opportunity to revise their work for final submission. At the end of the course students are expected to have a portfolio of their own writing and a greater understanding of the creative process. 3 Credits

EN 202 ADVANCED WRITING

Students will work collaboratively and independently on in-depth writing projects, developing skills needed to prepare and publish original work and the work of others. Students will solicit, read, evaluate, and edit submissions for potential publication in the school's literary magazine, newspaper, or in other venues. In addition to engaging in editorial roles, students may be given the opportunity to create and present projects that explore their own particular interests and career goals. Co-requisite: EN 102 or permission of instructor. 3 Credits Co-requisite: EN 102 or permission of instructor

EN 220 PROFESSIONAL WRITING

Provides directed practice in writing for specific audiences, particularly in the fields of science, business, and technology. Topics include understanding the ethical, legal, and cultural considerations of the professional environment, document management, and the effective use of graphics. Students produce a portfolio of work that may include formal and informal reports, proposals, job-related correspondence, instructions and procedures, summaries, and oral presentations. Prerequisite: EN 101. Completion of EN 102 is recommended. 3 Credits Prerequisite: EN 101. Completion of EN 102 is recommended.

English as a Second Language

ES 86 COLLEGE ESL I*

Designed for students who have limited experience with English. Introductory course focuses on basic understanding of English through integrated reading, writing, and speaking/listening activities. Students develop fluency in English through personal narrative and information sharing assignments. Required for some students based on College placement tests. A limited course load is recommended for students enrolled. Lecture: 6 hours per week. 6 Credits ES086 Prerequisite

ES 87 COLLEGE ESL II*

Designed for intermediate level students. Focuses on the development of abilities in reading, writing, speaking, and listening through an integrated approach. Classroom discussion of readings are used to develop students' confidence in their understanding and expression of English. Students develop college composition skills, focusing primarily on personal narrative and opinion pieces. Required for some students based on College placement tests. Lecture: 6 hours per week. 6 Credits ES087 Prerequisite

ES 88 LISTENING AND SPEAKING I*

Designed for beginner and intermediate-level English language learners. Focuses on speaking, pronunciation, and listening skills for conversational and academic English. Students build vocabulary and develop fluency by discussing various topics of interest. Activities may include listening to podcasts and videos, participating in discussions and role-plays, and giving presentations. Does not replace any degree requirement or elective. Lecture: 3 hours per week. 3 credits. 3 Credits

ES 89 GRAMMAR AND EDITING I*

Intended for students who place into ES 086 and ES 087. Focuses on understanding and using fundamental English grammar in context. Students learn to identify errors in their own writing and edit for correctness. Areas to be covered include basic verb tenses and sentence formation. Lecture: 3 hours per week. 3 Credits

ES 91 LISTENING AND SPEAKING II*

Designed for high-intermediate and advanced English language learners. Focuses on improving speaking, pronunciation, and listening skills for college study. Students develop fluency and accuracy by discussing various academic topics of interest. Activities may include listening to authentic materials such as podcasts and videos, participating in discussions and debates, and giving presentations. Does not replace any degree requirement or elective. Lecture: 3 hours per week. 3 credits. 3 Credits

ES 93 GRAMMAR AND EDITING II*

Intended for students in ES 100 or higher, including students in upper level writing courses who wish to improve their English grammar. Focuses on understanding and using advanced grammatical structures in context. Students develop an understanding of their own grammatical problems and how to edit their own writing for correctness. Areas to be covered include verb forms, complex sentences and parallel structure. Lecture: 3 hours per week. 3 Credits

ES 98 ESL SUMMER WRITING SEMINAR*

This course is designed for high-intermediate and advanced English language learners who want to improve their academic English skills. Students will read about a theme in literature, culture, or society and produce different types of academic writing, including one longer essay. Upon completion of the course, students may submit a writing portfolio to be considered for accelerated writing course placement. Does not replace any degree requirement or elective. Prerequisite: Placement into ES100 or higher. 3 Credits Prerequisite: Placement into ES100 or higher.

ES 100 COLLEGE ESL III*

Designed for high-intermediate level students. Focuses on the development of abilities in academic reading, writing, speaking, and listening through an integrated approach. Readings and classroom discussion are used to prepare students for reading/writing tasks they will encounter in academic assignments. Students produce a portfolio including three essays and a reading journal. Required for some students based on College placement tests. Lecture: 6 hours per week. 6 Credits Placement into ESL III

ES 150 COLLEGE ESL IV*

Designed for advanced level students. Focuses on the development of abilities in academic reading, writing, speaking and listening needed for college level courses. Students evaluate and analyze course readings and learn to incorporate readings as sources in their academic writing. Students produce a portfolio including three essays and a reading journal. Required for some students based on College placement tests. Lecture: 6 hours per week. 6 Credits Placement into ESL IV

Environmental Sciences & Safety

EV 103 ENVIRONMENTAL STUDIES I

An introduction to the science of ecology. Topics include: classes of living organisms and their sources of energy, food chains, elements essential for plant and animal nutrition, mutation and evolution, chemicals that cause genetic or somatic injury, cancer, the atmosphere, and the human population. Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits

EV 104 ENVIRONMENTAL STUDIES II

A continuation of the study of ecology. Topics include: the atmosphere, the hydrosphere, the geosphere, pollution and pollution control, waste treatment and disposal, pests and pesticides, food additives, radioactivity, nuclear power and other forms of energy, and the human population. Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits

EV 105 INTRODUCTION TO ECOLOGY I

This course presents the fundamental concepts in ecology and environmental science and develops critical thinking skills. These skills include interpretation analyzing, synthesizing and assessing new information. Topics presented in the course include a descriptive review of various ecosystems (such as the atmosphere, the hydrosphere, the geosphere); a basic discussion of energy and food, the concepts of competition, predation, adaptation and extinction thinking. 2 Credits

EV 106 INTRODUCTION TO ECOLOGY II

This course covers various environmentally significant issues. Including air and water quality; land/marine ecology; hazardous wastes and recycling. The public perception of environmental policies and issues, and the current status of environmental research are introduced. Prerequisite: EV 105 2 Credits
Prerequisite: EV105

EV 110 PRINCIPLES OF ENVIRONMENT SCIENCE & SAFETY

This course is designed to provide the tools and foundations necessary to understand the physical, chemical & biological properties of environmental contaminants and their effects on the living population and ecosystems. The course is designed to teach an understanding of the basic principles of water, air and soil pollutants. Topics examined include sources of contaminants, their fate, transport in multiple environmental media and treatment of such factors. Environmental health factors associated with the problems stemming from contamination of air, water, and food. Lectures and labs will cover these properties of specific contaminants in the environment, their monitoring techniques, and their interactive effects with water, air and soil. International/global issues related to the environment will also be examined. This course provides a qualitative and quantitative approach based on the integration of technology, mathematics, physical, chemical and biological sciences. Lecture: 3 hours. Lab: 2 hours. 4 Credits

EV 120 ASTRONOMY

This course is a descriptive introduction to the science of astronomy. The goal is to acquaint the beginning student with the sky and where we are in the observable universe. Topics will include understanding the night sky, motions of the moon and sun, the structure of solar system and galaxy, and the origin of the universe. Other topics will include seasons, history of astronomy, life and death of stars, astronomical instruments, and the search for new planets. Lecture: 3 hours per week. 3 credits. 3 Credits

EV 130 METEOROLOGY

An introduction to the science of atmospheric behavior. Topics include the structure of the atmosphere, climate, fundamentals of the weather, cloud formation, atmospheric motions, air masses, pollution, and use of meteorological instruments. 3 Credits

EV 201 ENVIRONMENTAL HEALTH & SAFETY

This course provides a comprehensive examination of environmental health issues through the scientific understanding of causes and possible future approaches to control major environmental health problems. This would include pollution problems and topics in environmental pollutants; environmental contamination with physical, chemical, and biological agents, vectors, dissemination (air, water, soil); solid and hazardous waste; biomarkers and risk analysis. The course will cover environment-to-human interactions and their impact. Environmental carcinogenesis, cell injury, food- and water-borne disease and risk analysis. Lab methods will include forensic toxicology, analysis of toxic drinking water contaminants, food microbiology, and bacterial toxins. Prerequisites: BI 110 or EV 110 or CH 110 Lecture: 3 hours per week. Lab: 3 hours per week 4 credits 4 Credits Prerequisites: EV106, BI120, CH120

EV 210 ENVIRONMENTAL MICROBIOLOGY

This course covers the structure, biochemistry, physiology and classification of the microorganisms that have ecological and industrial significance. It also includes the basic sampling, analysis and testing technologies in air, water, and soil. Site-remedial techniques including bio-remedial technique will also be reviewed. The course will consider the role of microorganisms in the environment and investigate the use of microbes in various industrial applications. The classifications of microbial toxins, enzymes, and other hazardous products of microbial toxicology and management procedures will be covered. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisites: EV 110, BI 120, CH 120 4 Credits EV210 Environmental Microbiology

EV 220 ENVIRONMENTAL ORGANIZATION ISSUES & ANALYSIS

In this subject, environmental management is examined from different perspectives including the socioeconomic and community aspects. Global issues as well as American environmental issues are considered. Integrated environmental management is offered as a means of limiting effects of problems. This is considered in the light of environmental ethics and legislation. Other aspects covered include risk environmental impact assessment and consequences including the evaluation process. Tools used for capacity building are developed and, several major case studies are explored. Issues and sustainable use of environmental resources are also emphasized. The Safety analysis will study the implementation and identification of major categories for both safety and environmental hazards prevention techniques through the development of programs appropriate for dealing with them. This course will also study the development of procedures in occupational safety models of accidents as well as techniques of investigation, emergency hazards, and risk assessment. 3 Credits

EV 240 ENVIRONMENTAL TOXICOLOGY

The course discusses critical issues associated with toxins in the environment through the examination of physiological, epidemiological, and biochemical effects and the mechanisms of action of such toxins on the human body. The course will cover the sources, definitions and classifications of toxins their effects on the human body and the environment. The relationship between toxins, the rate of mutation & cancers will be covered. Effects of exposure to substances such as asbestos, lead, organic solvents, radiation and germs as well as prevention and control will be discussed. The role of the immune system and the role of immuno-toxicology in defending the body will be covered. Applying these fields to understand how substances in the environment directly affect human health will be addressed. The environmental regulations, risk assessment, and the role of science, society and government in protecting human and environment health will be reviewed. Prerequisites: EV110 and EV210 Lecture: 3 hours per week. Laboratory: 3 hours per week. 4 Credits Prerequisites: EV110 and EV210

EV 242 ENVIRONMENTAL SCIENCES DIRECTED RESEARCH STUDY

This is a hands-on practical course to train students in a specific area of environmental sciences. The course will be supervised by a faculty member who will define the area of study with each student in association with mentors from the various fields. Examples of these fields are: Air and Water Quality, Water Microbiology, Hazardous Waste Handling, Food Hygiene and Safety, Marine Microbiology, Environmental Preservation, Drinking Water and Sewer Treatment. The instruction will be conducted both on campus and at selected field sites. Predetermined outcomes and assessment procedures must be identified prior to the training. Techniques such as protein toxin isolation, DNA extraction and sequencing, microbial identification, Gas Chromatography and other chromatography methods plus colorimeter & spectrophotometric methods would be used. Students may present their finding in national scientific conferences in the form of oral and/or written reports. Prerequisite: EV 210 4 Credits
Prerequisite: EV 210

French

FR 101 BEGINNING FRENCH I

Develops basic skills in speaking, understanding, reading, and writing. Gradual growth in oral expression with intensive vocabulary and idiom building in meaningful contexts. Lecture: 3 hours per week. 3 Credits

FR 102 BEGINNING FRENCH II

Focuses on the acquisition and development of reading, writing, comprehending, and speaking skills with emphasis on the aural and oral. Oral drills, audio-visual material, directed conversation, and dialogues will be utilized. Prerequisite: FR101 3 Credits Prerequisite: FR101

Geography

GG 101 GEOGRAPHY OF THE AMERICAS

Systematic study and comparative analysis of populations, natural resources and potentialities for development of the United States, Latin America, and Canada. Lecture: 3 hours per week. 3 Credits

GG 103 INTRODUCTION TO GEOGRAPHY

An introduction to the three organizing geographical traditions: earth science, culture and environment, locational and area analysis. Special attention is given to the interrelationships between humankind and the environment, and the dynamic nature of the geography of world locations. Lecture: 3 hours per week. 3 Credits

GG 105 WORLD REGIONAL GEOGRAPHY

A geographic analysis of selected world regions considering both physical and human elements. Regions are studied in terms of their land-forms, oceanographic, and atmospheric influences. Regions are also investigated in terms of population distribution and economic, political, social, and cultural forms. 3 Credits

Government

GV 102 CONTEMPORARY POLITICAL THEORY

An analysis of modern political thought. Emphasis on socialism, communism, and fascism as well as the liberal, democratic tradition and Leftist traditions. 3 Credits

GV 201 AMERICAN GOVERNMENT

Study of the Constitutions of the United States and of Massachusetts. Examines the American Congress and Presidency, the process of governance, civil rights, and civil liberties. Lecture: 3 hours per week. 3 Credits

GV 202 COMPARATIVE EUROPEAN GOVERNMENTS

Studies the governmental institutions and philosophies of the United Kingdom, France, Germany, and the Soviet Union. Analysis of the historical evolution of these systems of government and the ideologies that formed and supported them. Evaluation of the relative merits of each system in solving the unique governmental problems, which they have confronted. 3 Credits

GV 203 UNITED STATES CONSTITUTIONAL HISTORY

This course will examine the origins of the "living constitution." Specific areas of inquiry include: the relationship of commercial growth to legal change; Federal v. State conflicts; the different schools of constitutional interpretation. 3 Credits

GV 210 CONTEMPORARY GLOBAL ISSUES

Explores such topics as the nation-state, power vs. morality in foreign policy-making, the East vs. West, and current problems. 3 Credits

GV 230 CIVIL RIGHTS AND CIVIL LIBERTIES

This course analyzes the politics of civil rights and civil liberties in the U.S.. How have the president, Congress, state governments and courts responded to political pressures and social controversy over the right to dissent, freedom of speech and press, privacy, and civil rights. What are the political and social consequences of these governmental decisions and actions? 3 Credits

Health Sciences

HL 103 MEDICAL TERMINOLOGY

This course presents construction of medial terms through common word roots, prefixes, and suffixes. Students will learn to master medical vocabulary through classroom instruction. Lecture: 3 hours per week. 3 Credits

HL 110 HEALTH ASSESSMENT AND SKILLS

This course introduces students to the basic professional, psychomotor and cognitive attitudes and skills required to complete a systematic assessment and provide basic nursing care. Links to core concepts and competencies are reinforced through laboratory exercises and basic simulations. Achievement of competency and safety will be tested (pass/fail) in order to ensure readiness for clinical experience. Total laboratory course credit 1, equivalent of 3 laboratory hours a week for a 15 week semester, total course contact hours 45 hours. 1 Credits Prerequisites: BI 115, BI 116, BI 123, HL 111, EN 101, PS 101 Co-requisites: HL 125, NU 130, NU 135, NU 136, PS 118

HL 111 ESSENTIALS OF NUTRITION

This course focuses on one of the basic human needs, that of nutrition. The first portion of the course stresses the nutritional needs of well individuals across the life span. A working knowledge of nutrients and their food sources is provided, as well as some basic menu planning. An overview of psychological, economic, cultural and religious factors that affect nutrition is included. Basic principles of food preparation and safety are discussed, along with an introduction to the agencies and laws concerned with nutrition. The second portion of the course deals with dietary modifications utilized in dealing with common health problems. Total course credits 3 lecture hours per week for a total class hours of 45 hours. 3 Credits

HL 125 PHARMACOLOGY FOR NURSES: A PATHOPHYSIOLOGY APPROACH

This course provides an essential foundation for the nursing care of patients receiving pharmacologic agents for the prevention and/or management of alterations in biophysical and psychosocial function. Content emphasizes the core competencies of this program and their relationship to basic principles of pathophysiology, pharmacology, diagnostics and the nursing management of patients receiving commonly prescribed therapies. Total course credits 4, theory 4 hours a week, total contact hours 60. Prerequisites: BI 115, BI 116, BI 123 EN 101, HL111, PS 101 Co-requisites: HL 110, NU 130, NU 135, NU 136, PS 118 4 Credits Prerequisites: BI 115, BI 116, BI 123 EN 101, HL111, PS 101 Co-requisites: HL 110, NU 130, NU 135, NU 136, PS 118

Hindi

HI 101 ELEMENTARY HINDI I

This first course as part of a sequence of two courses, offers an in-depth introduction to modern Hindi, including the Devanagari script. Through a combination of graded texts, written assignments, audio/visual material, and computer-based exercises, this course provides cultural insight and increases proficiency in understanding, speaking, reading, and writing Hindi. Emphasis is placed on spontaneous self-expression in the language. 4 Credits

HI 102 ELEMENTARY HINDI II

This course offers an in-depth introduction to modern Hindi, including the Devanagari script. Through a combination of graded texts, written assignments, audio/visual material, and computer-based exercises, this course provides cultural insight and increases proficiency in understanding, speaking, reading, and writing Hindi. Emphasis is placed on spontaneous self-expression in the language. 4 Credits

History

HS 101 WESTERN CIVILIZATION I

This course explores the history of human civilization, including the development of society, politics, and culture in Europe until the 17th century. Topics covered may include the ancient world, the medieval period, and the Renaissance and Reformation 3 Credits

HS 102 WESTERN CIVILIZATION II

This course continues the Western Civilization survey sequence from the 16th century to the present. Topics may include the Scientific Revolution, the American and French revolutions, and World Wars I and II, the Cold War, and globalization. 3 Credits

HS 103 WORLD CIVILIZATION I

This introductory survey course examines the origins and development of major world civilizations until 1500, focusing on the social, political, economic, religious, and cultural aspects of Middle Eastern, European, Asian, African, and Mesoamerican civilizations. 3 Credits

HS 104 WORLD CIVILIZATION II

This introductory survey course examines the continued growth and development of major world civilizations from 1500 to the present, focusing on society, politics, economic relationships, religion, and culture, including increased interaction between these societies and globalization in the modern era. 3 Credits

HS 105 UNITED STATES HISTORY TO 1877

The first half of the US History survey sequence focuses on American history until 1877. Topics include the history of the colonial era; the American Revolution and Early Republic; the Civil War and Reconstruction. 3 Credits

HS 106 UNITED STATES HISTORY SINCE 1877

The second half of the US History survey sequence continues with emphases on industrialization, urbanization and immigration; expansion of the role of government through the New Deal, Great Society and Cold War; movements for civil rights; contemporary history. 3 Credits

HS 115 AMERICA THROUGH THE MEDIA

Explores social-cultural values of the United States from the 1920's to the present through the printed media, films, radio, T.V. and music. The Depression, World War II, the post-war world of affluence and anxiety are emphasized. 3 Credits

HS 201 MODERN LATIN AMERICAN HISTORY

This course will explore the history of Latin America from 1800 to the present, including Latin American independence movements; the rise of caudillismos; the impact of American imperialism in Latin America; the Mexican Revolution; the Cold War's impact on the region; current challenges including immigration and the rise of Central American gangs. While discussing those issues, this class will pay special attention to analyzing Latin American attempts to build stable societies and why those attempts failed. 3 Credits

HS 210 AFRICAN-AMERICAN HISTORY

This course explores the African American struggle for equality throughout American history, from the colonial era to the civil rights movement and contemporary America. Topics covered will include the origins of slavery; the Civil War, Reconstruction, and the emergence of segregation; urbanization and industrialization; the cultural and intellectual achievements of African Americans; the Long Civil Rights movement; contemporary African American political and economic life. 3 Credits

HS 220 NAZI GERMANY AND THE HOLOCAUST

This course explores primary and secondary sources to determine the emergence of Nazism and the causes of the Holocaust, the methodology and implementation of the Nazi genocide of the Jews and other European groups, and the Holocaust in the context of World War II and its aftermath. In addition, students will examine the historiography of the Holocaust, comparing different historical explanations and schools of historical analysis to determine how they have influenced our understanding of this event.

Prerequisites: Completion of one History 100-level course. 3 Credits
Prerequisites: Completion of one History 100-level course.

HS 230 WE THE PEOPLE: IMMIGRATION AND CITIZENSHIP IN U.S. HISTORY

Immigrants have shaped and defined the United States yet this legacy is often contested as different generations argue about what it means to be "American." This course traces the history of immigration and the changing definitions of citizenship from the colonial era to the present. It begins with the first European contact and settlement in the Americas, follows the three great immigration waves of the 19th and 20th century, and explores how social, cultural, and political forces have influenced the continual evolution of the citizenship process. Prerequisite: Successful completion of EN101 3 Credits Prerequisite: Successful completion of EN101

HS 299 HISTORY INTERNSHIP

This course offers a combined academic and professional experience that will allow the student to apply their history training and knowledge while developing hands-on experience in professional positions related to history fields, including archives, museum education, and preservation. Students will study public history under the direction of appropriate faculty, and work on-site at a history institution to increase their research, writing, presentation and technical skills. 3 Credits

Hospitality Management

HM 101 INTRODUCTION TO HOSPITALITY

Considers the components, development and scope of the lodging/food service (hospitality) industry; reviews industry organizational structures; and identifies industry trends and career options. Field trips and guest speakers as appropriate. Lecture: 3 hours per week. 3 Credits

HM 102 FRONT OFFICE MANAGEMENT

Introduces all aspects of front office procedures in lodging. Stresses the importance of operations that are guest-focused and built upon inter-departmental communication. Automated guest registration systems are studied extensively. Role-play strategies are incorporated throughout. 3 Credits

HM 122 HOSPITALITY LAW

This course provides students, practicing professionals and managers in hospitality, travel, culinary arts, and casino industries with the knowledge to address legal issues confronting them in their specific field. By reading the textbook and participating in the course learning activities and assignments, students and practitioners alike can appreciate and identify what actions and precautions are necessary to avoid, or at least minimize the number of lawsuits. The course uses the case method and actual legal briefs to learn the discipline of law related to the hospitality industries. Students will study decisions from actual cases in which hospitality establishments were sued, as well as what legal precedents were cited. 3 Credits

HM 201 FOOD AND BEVERAGE MANAGEMENT

An in-depth study of the practices and principles used in food and beverage operations. Students will examine issues related to inventory management, cost of food/beverage sales, purchasing, legal and ethical issues as well as management and marketing issues. All students enrolled in this course will be required to complete a CARE (Controlling Alcohol Risk Effectively) program. Lecture: 3 hours per week. 3 Credits

HM 203 CONFERENCE & EVENT PLANNING

This course provides the practical knowledge and opportunity to design, develop, implement and manage meetings, expositions, events and conventions (MEEC). The course also discusses the requirement for launching various MEEC programs, including entertainment arrangement, designing furnishings, obtaining financing, selecting vendors and suppliers, managing the MEEC project, using applicable technology, audio and visual equipment and social media, planning a marketing campaign, and organizing food and beverage services. Prerequisites are HM 101 or permission of the instructor. 3 Credits
Prerequisites: HM 101 or permission of the instructor.

HM 208 INTRODUCTION TO TOURISM

This course provides the knowledge and skills for developing and managing domestic and foreign tourism and travel opportunities. The course also discusses cruise attractions and entertainment, selecting travel destinations, providing direct marketing campaigns and food and beverage services. Students will also develop an understanding of air travel products and suppliers, the tourism environment, the impact of the economic environment, custom regulations, and implementing quality customer services. Prerequisites are HM 101 and HM 201 or permission of the instructor. 3 Credits
Prerequisites: HM 101 and HM 201, or permission of the instructor.

Human Services

SW 101 INTRODUCTION TO SOCIAL WELFARE

This course provides an historical perspective and orientation to the variety of fields within human services. Discussions of basic principles and concepts, the role of the professional, legislation, current issues and trends are covered. Journal writing and field trips to selected agencies are integral elements of this course. Lecture: 4 hours per week. 4 Credits

SW 201 PRACTICUM/SEMINAR

This is a professionally supervised, 150 hour field work experience in a human service setting. A weekly seminar and scheduled conferences are also required. Prerequisite: SW 101 and Instructor permission. Lecture & field experience: 6 credits. 6 Credits
Prerequisite: SW 101 and Instructor permission.

Humanities

HU 103 HUMAN VALUES, PERSONAL FREEDOM, AND THE ARTS

An exploration of topics and issues from the Ancient Greeks, Romans, and Middle Ages that have a major influence on people in the twentieth century. Major ideas examined include: wisdom, love, duty, courage, justice, freedom, the relationship of people to each other, their country, and their religion. Lecture: 3 hours per week. 3 Credits

HU 104 ART IN MODERN SOCIETY

Examines the movements, ideas, and innovations in modern painting, sculpture, and architecture. Focus on post-World War II expressionism, abstractionism, and surrealist art. Lecture: 3 hours per week. 3 Credits

HU 105 EXPLORING WORLD RELIGIONS

This course compares what world religions believe about God, atheism, grace, karma, incarnation, reincarnation, heaven and hell, and what these beliefs contribute to our understanding of contemporary issues, including ecology, artistic expression, and global awareness. Lecture: 3 hours per week. 3 Credits

HU 106 INTRODUCTION TO VEDIC THOUGHT

This course provides an overview of Vedic Studies with its unique philosophy of the ultimate goal of human birth. It includes an outline of: the ancient extant texts, the origin and development of Hindu society with its unique way of life, the caste system, the four stages of life, the four aims of life, the role of food, God in Its infinite forms, the Law of Karma, the theory of Predestination, the theory of reincarnation, Hindu ethics, guru and disciple relationship, the two ways of living (activistic or renunciant), the four major yogas, the sacred mantras and symbols, importance of temples, the concept of the three gunas, cyclic dissolution of the world, liberation from the cycles of rebirths, and individual growth in harmony with the universe. Lecture: 3 hours per week. 3 Credits

HU 107 KARMA YOGA: SCIENCE OF ACTION

In the Hindu tradition, Karma Yoga is a simple scientific technique used to perform everyday actions skillfully with a serene and focused mind. The student will understand the theory and practice of Karma Yoga as enunciated by Sri Krishna in the Bhagavad Gita. Among the expected benefits experienced with the practice of this discipline include improved physical and mental health, balanced individual growth, harmony in social interactions, fearlessness, superior work performance, increased self-awareness, and a sense of individual calmness fostering global peace. Lecture: 3 hours. 3 credits. 3 Credits

HU 110 MYTH, MAGIC, AND MYSTERY

This course investigates how diverse cultures have explained life's mysteries in order to understand common human problems, values, and achievements. Students read the myths, legends, folk tales and holy books of diverse ethnic and cultural groups. Goals for the course include: learning about the traditional values and wisdom of others in the human continuum, and achieving a better understanding of our place within that continuum. Students work in teams and choose stories and cultures to research. They observe from cross-cultural and interdisciplinary perspectives, and produce written and audiovisual presentations of their findings. Lecture: 3 hours per week. 3 Credits

HU 120 WORLD TRADITIONS

Comparative analysis of global cultural practices and assessment of their impact within a multicultural environment. Examines the origins and sustenance of ritual practices within postmodern society. 3 Credits

HU 203 STUDIES IN MODERNITY

An interdisciplinary humanities course that explores the condition of modernity and related themes in Western thought from the mid-19th century. We will draw from the fields of philosophy, literature, literary theory, social thought, and intellectual history. Topics will include understanding the concept of modernity, the significance of modernism in literature and the arts, and new concerns with subjectivity and truth. Lecture: 3 hours per week. 3 Credits 3 Credits

Interior Design

IN 101 INTRODUCTION TO INTERIOR DESIGN

This course is designed to provide a comprehensive study of the methods used by the interior designer to create the harmonious integration of interiors and materials in both residential and commercial settings. The professional interior designer is trained to provide the total creative solution for an interior? as contrasted with a decorator who furnishes an already planned interior.? Topics will include materials for interiors, furniture styles and accessories, lighting, window treatments, and the development of a final residential or commercial project. Architectural drawing techniques and equipment will be used throughout the course. In addition to the cost for tuition and fees, all students are required to purchase an architectural drawing kit. Lecture: 3 hours per week. 3 Credits

IN 102 ARCHITECTURAL DRAWING FOR INTERIOR DESIGN

This course will provide an in-depth study of the interior designer's drawing techniques. The skilled use of drafting tools and materials will enable the student to express his or her ideas visually. The course will focus on floor plans, elevation, space planning, and three-dimensional representational drawings. In addition to textbooks, all students must purchase or have access to a complete architectural drawing kit. 3 Credits

IN 103 HISTORY OF HOME FURNISHINGS

This course outlines the evolution of period furniture, architecture, interiors, and materials from the Gothic to the present. a detailed analysis of furniture styles and construction will be presented in an historical context. In order for the student to develop an appreciation for furnishings and decoration, trips to museums, furniture showrooms, and historic homes will be planned. Lecture: 3 hours per week. 3 Credits

IN 104 INTERIOR DESIGN WITH CAD/AUTOCAD

Introduces students to the AutoCAD software as a tool to present and document designs. Emphasis is placed on editing drawings, layering, templates, dimensioning, text and printing. In addition, strong emphasis is placed on drafted quality and printed readability of all documents. Students will translate floor plans, elevations and sections from a previously hand drafted project in AutoCAD to produce a set of working drawings for their portfolio. Prerequisite: IN 102. 3 Credits Prerequisite: IN 102.

IN 201 COLOR THEORY AND TECHNIQUES

Introduces students to the major concepts of Color Theory in Interior Design including the principles of: color systems, natural lighting and color, psychological impact of color, color schemes, special color effects, practical approaches and working method of color theory. 3 Credits

IN 202 MATERIALS IN DESIGN

Material selection is a very important aspect of an interior designer's project planning. The successful conversion of ideas to practical applications will be enhanced by the proper selection of materials. Wall coverings, fabric texture, plastics and chrome become essential ingredients in the combining of space and form within the designer's planned environment. Samples of a variety of designer materials will be studied and evaluated. 3 Credits

IN 205 COMMERCIAL AND RESIDENTIAL PRESENTATION TECHNIQUES

This course is designed to teach students all the practical skills they will need to make a complete presentation. Floor plans, elevations and other drafting techniques will be explored as well as the execution of color renderings and material boards. The use of both residential and commercial projects throughout the course will provide the backdrop for student presentations that will include visual, verbal and financial presentations. Time will be spent learning how to price a project, ranging from the selling of your design work to the actual cost and selling of the physical project. Topics are presented by the instructor, assigned Design projects are then completed by students both in class and outside of class. Design projects will be given on a weekly basis, with a final project due at the end of the semester, that incorporates drawings, verbal skills and a summary of building costs. 3 Credits

Italian

IT 101 BEGINNING ITALIAN

Instruction on the basic skills of understanding, speaking, reading, and writing Italian. Basic pronunciation skills, limited but practical vocabulary, common idiomatic expressions, and sufficient knowledge of sentence structure and grammatical principles to understand materials written in Italian. Emphasis on practical uses of the language rather than theory. In addition to grammar, four graded Italian readers are used in this course. 3 Credits

IT 102 ITALIAN II

Italian II is a continuation of Italian I. Italian II reinforces the listening, speaking, reading, and writing skills learned in Italian I so that students can communicate more effectively and accurately in Italian as it is spoken and written today. There will also be dialogs, readings, and culture to give students an appreciation of contemporary Italian life and culture. 3 Credits

Law

LA 200 MEDIA AND THE LAW

The course covers important aspects of the law pertaining to media as a form of communication. Topics include privacy, obscenity, and copyright. Sources of law and legal reasoning will be emphasized. The course should enhance the students' understanding of the U.S. legal system and constitutional laws affecting communication. The course will also help students recognize the legal issues that can occur in professional and personal communication and help them avoid legal pitfalls when communicating through and within media. 3 Credits

LA 221 PRINCIPLES OF BUSINESS LAW

The course covers important substantive areas of law with emphasis on commercial aspects. Topics include: sources of law, legal reasoning, civil procedure, torts, criminal law, real property, contracts and an introduction to the Uniform Commercial Code. Lecture, activities, and simulations. Lecture: 3 hours per week. 3 Credits

LA 222 PRINCIPLES OF BUSINESS LAW II

A continuation of LA 221. Agency, sales and warranties, commercial paper, real and personal property, business organizations, and debtor-creditor relations. 3 Credits Prerequisite: LA221

LA 227 LEGAL ENVIRONMENT OF BUSINESS

This course explores special topics in contemporary law such as agency, finance law, commercial paper, labor law, computer law, entertainment law, environmental law, consumer protection, securities regulation, and governmental regulation of business. Lecture: 3 hours per week. 3 Credits

LA 228 CRIMINAL LAW AND PROCEDURES

An introduction to the concepts of criminal liability, substantive criminal law, and the basic elements of various crimes. Topics covered include pretrial, and trial procedures, criminal defenses, jurisdiction of courts. Lecture: 3 hours per week. 3 Credits

LA 230 LAW AND SOCIETY

This course introduces students to the institutions and participants of the American legal system. Topics covered include court procedures, civil and criminal law, constitutional law, and public policy. Students also read and analyze case law and statutes, and participate in class activities. Lecture: 3 hours per week. 3 Credits

LA 241 DNA LAW

This course examines the Fourth Amendment concepts of unreasonable search and seizure and the exclusionary rule, and the Fifth Amendment protections, as well as the concept of privacy in the U.S. Constitution, all as applicable to the FBI CODIS database and DNA as evidence. Technical challenges to DNA evidence, based on scientific errors and misapplication of analysis of allelic frequencies in populations, are discussed. Lecture: 3 hours per week. 3 credits. Prerequisites: LA 228, or equivalent, or consent of instructor; BI 110 (preferred) or BI 101, or equivalent, or consent of instructor. 3 Credits Prerequisites: LA 228, or equivalent, or consent of instructor; BI 110 (preferred) or BI 101, or equivalent, or consent of instructor.

LA 242 DNA LAW TRIAL PRACTICES

Pretrial practices, such as discovery and motions in limine as specific for DNA evidence, and rules of evidence are discussed. Students will participate in mock trial exercises, specifically focused on presenting, and challenging, sophisticated DNA analysis to lay juries. Lecture: 3 hours per week. 3 credits Prerequisites: CJ 217, or equivalent, or consent of instructor; LA 241 or consent of Instructor. 3 Credits Prerequisites: CJ 217, or equivalent, or consent of instructor; LA 241 or consent of Instructor.

LA 250 HOSPITALITY LAW

The course addresses the legal aspects of hospitality management using the case method and legal briefs. The legal implications of civil law, tort and contracts will be discussed, along with the law and legal relationships that exist in the hospitality business context and environment. Further, this course prepares students and professionals in the hospitality industry to negotiate the industry's complex network of legal requirements and manage their operations in a way to minimize legal risk. 3 credits. Prerequisites: Satisfactory basic English and Math skills and HM 101 Introduction to Hospitality. 3 Credits Prerequisite: HM 101

Learning Community - Criminal Justice

LCC 100 LEARNING COMMUNITY: CRIMINAL JUSTICE-FREEDOM & FEAR: ISSUES IN CONTEMPORARY CRIMINAL JUSTICE

In this learning community, students learn about the history, development and philosophy of the criminal justice system using class discussion, case study analyses, and extensive reading and writing activities in both CJ101 and WR100. Through content based in the criminal justice field, students strengthen their critical reading skills and practice process-based writing. Designed for criminal justice majors, the learning community also integrates off-campus trips to local correctional facilities, panel discussions with local experts in the field, student-led seminars, and dedicated program advising. 7 Credits

Literature

LI 104 CHILDREN'S LITERATURE

Through exposure to a wide range of children's books, authors and illustrators, students will develop an understanding of the importance of children's literature in the early childhood education classroom. Students will gain abilities in evaluating the quality of children's books and making appropriate selections for young children, acquire a repertoire of effective techniques for using children's literature effectively in the classroom and learn ways that children's literature can develop literacy. Lecture: 3 hours per week. 3 Credits

LI 201 WORLD LITERATURE I

This course introduces students to selected works of literature from Africa, the Americas, Asia, and Europe from ancient times through the eighteenth century. Readings may be drawn from a range of literary genres. Through literary analysis the course will consider how literature both impacts and reflects the historical time period and culture that generates it. The course will explore ways in which writers from around the world illuminate the human experience. Lecture: 3 hours per week. Prerequisites: EN 101 (Completion of EN 102 also recommended). 3 Credits Prerequisites: EN 101 (Completion of EN 102 also recommended)

LI 202 WORLD LITERATURE II

This course introduces students to selected works of literature from Africa, the Americas, Asia, and Europe from the eighteenth century to the present day. Readings may be drawn from a range of literary genres. Through literary analysis the course will consider how literature both impacts and reflects the historical time period and culture that generates it. The course will explore ways in which writers from around the world illuminate the human condition. Lecture: 3 hours per week. 3 credits. Prerequisite: EN 101 (Completion of EN 102 is also recommended) 3 Credits Prerequisite: EN 101 (Completion of EN 102 is also recommended)

LI 203 AMERICAN LITERATURE I

Major American writers from colonial times to the Civil War. Exploration of significant ideas, literary form, and cultural patterns. Includes readings from the works of Franklin, Hawthorne, Melville, Emerson, Thoreau, and others. Prerequisites: EN 101 (Completion of EN 102 also recommended) 3 Credits Prerequisite: EN101

LI 204 AMERICAN LITERATURE II

A continuation of LI 203, considering authors from the Civil War to the present. Lecture: 3 hours per week. Prerequisites: EN 101 (Completion of EN 102 also recommended). 3 Credits Prerequisite: EN101

LI 205 BRITISH LITERATURE I

Myths, legends, themes, language and representative figures of the English literary tradition from its origins to 1798, including Beowulf, Arthur, Chaucer, Hamlet, and Milton. Prerequisites: EN 101 (Completion of EN 102 also recommended) 3 Credits Prerequisite: EN101

LI 206 BRITISH LITERATURE II

A continuation of LI 205 considering authors from the Romantic, Victorian, and Modern periods of British Literature. 3 Credits Prerequisite: EN101

LI 207 WOMEN IN LITERATURE

Beginning with creation myths and folk tales where female figures predominate, the course proceeds to literary works written by women. Each work will be considered in the cultural context in which it was created. The writer's life and the social history surrounding the work will be discussed. Students are expected to write essay exams and a research project for submission and/or presentation. 3 Credits

LI 208 LIFE WRITING: READING AND WRITING AUTOBIOGRAPHY

The course will examine the art of composing a life as practiced by memoirists, diarists, and autobiographers including Welty, Douglass, Nabokov, and Nin. The critical perspective gained through this study will be applied to the students own writing on autobiographical themes; through these written assignments, students will explore the value of writing in making sense of one's own experience. Lecture: 3 hours per week. 3 Credits

LI 209 FILM AND LITERATURE

By examining works of literature that have been made into movies, this course will look at how medium affects message. Students will view films and read the books from which they have been adapted in order to consider how translation from print to cinema affects such dimensions as narrative, character, reader/viewer experience, and authorial intention. Lecture: 3hours per week. 3 Credits

LI 230 LATIN AMERICAN LITERATURE AND CULTURE

The course begins with manifestations of pre-Hispanic literacy, and arrives at Modernism, a paramount movement in Latin American literature that questioned conventional notions about literary discourse. Designed as a survey, this course will provide background knowledge necessary for understanding the study of Latin American literature, as well as provide a deeper appreciation for Latin American culture. In this course special attention will be given to readings that describe the development of cultural and aesthetic movements in the social-historical contexts of Latin America. Political and cultural issues, therefore, will be of primary interest and would focus on analysis and class discussion. Prerequisite: EN101; (Completion of EN102 is also recommended) 3 Credits Prerequisite: EN101; (Completion of EN102 is also recommended)

LI 231 CARIBBEAN LITERATURE AND CULTURE

This course is a survey of Caribbean literature and literary criticism across geographic and linguistic divides, examining the most important texts, from the foundational tradition in the 16th century and the origins of Modernity in the West Indies to the narratives and discursive practices that inform the present day Caribbean world and its Diaspora. Prerequisites: EN101; EN102 Recommended 3 Credits Prerequisites: EN101; EN102 Recommended

Management

MG 101 PRINCIPLES OF MANAGEMENT

Integrates traditional and behavioral approaches to management. Managerial functions of planning, organizing, staffing, leading, and controlling. Apply decision-making, leadership, communication, coordination, delegation, and authority-responsibility relationships. Appreciation of the technical and conceptual, aspects of organizational thinking. Selected case studies and contemporary examples used to illustrate the application of management principles. Lecture: 3 hours per week. 3 Credits

MG 102 SMALL BUSINESS MANAGEMENT

Overview of small business and its environment, including suggested approaches and techniques for effective decision making and for the solution of small business management problems. Opportunities for obtaining sources of information on the starting and management of specific types of businesses based on individual student interest and selection. Lecture: 3 hours per week. 3 Credits

MG 104 SUPERVISORY MANAGEMENT

Studies the practical applications of sound management techniques and strategies used by first-line supervisors. Covers the important information a supervisor needs to know about handling people and managing their jobs. Examines the human, technical, and personal problems that supervisors face daily. Class lectures and discussions will be supported by case problems and role-playing. Can be used to substitute for MG 101 in the General Business Administration core. 3 Credits

MG 204 HUMAN RESOURCE MANAGEMENT

Personnel processes involved in manpower planning, personnel recruitment, employee selection, orientation, and placement for application form, types of testing devices, employee training and development, and performance appraisal. Equal Employment Opportunity and Affirmative Action. Basic understanding of wage and salary administration, benefits, and union/management relations. Lecture: 3 hours per week. Prerequisite: MG 101 or equivalent 3 Credits Prerequisite: MG101

MG 210 ENTREPRENEURSHIP

The Entrepreneurship course prepares students who have sound business ideas and/or well developed business plans to start, develop, finance, market, manage and launch a new business. This course gives students the skills and knowledge they need to master the requirements of all the stages of launching a new business and the opportunity to build and implement a new business. The course has a classroom component in which students conduct their academic studies and an experiential component that allows students to develop and implement their business strategies. (This will include selecting the ownership method, securing financing, developing marketing techniques, preparing financial statements and budgets, etc.) A mentoring feature is included that guides students through the entire entrepreneurial process. The outcome of this course is to launch of a new business. 3 Credits

MG 219 CURRENT MANAGEMENT AND MARKETING ISSUES

Provides a balanced coverage and discussion of contemporary major management and marketing topics. Readings and cases will provide students the opportunity to develop analytical skills. Guest lecturers from industry and business, films, and research are used to supplement and support classroom discussions. 3 Credits Prerequisites: MG101, MK103

Marketing

MK 103 PRINCIPLES OF MARKETING

Examines contemporary marketing principles, concepts, and managerial practices. Studies the marketing environment, consumer behavior, marketing, research, and information systems. Analyzes the marketing mix in terms of product planning and development, distribution management, pricing strategies, and promotional practices. Focuses attention on the social and legal responsibilities of marketing and consumerism. Examines the nature and importance of international and global marketing. Case problems and current issues are discussed and analyzed. Lecture: 3 hours per week. 3 Credits

MK 104 SERVICE INDUSTRY MARKETING

A study of the unique characteristics of service marketing and sales and the application of TQM principles to this sector. Consideration of the nature of the service product, the issue of inventory vs. capacity, the distribution channel implications of customer involvement in service production, etc. Special attention will be given to the role of team building and the team process in the development of quality in service settings. 3 Credits

MK 213 PRINCIPLES OF SALES

Students preparing for business in developing the ability to sell goods and services. The course includes selling as a career, stresses the importance of personal preparation for effective selling through the salesperson's understanding of self, product, and customer, discusses application of the behavioral sciences to selling situations, instruction in how to use selling techniques, including securing and opening the sales interview, holding interest, securing conviction, handling objections, ending with closing the sale. Problems drawn from actual sales transactions. Lecture: 3 hours per week. Prerequisite: MK 103 or equivalent. 3 Credits Prerequisite: MK103

MK 214 E-COMMERCE

The course introduces students to the concept of electronic commerce (called E-Commerce or E-Business). It describes the manner in which transactions take place over the Internet and the World Wide Web. It explores the process of electronic buying and selling of goods, services and information and discusses electronic communicating, collaborating and discovering information. The approach is primarily managerial, describing the opportunities, limitations, issues, security and risks of e-commerce. However, it also includes technical considerations. The e-commerce technical issues include creating the web infrastructure; exploring web-based site development tools; exploring global e-commerce considerations and strategies; performing web site requirements analysis, planning, development and implementation. Finally, the course integrates marketing concepts and applications, financial analysis (ROI), business planning, customer service applications, and information technology. Lecture: 3 hours per week. 3 Credits

MK 215 PRINCIPLES OF ADVERTISING

Introduces the student to advertising as a component of the marketing promotional mix, target market's needs, goals and perceptions, different media forms such as print, broadcast, and direct mailing. The student will develop an advertising plan that focuses on product analysis and which is integrated with marketing objectives and strategies. Lecture: 3 hours per week. Prerequisite: MK 103 3 Credits
Prerequisite: MK103

MK 220 GLOBAL MARKETING MANAGEMENT

This course examines the marketing activities required to select, gain entry and compete in the global economy. Also examined in this course is the influence of culture, environment, government regulations, political differences, economic systems and modified American marketing concepts and methods can have on the marketing mix decisions related to global markets. Finally, this course will enable students to understand how to develop, manage, implement and lead global marketing export plans and operations. 3 credits. Prerequisites: Principles of Marketing (MK 103) and Global Business (BU 201). 3 Credits
Prerequisites: MK 103 and BU 201

Mathematics

MA 1 PREPARATION FOR COLLEGE MATH*

This course is a modularized approach to the traditional developmental math sequence. It is comprised of 15 modules that students can advance through at their own pace. All students placing into the developmental sequence will be required to start in module 1. The first five modules correspond to ma 90: Basic Math Studies: Basic Math Studies is the first of three classes in the developmental mathematics sequence. It provides for a preparation for Introductory Algebra and a solid mathematical background for subsequent classes in the sequence. The focus of the class is on reinforcement of the student's arithmetic background and its application to common mathematical tasks to include percentage, order of operation, fractions, decimals, average, geometric quantities, and graphical representations of numbers. The emphasis of the three semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. The second Five modules correspond to ma 95: Introductory Algebra: Introductory Algebra is the second of three classes in the developmental mathematics sequence. It provides a development of concepts of variables, expressions, and equations using symbolic algebra to represent primarily linear relationships both graphically and analytically. The concept of function will be developed for the application of linear equations and concepts of dependent and independent variable. Students will also learn to solve simultaneous linear equations as well as how to construct linear equations from slope and point information. Application problems will include geometric figure quantities, ratio and proportion, direct and indirect variation, and conversion of units. Finding the greatest common factor of a polynomial will also be included. The emphasis of the three-semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. The last five modules correspond to ma 98: Intermediate Algebra: Intermediate Algebra is the last of three classes in the developmental mathematics sequence. It provides a development of primarily nonlinear function, specifically quadratic, radical, and rational. Students will learn to apply concepts of combining like terms, using the distributive property, and factoring quadratic expressions. Students will also learn to understand and apply algebraic methods to solve literal equations, applications of Pythagorean Theorem, and geometric problems of perimeter, area, and volume. The emphasis of the three semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. A minimum of five modules will be required per semester to earn a passing grade in this course. Prerequisite: Placement through placement testing, or completion of MA085. 3 Credits Prerequisite: Placement through placement testing, or completion of MA085.

MA 2 PREPARATION FOR COLLEGE MATH*

This course is a modularized approach to the traditional developmental math sequence. It is comprised of 15 modules that students can advance through at their own pace. All students placing into the developmental sequence will be required to start in module 1. The first five modules correspond to ma 90: Basic Math Studies: Basic Math Studies is the first of three classes in the developmental mathematics sequence. It provides for a preparation for Introductory Algebra and a solid mathematical background for subsequent classes in the sequence. The focus of the class is on reinforcement of the student's arithmetic background and its application to common mathematical tasks to include percentage, order of operation, fractions, decimals, average, geometric quantities, and graphical representations of numbers. The emphasis of the three semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. The second Five modules correspond to ma 95: Introductory Algebra: Introductory Algebra is the second of three classes in the developmental mathematics sequence. It provides a development of concepts of variables, expressions, and equations using symbolic algebra to represent primarily linear relationships both graphically and analytically. The concept of function will be developed for the application of linear equations and concepts of dependent and independent variable. Students will also learn to solve simultaneous linear equations as well as how to construct linear equations from slope and point information. Application problems will include geometric figure quantities, ratio and proportion, direct and indirect variation, and conversion of units. Finding the greatest common factor of a polynomial will also be included. The emphasis of the three-semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. The last five modules correspond to ma 98: Intermediate Algebra: Intermediate Algebra is the last of three classes in the developmental mathematics sequence. It provides a development of primarily nonlinear function, specifically quadratic, radical, and rational. Students will learn to apply concepts of combining like terms, using the distributive property, and factoring quadratic expressions. Students will also learn to understand and apply algebraic methods to solve literal equations, applications of Pythagorean Theorem, and geometric problems of perimeter, area, and volume. The emphasis of the three semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. A minimum of five modules will be required per semester to earn a passing grade in this course. Prerequisite: Completion of MA001. 3 Credits Prerequisite: Completion of MA001.

MA 3 PREPARATION FOR COLLEGE MATH*

This course is a modularized approach to the traditional developmental math sequence. It is comprised of 15 modules that students can advance through at their own pace. All students placing into the developmental sequence will be required to start in module 1. The first five modules correspond to ma 90: Basic Math Studies: Basic Math Studies is the first of three classes in the developmental mathematics sequence. It provides for a preparation for Introductory Algebra and a solid mathematical background for subsequent classes in the sequence. The focus of the class is on reinforcement of the student's arithmetic background and its application to common mathematical tasks to include percentage, order of operation, fractions, decimals, average, geometric quantities, and graphical representations of numbers. The emphasis of the three semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. The second Five modules correspond to ma 95: Introductory Algebra: Introductory Algebra is the second of three classes in the developmental mathematics sequence. It provides a development of concepts of variables, expressions, and equations using symbolic algebra to represent primarily linear relationships both graphically and analytically. The concept of function will be developed for the application of linear equations and concepts of dependent and independent variable. Students will also learn to solve simultaneous linear equations as well as how to construct linear equations from slope and point information. Application problems will include geometric figure quantities, ratio and proportion, direct and indirect variation, and conversion of units. Finding the greatest common factor of a polynomial will also be included. The emphasis of the three-semester sequence is fortification of mental

calculation power with minimum reliance on digital calculation. The last five modules correspond to ma 98: Intermediate Algebra: Intermediate Algebra is the last of three classes in the developmental mathematics sequence. It provides a development of primarily nonlinear function, specifically quadratic, radical, and rational. Students will learn to apply concepts of combining like terms, using the distributive property, and factoring quadratic expressions. Students will also learn to understand and apply algebraic methods to solve literal equations, applications of Pythagorean Theorem, and geometric problems of perimeter, area, and volume. The emphasis of the three semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. A minimum of five modules will be required per semester to earn a passing grade in this course. Prerequisite: Completion of MA002. 3 Credits Prerequisite: Completion of MA002.

MA 85 ARITHMETIC AND STUDY SKILLS*

This course is designed to bolster students' understanding of basic arithmetic, number sense and mathematical study skills to better prepare them for their future math courses. Topics covered will include but not be limited to: problem solving, basic mathematical literacy, place value, names for numbers, operations on whole numbers, rounding and estimating and order of operations. Study skills covered will include: time management, organizational skills, study strategies, test taking skills and managing math anxiety. 1 Credits

MA 90X ACCELERATED BASIC MATH STUDIES*

This course combines the topics in MA 085 and MA 090 in one semester. It is designed to bolster students' understanding of basic arithmetic, number sense and mathematical study skills. Topics covered will include but not be limited to: problem solving, basic mathematical literacy, place value, names for numbers, operations on whole numbers, rounding and estimating, order of operations, percentages, fractions, decimals, averages, geometric quantities, and graphical representations of numbers. Study skills covered will include: time management, organizational skills, study strategies, test taking skills and managing math anxiety. 4 Credits

MA 90 BASIC MATH STUDIES*

Basic Math Studies is the first of three classes in the developmental mathematics sequence. It provides for a preparation for Introductory Algebra and a solid mathematical background for subsequent classes in the sequence. The focus of the class is on the student's arithmetic background and its application to common mathematical tasks to include percentage, order of operation, fractions, decimals, average, geometric quantities, and graphical representations of numbers. The emphasis of the three semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. Prerequisite: Placement through placement testing, or completion of MA085. 3 Credits Prerequisite: Placement through placement testing, or completion of MA 085.

MA 95 INTRODUCTORY ALGEBRA*

Introductory algebra is the second of three classes in the developmental mathematics sequence. It provides a development of concepts of variables, expressions, and equations using symbolic algebra to represent primarily linear relationships both graphically and analytically. The concept of function will be developed for the application of linear equations and concepts of dependent and independent variable. Students will also learn to solve simultaneous linear equations as well as how to construct linear equations from slope and point information. Application problems will include geometric figure quantities, ratio and proportion, direct and indirect variation, and conversion of units. Finding the greatest common factor of a polynomial will also be included. The emphasis of the three semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. Prerequisite: MA 090 or placement through placement testing. 3 Credits Prerequisite: MA 090 or placement through placement testing.

MA 98 INTERMEDIATE ALGEBRA*

Intermediate Algebra is the last of three classes in the developmental mathematics sequence. It provides a development of primarily non-linear function, specifically quadratic, radical, and rational. Students will learn to apply concepts of like terms, using the distributive property, and factoring quadratic expressions. Students will also learn to understand and apply algebraic methods to solve literal equations, applications of Pythagorean Theorem, and geometric problems of perimeter, area, and volume. The emphasis of the three semester sequence is fortification of mental calculation power with minimum reliance on digital calculation. Prerequisite: MA 095 or placement through placement testing. 3 Credits Prerequisite: MA 095 or placement through placement testing.

MA 102X ACCELERATED COLLEGE ALGEBRA COREQUISITE

This course is designed for students who complete MA 095 (or the equivalent) with a B or better (or have an appropriate score on the placement test) and who opt to take MA 102. Activities will include review of Math skills in sync with the material being taught in the concurrent MA 102 course. Project level problems will be used to incorporate application of concepts. Groups will be formed to encourage communication of Math skills amongst peers. This course will be graded on a Satisfactory/Unsatisfactory basis. This course is part of the Math Co-requisite Project. Co-requisite: Students are required to take MA 102X and the corresponding section of MA 102: College Algebra. Prerequisite: MA 095 (or equivalent) with a B or better or an appropriate placement test score. 2 Credits Co-requisite: Students are required to take MA 102X and the corresponding section of MA 102: College Algebra. Prerequisite: MA 095 (or equivalent) with a B or better or an appropriate placement test score.

MA 102 COLLEGE ALGEBRA

This course consists of basic and advanced algebra concepts. Students will learn to analyze functions through algebraic evaluation, graphing, transformations, and solving both equations and inequalities. The definition of function will be emphasized. Functions studied include linear, quadratic, rational, radical, logarithmic, exponential, inverse, and absolute value. Students will also study the complex number system, operations and compositions of functions, systems of equations and elementary matrices. Prerequisite: MA 098 or higher 3 Credits Prerequisite: MA 098 or higher

MA 103T TRIGONOMETRY

This is a preparation course for Calculus that involves a study of trigonometric functions. The study will include asymptotes, range, domain and solution of problems with arbitrary as well as right triangles. Emphasis will be placed on analyzing the properties of trigonometry, including trigonometric identities, laws and formulas. Basic concepts of limits will be included. Prerequisite/Co-requisite: MA102 College Algebra be taken previously or concurrently. 1 Credits Prerequisite/Co-requisite: MA102 College Algebra be taken previously or concurrently

MA 104X ACCELERATED PRECALCULUS COREQUISITE

This course is designed for students who complete MA 095 (or the equivalent) with a B or better (or have an appropriate score on the placement test) and who opt to take MA 104. Activities will include review of Math skills in sync with the material being taught in the concurrent MA 104 course. Project level problems will be used to incorporate application of concepts. Groups will be formed to encourage communication of Math skills amongst peers. This course will be graded on a Satisfactory/Unsatisfactory basis. This course is part of the Math Co-requisite Project. Co-requisite: Students are required to take MA 104X and the corresponding section of MA 104: Precalculus. Prerequisite: MA 095 (or equivalent) with a B or better or an appropriate placement test score. 2 Credits Co-requisite: Students are required to take MA 104X and the corresponding section of MA 104: Precalculus. Prerequisite: MA 095 (or equivalent) with a B or better or an appropriate placement test score.

MA 104 PRE-CALCULUS MATHEMATICS

This course is a preparation for Calculus. Students will learn to analyze functions through algebraic evaluation, graphing, transformations, and solving both equations and inequalities. The definition of function will be emphasized. Functions studied will include linear, quadratic, rational, radical, logarithmic, exponential, inverse, circular, absolute value, and trigonometric. Emphasis will be placed on analyzing the properties of trigonometry, including trigonometric identities, laws and formulas. Students will also study the complex number system, operations and compositions of functions, systems of linear equations and basic concepts of limits. Lecture: 4 hours per week. Prerequisite: MA 098 or higher 4 Credits Prerequisite: MA 098 or higher

MA 105 INTRODUCTION TO STATISTICS

Fundamental concepts of inferential and descriptive statistics with emphasis on interpretation of statistical arguments. An introduction to data analysis including graph analysis, measures of central tendency, correlation, regression, concepts of probability theory, sampling errors, confidence intervals in normal distribution, hypothesis testing, and analysis of variance. Prerequisite: MA 095 or higher, or the equivalent. 3 Credits Prerequisite: MA 095 or higher, or the equivalent.

MA 106 QUANTITATIVE REASONING

This course is designed to engage students in solving and analyzing real world problems that are quantitative in nature. Students will develop the ability to use concepts and processes from arithmetic, algebra, geometry, logic, probability and statistics to become better informed citizens, sound financial planners, productive workers, and life-long learners. Technology is used to explore mathematical models of real-world phenomena. Lecture: 3 hours per week. Prerequisite: MA 095 or higher, or the equivalent 3 Credits Prerequisite: MA 095 or higher, or the equivalent.

MA 109 ELEMENTS OF MATHEMATICS I

This course provides a comprehensive, conceptually based study of the mathematics of the natural, whole number, integer, and rational number systems. Topics studied include quantitative reasoning, estimation and computation, number theory, sets, whole number, integer, and rational number operations, and proportional reasoning. Active learning and problem-solving strategies are emphasized. This course is required for Liberal Arts: Early Childhood Education program and Liberal Arts: Elementary Education program. Prerequisite: MA 098 or appropriate score on the placement test. 3 Credits Prerequisite: MA 098 or appropriate score on the placement test.

MA 119 ELEMENTS OF MATH II

This course provides a comprehensive, conceptually based study of the real number system. Topics studied include statistics, probability, geometry, measurement, algebra, and coordinate geometry. Inquiry based instruction, problem-solving strategies, problem solving skills, and the appropriate use of technology including calculators and computers are emphasized. This course is required and designed for Liberal Arts: Elementary Education program. Prerequisite: MA 109. 3 Credits Prerequisite: MA 109.

MA 131 TECHNICAL MATHEMATICS

Algebra with technical applications. Rational numbers, exponents, scientific notation, percent, ratio and proportion, linear equations, elementary plane geometry, solving systems of linear equations by graphing and algebraic methods, solving literal equations, introduction to right angle trigonometry. Intended for students enrolled in a technology program. 3 Credits MAC101 Prerequisite

MA 200 CALCULUS I

Designed to parallel first-semester calculus courses at four-year institutions of learning and to prepare the student for further work in calculus. Topics include a review of functions and their graphs, properties of limits, continuity, derivatives of algebraic and transcendental functions, differentials, Max-Min applications, related rates, the Fundamental Theorem of Calculus, the anti-derivative, and the definite and indefinite integrals. For students in mathematics, engineering, sciences and liberal arts. Lecture: 4 hours per week. Prerequisite: MA 102 & MA 103T, or MA 104 or permission of instructor. 4 Credits Prerequisite: MA 102 & MA 103T, or MA 104 or permission of instructor.

MA 201 CALCULUS II

Differentiation and integration of the inverse functions, applications of integration, special integration techniques (substitution, parts, partial fractions, and trigonometric substitution), improper integrals, infinite series, and an introduction to differential equations. Designed for students in mathematics, engineering, sciences and liberal arts. The course is made to parallel the second-semester calculus course at four-year colleges, and to provide a continuation of the calculus sequence. Prerequisite: MA 200 4 Credits Prerequisite: MA200

MA 202 CALCULUS III

To introduce the elements of the calculus (differentiation and integration) of functions of several variables, vectors and vector fields, optimization, and line and flux integrals. Designed to parallel a Calculus III course at four-year institutions of learning. Designed for students in mathematics, engineering, sciences and liberal arts. Prerequisite: MA 201 4 Credits MA202 Prerequisite

MA 210 INTRODUCTION TO LINEAR ALGEBRA

An introduction to matrix theory and linear algebra. Vector spaces, linear transformation, matrices, determinants, systems of linear equations, and applications. Prerequisite: MA201 or equivalent; or permission of instructor. 4 Credits MA210 Prerequisite

MA 211 DIFFERENTIAL EQUATIONS

An introduction to the theory and applications of elementary differential equations and boundary value problems. Designed to parallel a course in Differential Equations at a four-year college or university. Lecture: 4 hours per week. Prerequisite: MA201 or equivalent. 4 Credits Prerequisite: MA201 or equivalent

MAC 100 BUSINESS MATH

Concepts and practices of financial mathematics, elementary probability, and descriptive statistics are covered in this course. Simple and compound interest, present and future value, and annuities are covered. Measures of central tendency and dispersion including normal distribution and standard deviation are studied. Combinations, permutations, randomness and principles of counting including set notation are considered. Emphasis is on the use of mathematics, not theoretical derivation. Designed for students in career programs. Not an equivalent course for 100 level MA courses. Lecture: 3 hours per week. Prerequisite: MA 095 or higher 3 Credits Prerequisite: MA 095 or higher

MAC 101 TECHNICAL MATH

Algebra with technical applications. Rational numbers, exponents, scientific notation, percent, ratio and proportion, linear equations, elementary plane geometry, solving systems of linear equations, elementary plane geometry, solving systems of linear equations by graphing and algebraic methods, solving literal equations, introduction to right angle trigonometry. Intended for students enrolled by career technology programs. Not an equivalent course for 100 level MA courses. Prerequisite: MA 095 or higher. 3 Credits Prerequisite: MA 095 or higher

Mechanical Engineering

MN 100 CAREER READINESS AND E-PORTFOLIO

This course prepares students to launch a successful career search. It covers topics such as resume preparation, effective communication skills (both oral and written), and effective interview skills. The course also prepares students to establish an efficient e-portfolio structure that best represents one's strongest credentials. 1 Credits

MN 101 INTRODUCTION TO COMPUTER AIDED DESIGN AND DRAFTING

Students will be introduced to Computer Aided Design and Drafting applications and industry standard software. Concentrate on the basic drafting rules and skills as they apply to engineering drawings. Communicate with traditional free hand sketching and AutoCad software to create diagrams and circuitry drawings. Students will be introduced to the common practices, terminology and symbols relating to electrical and electronic design. Students will create and edit drawings using various 2D geometry and symbol libraries. Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits

MN 115 BLUEPRINT READING AND ESTIMATING

Examines the process of developing and interpreting blueprints. Introduces cost analysis and provides students with a working knowledge of material expenses. Lecture: 3 hours per week. 3 credits. 3 Credits

MN 118 ETHICS FOR ENGINEERS AND TECHNOLOGISTS

The design, manufacture or delivery of professional services requires careful consideration of the ethical dimensions of the issues and responsibilities of individuals and corporations. This course will cover ethical issues in product development and professional services based on traditional and contemporary ethical theories. Instruction will be provided through specific case studies or scenario development. Students will research and analyze the situations presented to them and will present the result of their analysis through term papers and presentations. Lecture: 3 hours per week 3 Credits

MN 121 MECHANICAL DETAILING

Mechanical Details develops detailed engineering part and assembly drawings using SolidWorks 3D parametric-based Computer Aided Design (CAD) software. Create and modify drawing templates, sheet formats, drawing views and detailed drawings. Produce annotated drawings with dimensions, notes, geometric tolerances, and tables, using ANSI and ISO industry standards. In an industry-simulated atmosphere, work with welding symbols, Geometric Tolerance notation, reports and BOM to produce multi-sheet working drawings and Engineering Change Orders/Notices (ECO/ECN). Manipulate Design Tables to create multiple configurations. Import data from Autocad, IGES, and other graphic formats. Lecture: 3 hours per week. Lab: 2 hours per week. Co-requisite: MN130 or permission of instructor 4 Credits Co-requisite: MN130 or permission of instructor

MN 125 ENGINEERING COMPUTATION WITH APPLICATION SOFTWARE

Prepares students for use of application software to solve a variety of engineering problems. Introduces students to engineering analysis using spreadsheets and Math application software such as MatLab. Students will design algorithms using a high-level programming language to solve technical problems. Recommended completion of MA 104 or higher Math course. Lecture: 3 hours per week. Lab: 2 hours per week 4 Credits

MN 130 ENGINEERING DESIGN WITH CAD I

Presents engineering design case studies for a variety of engineering disciplines and introduces design topics including problem formulation, creativity, specifications, evaluation tools, ergonomics, manufacturing and ethics. Provides a solid foundation for developing accurate 3D CAD models and 2D representations of parts and assemblies using SolidWorks, a 3D Parametric Computer Aided Design (CAD) software. CAD topics will include hands-on creation and modification of parts, and assemblies in regard to design intent and complete with features, dimensions, relationships and views, and developing 2D representation of 3D parts. Students develop an original design to solve a technical problem and a 3D visualization of the solution using SolidWorks as a term project. Recommended: Working Knowledge of Microsoft Word, Excel, and the WWW. Lecture: 3 hours per week; Lab: 2 hours per week. 4 Credits

MN 131A MANUFACTURING TECHNOLOGY FUNDAMENTALS

This course provides an overview of the basic manufacturing fundamentals and concepts. Topics covered include basics of machine tools, basics of machining, and manufacturing processes. Machine tools topic includes machine setup, machine zeros, motion axes, work piece clamping, and wet/dry machining. Machining topic includes cutting tools materials and types, standard stock shapes, machining parameters, machining quality, stock squaring, home position, tool paths, and rapid positioning. Manufacturing processes include turning, drilling, milling, and Electric Discharge Machine (EDM). The course also offers an overview of OSHA safety guidelines and requirements. 1 Credits

MN 131B GEOMETRIC DIMENSIONING & TOLERANCE

This course covers the basics of both conventional and geometric tolerances. Topics include nominal/basic/actual size, hole and shaft, hole and shaft systems, limit dimensions, unilateral/bilateral/symmetric tolerances, material conditions, datum, and datum targets. Other topics include ASME Tolerance Rules, ANSI and ISO Fits, tolerance accumulation, statistical tolerancing, true position. Geometric tolerances include assigning tolerances and interpreting them. Students apply the concepts using commercial CAD/CAM software. Co-requisite: MN 130 Engineering Design I 1 Credits
Co-requisite: MN 130 Engineering Design I

MN 131C STATISTICAL PROCESS CONTROL AND QUALITY ASSURANCE

This course covers statistical process control (SPC) and quality assurance (QA) in manufacturing. SPC covers modeling, process quality, control charts, process capability, and acceptance sampling methods, Six Sigma, and Lean Enterprise. Quality assurance covers administrative and procedural activities implemented in a quality to fulfill product requirements, management of the quality of raw materials, assemblies, products and components, production and inspection processes, ISO 9000. Co-requisite: MN 130 Engineering Design I 1 Credits Co-requisite: MN 130 Engineering Design I

MN 132A REVERSE ENGINEERING 3D SCANNING AND 3D PRINTING

This course introduces the concepts of reverse engineering, a common practice in design and manufacturing. It also covers 3D scanning concepts including 3D point clouds, converting these clouds to CAD surfaces, and filtering techniques. 3D printing concepts include prototyping applications, triangulation (Tessellation) of CAD models, build orientation, support structure, deviation and angle tolerances, and building techniques. 1 Credits

MN 132B NUMERICAL CONTROL MACHINING

This course introduces the concepts of NC tool path generation and verification. Other NC machining concepts include zero-radius programming, tool offset, interpolation and canned cycles, NC controllers, G-code and M-code programming. The course focuses on NC turning, drilling, and milling. The course also introduces the concepts and capabilities of computer numerical control machine tools. It also introduces the concepts of machine codes, work offsets, height offsets, machine settings, alarms and communication. Interpretation of blue prints is also covered. Students gain an understanding of machine shop math, machining processes, and tooling. The course utilizes the Hass Mill and Lathe CNC Simulation controllers. 2 Credits

MN 132C SUSTAINABILITY AND LIFECYCLE MANAGEMENT

This course covers the basics of sustainable (green) design and manufacturing, End-of-life (EOL) processing, lifecycle assessment (LCA), guidelines and principles of sustainability and product lifecycle management (PLM). It also covers impact metrics of carbon footprint, energy consumption, air acidification, water eutrophication, and water footprint, Sustainable design tools and software are discussed. 1 Credits

MN 133A NEW PRODUCT DEVELOPMENT

This course covers the basics of how to create new products and services. Topics include product development process, customer research and needs, concept generation and testing, product specifications and architecture, and patents and intellectual property. Students also learn product prototyping, product launch planning, and market testing. Students apply their course skills to their own product ideas and develop prototypes of these products 2 Credits

MN 133B LEAN SIX SIGMA FUNDAMENTALS

This course covers the fundamentals of lean thinking and six sigma methodology. The course establishes the connection between lean thinking which focuses on waste reduction and six sigma which strives to eliminate product defects. Lean thinking topics include value, value stream mapping, flow, pull, and perfection. Six sigma topics include the five standard steps of six sigma methodology: design, measure, analyze, improve, and control. Students apply the course knowledge to practical problems. 2 Credits

MN 135 ENGINEERING DESIGN WITH CAD II

Project-oriented approach to the design and development of parts, assemblies and drawings utilizing ProIE/ Wildfire/Creo 3D parametric CAD software. Skill sets include feature creation and modification of parts, assemblies and drawings in this hands-on class. The new ProIE/ Wildfire/ interface and multiple options of features are explored through a series of exercises. Students must be familiar with SolidWorks or other 3D modeler and the World Wide Web (WWW). Lecture: 3 hours per week. Lab: 2 hours per week. 4 credits. Prerequisite: MN 130 or permission of instructor 4 Credits Prerequisite: MN130

MN 140 PROJECT MANAGEMENT

This course provides an introduction to project management theory and the use of MS Project software. It focuses on coordinating tasks, assigning resources, and tracking cost to develop a project schedule. Students learn project management skills while working on actual projects. MS Project and various CAD, CS and MS Office applications are used to complete hands-on course work. Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits

MN 141 ARCHITECTURE & CIVIL CAD APPLICATIONS

Architecture and Civil CAD applications is a hands-on approach to understand and develop the basic drawings required for residential construction including 2D plot plan, floor plan, electrical plan and kitchen plan. Understand basic Plot plans, contour maps and wetland boundaries. Read and understand architectural and civil drawings. Explore manual sketching techniques to construct rough concept plans and models. Architectural scale and Engineering scale required. Utilizes AutoCAD. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisites: MN 101 or permission of instructor 4 Credits Prerequisites: MN 101 or permission of instructor

MN 150 PRINTED CIRCUIT DESIGN I

Presents the concepts of layout and tape-up of printed circuit boards and drafting documentation needed to fabricate and assemble printed circuit boards. Lecture: 3 hours per week. Laboratory: 2 hours per week. 4 Credits

MN 155 PRINTED CIRCUIT DESIGN II

Continuation of MN 150 with emphasis on projects. Prerequisites: MN130, MN150 Lecture: 3 hours per week. Laboratory: 2 hours per week. 4 Credits Prerequisites: MN130, MN150

MN 201 CO-OP DIALOGUE

This course provides actual hands-on work experience at companies. Co-Op experience of at least 80 hours within a supervised setting is required. While on co-op students will meet periodically in person or remotely during their co-op semester to share their co-op experiences. Students are required to document their experience. Grading is pass/fail. Prerequisite/Co-requisite: MN100 Career Readiness and ePortfolio. 1 Credits Prerequisite/Co-requisite: MN100 Career Readiness and ePortfolio.

MN 203 ENGINEERING MECHANICS: STATICS

Study of forces that produce equilibrium among material bodies. Resolution and addition of forces, vectors, translational and rotational equilibrium, torque, structural analysis, internal forces, centroid and center of gravity, moment of inertia and radius of gyration. Lecture: 3 hours per week. Prerequisites: MA 200, PY 103 3 Credits Prerequisites: MA 200, PY 103

MN 204 ENGINEERING MECHANICS: DYNAMICS

Study of both the motion of an object and the forces that bring about the motion of that object. Vector development of kinematics of a particle with respect to fixed and moving coordinate systems. Dynamics of a particle and systems of a particle and rigid bodies. Work, energy, impulse, and linear and angular momentum. Lecture: 3 hours per week. 3 credits. Prerequisites: MA 201, PY 103 3 Credits Prerequisites: MA 201, PY 103

MN 205 SUPPLY CHAIN MANAGEMENT

This course focuses on the development and application of decision models in supply chains with emphasis on demand forecasting, aggregate planning, inventory management (cycle and safety), supply network design, transportation, coordination and sourcing. Industry standard tools and techniques will be utilized in building decision models for effective decision making in supply chains. The course also discusses security issues in supply chain networks. 4 Credits

MN 210 STRENGTH OF MATERIALS I

Study of internal forces produced by externally applied load, stress, strains, shear forces and bending moment diagrams, mechanical properties of materials, torsion, bending, combined loadings, plane stresses and plane strain, principal stresses, maximum shear stress, and Mohr's circle. Lecture: 3 hours per week. Lab: 2 hours per week. 4 credits Prerequisite: MN 203 or by instructor's permission. 4 Credits Prerequisite: MN 203 or by instructor's permission.

MN 220 THERMODYNAMICS I

Study of systems in which mass and energy flow across the systems' boundaries. Properties of pure substance, phases and phase change, equation of state, work, heat, internal energy and thermodynamic processes. Control volume analysis of mass and energy and the second law of thermodynamics. Availability and irreversibility, analysis of both open and closed systems, and introduction to gas and vapor cycles. Lecture: 3 hours per week. Laboratory: 2 hours per week. 4 Credits Prerequisites: MA124, PY103

MN 222 STRENGTH MATERIALS II

Study of stress concentration and theory of elastic failure, stresses produced by fluctuating loads, deflections of beams and shafts, statically indeterminate beams, moment-area and super position methods, buckling of columns, elastic strain energy, impact loading, principle of virtual work, and Castiliano's Theorem. Lecture: 3 hours per week. Lab: 2 hours per week. 3 Credits

MN 230 MECHANICAL ENGINEERING LABORATORY

Experimental study of topics related to fluid mechanics and strength of materials. Velocity profile, flow measurement, pressure energy losses in pipes and fittings, drag force, deflections, and stress analysis. Laboratory: 2 hours per week. 2 Credits Prerequisite: MN225

MN 241 ARCHITECTURAL DESIGN

Sketching and CAD techniques for residential and commercial detailing and design. Survey details, landscaping, floor layout, 3D house construction, plan, elevation, foundation, truss structure, kitchen and bathroom design. Commercial team-based projects designed by students. Introduced to advanced visualization techniques. Lecture: 3 hours per week. Lab: 2 hours per week 4 credits. Prerequisite: MN 141 or permission of instructor. 4 Credits Prerequisite: MN 141 or permission of instructor

MN 250 MECHANICAL COMPONENTS

Drawing of complex mechanisms and components such as gears, fasteners, springs, and other parts. Concentration on 3D modeling techniques with plastic and metal components. Lecture: 3 hours per week. Laboratory: 2 hours per week. Prerequisite: MN121 or MN135 4 Credits Prerequisite: MN121 or MN135

MN 251 ELECTRO-MECHANICAL DESIGN

Design of complex assemblies using 3D modeling software, Pro/ENGINEER wildfire(r)/Creo and SolidWorks(r), sheet metal drawings, design of electrical-mechanical components and large assemblies. Creating projects from concept to final design will be emphasized. Lecture: 3 hours per week. Laboratory: 2 hours per week. Prerequisite: MN121 or MN135 4 Credits Prerequisite: MN121 or MN135

MN 261 ANIMATION, MATERIALS AND 3D MODELING

Animation, Materials and 3D Modeling is an introduction to 3D Modeling and animation techniques. In the design world, professionals relay complex ideas through computer animation. Computer animation requires creativity, computer knowledge and careful planning. Students learn to apply software tools to create 3D models, apply mapped materials for photo-realistic images, and develop timed animations in the industry standard formats such as .avi, .jpg and tiff. Students apply animation to illustrate a variety of applications such as assembly instructions for consumer products and scientific illustrations. Models are incorporated into written procedures and oral graphic presentations. Lecture: 3 hours per week. Lab: 2 hours per week. 4 credits. Prerequisite: MN 130 or permission of instructor. 4 Credits Prerequisite: MN 130 or permission of instructor.

MN 271 PROJECT DESIGN

Capstone design project focusing on a combination of project management skills and CAD skills. Students will work in teams and focus on real world design issue in their area of focus: architecture, mechanical design or multimedia design. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: MN135 or MN 241 4 Credits Prerequisite: MN135 or MN 241

MN 272 DESIGNING PLASTIC PARTS

Designing Plastic Parts incorporates industry CAD applications from the development of the 3D model to a standard mold base. Students work with customer requirements and utilize advanced modeling techniques such as sweeps, lofts, ribs and draft to create molded plastic parts. From the plastic designed part, the core and cavity mold bases are developed. Students also explore complex parting lines and multiply cavity molds. Prerequisite: MN 130 or permission of instructor. Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits Prerequisite: MN 130 or permission of instructor.

MN 273 COMPUTER AIDED MANUFACTURING

In this course, students learn about the computer aided manufacturing process (CAM) for subtractive manufacturing. Students use industry standard software such as MasterCAM to prepare their design for the subtractive manufacturing process and implement the process by creating a prototype using CNC equipment. Topics such as feeds and speeds, tool set-up, fixturing and using the CNC Controller are also discussed. Prerequisite: MN130 or Permission of Instructor. 4 credits 4 Credits Prerequisite: MN130 or Permission of Instructor.

Medical Coding

MR 120 PATHOPHYSIOLOGY FOR MEDICAL CODING

This course surveys the major systems of the human body. Conventional diagnostic procedures and treatment options are identified. Students will learn the relationship of pharmacology to the health care process. Topics such as disease prevention and transmission, coronary care, oncology, immunizations, organ transplantation and replacement, genetic illness, and AIDS are discussed. Total Course Credits 3; Lecture: 3 hours per week. Pre-Requisite: BI 113 Essentials of Anatomy and Physiology; HL 103 Medical Terminology. Co Requisite: EN 101 Freshman English I 3 Credits Pre-Requisite: BI 113 Essentials of Anatomy and Physiology; HL 103 Medical Terminology Co Requisite: EN 101 Freshman English I

MR 203 CODING: INTERNATIONAL CLASSIFICATION OF DISEASES (ICD-CM)

This course introduces ICD coding systems. It provides extensive coding practice in principal and secondary diagnoses and procedures and correct sequencing. Conditions and diseases in each of the body systems, neoplasms, congenital anomalies, ill-defined conditions and E- and V- codes will be coded using the ICD system. The history and significance of ICD coding in third party reimbursement is given. The course presents information on opportunities for employment and coding specialist certification. Total Course Credits 4; Lecture (3 credits) 3 hours per week. Lab:(1 credit) 2 hours per week. Total course hours 60. Prerequisite: MR 120 Pathophysiology for Medical Coding 4 Credits Pre-requisite: MR 120 Pathophysiology for Medical Coding

MR 206 CODING: CURRENT PROCEDURAL TERMINOLOGY (CPT)

This course provides instruction in the classification and coding of ambulatory care encounters using Physicians Common Procedural Terminology (CPT-4) and HCPCS Level II (National) codes. Using workbook exercises and medical reports, students learn to accurately assign CPT codes for all occasions of service and encounters in a physician practice or outpatient care setting. Lecture hours 4 per week. 4 Credits

MR 207 HIPAA STANDARDS AND ETHICS FOR MEDICAL CODERS

Medical Coders are required to maintain ethical and legal standards within their professional practice. This course will balance coverage of both the legal and ethical issues with an emphasis on HIPAA standards. The course will provide a foundation for handling common ethical and legal challenges in everyday practice. As the student progress through the course such topics as professional accountability, informed consent, documentation, administrative and medical liability and litigation as well as work situations that could escalate into conflict or dispute will be presented. Prerequisite: MR 206 Coding: Current Procedural Terminology (CPT) 3 Credits Prerequisite: MR 206 Coding: Current Procedural Terminology (CPT)

MR 211 DIRECTED PRACTICE IN CODING

Supervised field work in affiliated hospitals and health care facilities provide actual clinical experience. Prepares student for performance of coding duties through practical experience. Field Experience: 4 days a week for 4 weeks. Prerequisite: MR 201. 3 Credits Prerequisite: MR201

Medical Office Administrative Assistant

MO 101 MEDICAL OFFICE PROCEDURES I

This course introduces a variety of documents and reports commonly seen in the medical office. It includes an introduction to medical office computer applications and functions in a typical medical environment pertinent to medical transcription, patient scheduling, medico legal documentation, patient information databases, and computerized billing. Lecture: 5 hours per week. 5 Credits

MO 110 MEDICAL OFFICE PROCEDURES II

This course focuses on medical law and ethics, fundamentals of current medical practice, interrelationships of health professions team, medical office management, medical records management, therapeutic communication, and the legal and ethical role of the medical office administrative assistant. Course content may include increasingly advanced medical documentation, such as SOAP notes or other formats, pathology and operating room reports, consultation reports, patient referral documentation and professional correspondence. Lecture: 5 hours per week. Prerequisite: MO 101 5 Credits Prerequisite: MO101

MO 120 MEDICAL OFFICE INSURANCE AND BILLING

This course covers the practice and skills needed for medical insurance claims processing. It includes billing procedures, claims review and problem solving, and introductory standardized diagnostics and procedural coding. The course also provides an in-depth exposure to medical office management, financial practices, and scheduling procedures. Lecture: 4 hours per week. 4 Credits

Music

MU 102 INTRODUCTION TO MUSIC THEORY

This class is an introduction to music (notes, chords, styles, sounds) for both beginners and experienced musicians. Classroom topics include an introduction to the keyboard, followed by note identification using the staff and clefs and rhythmic identification. Various styles of music are discussed, beginning with the Western European tradition and moving through the various styles of American music: including march, ragtime, jazz, blues, rock, country. The course includes an introduction to music theory and culminates with an explanation of intervals and how they relate to chords and chord progressions, giving a musical overview of both large and small forms. Students will be expected to participate in a final project reflecting their own interest in music, to include subjects such as styles, albums, artists, DJ'ing, technology or performance. 3 Credits

Nursing

NU 125 INTRODUCTION TO BIOPHYSICAL CONCEPTS AND PHARMACOLOGY IN NURSING

This course introduces students to biophysical concepts in nursing care across the lifespan. Key concepts are reinforced through an understanding of select exemplars and a focus on essential aspects of health wellness continuum across the lifespan. Competency in the application of the nursing process to address physiological needs in a variety of settings is stressed. Course content also emphasizes interrelated professional concepts related to pharmacology and medication administration. By the end of this course students should have a basic understanding of common classifications/prototypes of agents used in the management of patients with actual or potential health problems and the implications for nursing care. 4 credits. Prerequisites: BI 115, BI 116, BI 123, EN 101. Co-requisites: NU 130, HL 110, EN 102, PS 101. 4 Credits Prerequisites: BI 115, BI 116, BI 123, EN 101. Co-requisites: NU 130, HL 110, EN 102, PS 101.

NU 130 INTRODUCTION TO PROFESSIONAL/HUMANISTIC NURSING CONCEPTS

This course introduces professional and humanistic concepts applied in the context of nursing practice. Key concepts are studied in order to provide the foundational knowledge necessary to socialize to professional nursing role and provide patient centered care. The understanding and application of integrated reasoning, critical thinking and clinical decision making in healthcare is stressed. Select exemplars are used to support an understanding of the concepts under study. 2 credits. Prerequisites: BI 115, BI 116, BI 123, EN 101, Co-requisites: NU 125, HL 110, EN 102, PS 101. 2 Credits Prerequisites: BI 115, BI 116, BI 123, EN 101, Co-requisites: NU 125, HL 110, EN 102, PS 101.

NU 135 INTRODUCTION TO PSYCHOSOCIAL CONCEPTS AND PHARMACOLOGY IN NURSING

This course introduces psychosocial concepts in nursing care across the lifespan. Key concepts are reinforced through an understanding of select exemplars and a focus on essential aspects of health wellness continuum in mental health across the lifespan. Competency in addressing psychosocial needs in a variety of settings through the application of the nursing process is stressed. Course content also emphasizes principles of pharmacology and nursing care related to common classifications/prototypes of agents used in the management of patients with actual or potential mental health problems and the implications for nursing care. 4 credits, Prerequisites: NU 125, HL 110, EN 102, PS 101. Co-requisites: NU 160, NU 161, CS 100. 4 Credits Prerequisites: NU 125, HL 110, EN 102, PS 101. Co-requisites: NU 160, NU 161, CS 100.

NU 140 BRIDGE COURSE

The course facilitates the beginning of the transition for the Licensed Practical Nurse as an Associate Degree Nurse. The bridge course provides content that orients the student to the philosophy, conceptual framework, and objectives of the Massachusetts Bay Community College Nursing Program. Nursing knowledge and science, integrated reasoning, professionalism and leadership, patient centered care, teamwork and communication, quality and safety, and systems-based practice in contemporary nursing will be explored. Pharmacological concepts will be discussed and a review of medication administration with emphasis on drug/IV calculations will be conducted and regularly reinforced throughout the course. The roles of the LPN and the RN in health assessment/data collection based on Marjorie Gordon's Functional Health patterns will be discussed. The student will perform health assessment skills and participate in laboratory experiences using scenarios involving a patient simulator in the Simulation Center and in the application of concepts in acute health care settings. Course Hours: Lecture - 2 credits, 2 hours per week; Laboratory - 1 credit 2 hours per week; Clinical - 2 credits, 6 hours per week. Total course credits 5. Prerequisites: Unrestricted MA LPN license; Current practice as an LPN within the last 5 years with a minimum of one year experience in a health care setting. BI 115, BI 116, BI 123, EN 101, HL 111, and PS 101 5 Credits Prerequisites: Unrestricted MA LPN license; Current practice as an LPN within the last 5 years with a minimum of one year experience in a health care setting. BI 115, BI 116, BI 123, EN 101, HL 111, and PS 101

NU 160 CONCEPTS IN NURSING CARE ACROSS THE LIFESPAN I

This course focuses on an integrated understanding of nursing concepts across the lifespan. Professional concepts focus on evidence-based practice and quality and safety in long-term care and rehabilitation settings. An understanding of biophysical concepts is expanded through the analysis of exemplars relating to common health problems seen across the lifespan and in a variety of healthcare settings. Interrelated psychosocial concepts are addressed. Nursing interventions that emphasize health promotion, intervention and restoration of optimal functional capacity are explored. This course is linked to the NU 161 practicum course. Failure in either NU 160 or NU 161 will require repetition of both courses. 4 credits.

Prerequisites: NU 130, NU 125, HL 110, EN 102, PS 101. Co-requisites: NU 135, NU 161, CS 100. 4 Credits Prerequisites: NU 130, NU 125, HL 110, EN 102, PS 101. Co-requisites: NU 135, NU 161, CS 100.

NU 161 CONCEPTS IN NURSING CARE ACROSS THE LIFESPAN I PRACTICUM

This course provides students with an introductory clinical experience in the long-term/rehabilitation setting. When possible, select activities in community settings with an emphasis on health promotion may be incorporated. One to one patient care assignments provide an opportunity to explore common, predictable health problems or exemplars and support an understanding of concepts introduced in the program to this point. Both individual patient-care assignments and cognitive clinical activities are used to support achievement of course outcomes. This course is linked to the NU 160 theory course. Failure in either NU 160 or NU 161 will require a repetition of both courses. 4 credits. Prerequisites: NU 130, NU 125, HL 110, EN 102, PS 101. Co-requisites: NU 135, NU 160, CS 100. 4 Credits Prerequisites: NU 130, NU 125, HL 110, EN 102, PS 101. Co-requisites: NU 135, NU 160, CS 100.

NU 180 CONCEPTS IN PHARMACOLOGY FOR LPN TO RN BRIDGE

This course builds on the practical nurse's knowledge of medications and the nurse's role in administration by gaining a deeper understanding of how various classes of drugs exert their effects on human cells and tissues. Students will learn to classify agents according to their pharmacologic properties thus reinforcing an understanding of a broad range of therapeutic effects as well as unintended adverse effects and their implications for nursing practice as a registered nurse. Rather than memorizing individual agents according to the disorders they are used to treat, students will focus on prototypes representative of other medications with similar mechanisms of action in the same class. 3 credits, Prerequisites Bl 215, Bl 217, Bl 223, PS 101, EN 101. Co-requisites: NU 181, and NU 182 3 Credits Prerequisites Bl 215, Bl 217, Bl 223, PS 101, EN 101. Co-requisites: NU 181, and NU 182

NU 181 CONCEPT ANALYSIS FOR LPN TO RN BRIDGE

This course assists the student to develop the pattern recognition and critical thinking skills required in the registered nurse role by reframing foundational knowledge acquired in practical nursing studies into a conceptual approach to nursing care and practice. A variety of strategies will be used to assist students to make the transition to conceptual thinking including concept analysis, concept mapping, written assignments and case studies. Students will be asked to reorganize foundational knowledge into concepts and move on complete an in depth analysis of concepts representing unpredictable and complex healthcare needs. In addition, students will evaluate key professional concepts from the perspective of the registered nurses practice. 4 credits Prerequisites Bl 215, Bl 217, Bl 223, PS 101, EN 101. Co-requisite: NU 180 & NU 182 4 Credits Prerequisites Bl 215, Bl 217, Bl 223, PS 101, EN 101. Co-requisite: NU 180 & NU 182

NU 182 CORE CONCEPTS FOR HOLISTIC CARE ACROSS THE LIFESPAN WITH PRACTICUM

This course addresses the need to strengthen the practical nursing's understanding of key psychosocial and biophysical concepts that occur across the lifespan. Students complete an in depth an analysis of the concepts of growth and development, family, sexuality, reproduction, cognition, mood and affect and stress and coping. Select exemplars are studied to reinforce an understanding of how nursing care is applied to promote health in patients of all ages as well as care for those presenting with both predictable and increasingly complex alterations. Students will have an opportunity to apply nursing concepts in the maternal child clinical setting and in a health promotion setting serving the holistic needs of children and families. Didactic content is delivered in a flexible hybrid format. 5 credits. (note: students who have obtained a decision score of 75 or greater on each of the following NACE INursing Care During Childbearing / Nursing Care of the Child and Nursing Care of the Client with a Mental Disorder may receive course credit provided they have completed face sheets and maps required for the LPN to RN Capstone Course). Prerequisite: NU 181, Co-requisite: NU 180 5 Credits Prerequisite: NU 181, Co-requisite: NU 180

NU 225 CONCEPTS IN NURSING CARE ACROSS THE LIFESPAN II

This course expands on an understanding of nursing concepts across the lifespan. Professional concepts focus an understanding of evidence-based practice and quality and safety in acute care settings. Analysis of new biophysical concepts and exemplars support the application of problem solving to nursing and health care needs across the lifespan and in a variety of healthcare settings. Interrelated psychosocial and humanistic concepts continue to be addressed. An exploration of caring interventions and more complex variables supporting them is undertaken. This course is linked to the NU 226 practicum course. Failure in either NU 225 or NU 226 will require a repetition of both courses. 3 credits. Prerequisites: NU 135, NU 160, NU 161, CS 100. Co-requisites: NU 226, NU 235, NU 236, any Humanities Elective 3 Credits
Prerequisites: NU 135, NU 160, NU 161, CS 100. Co-requisites: NU 226, NU 235, NU 236, any Humanities Elective

NU 226 CONCEPTS IN NURSING CARE ACROSS THE LIFESPAN II PRACTICUM

This course provides students with a clinical experience in the acute care setting. Supplemental activities in other healthcare settings may be incorporated. One to one patient-care assignments provide an opportunity to explore more complex health problems or exemplars and support an understanding of integrated concepts introduced in the program to this point. Both individual patient-care assignments and cognitive clinical activities are used to support achievement of course outcomes. This course is linked to the NU 225 theory course. Failure in either NU 225 or NU 226 will require a repetition of both courses. 2 credits. Total contact hours 90. Prerequisites: NU 135, NU 160, NU 161, CS 100. Co-requisites: NU 225, NU 235, NU 236, Humanities Elective. 2 Credits Prerequisites: NU 135, NU 160, NU 161, CS 100. Co-requisites: NU 225, NU 235, NU 236, any Humanities Elective.

NU 235 CONCEPTS IN FAMILY NURSING

This course expands on an understanding of nursing concepts across the lifespan, with an emphasis on the concept of family and the variables that impact the provision of nursing care. Professional concepts focus on evidence-based practice in the various settings and systems serving the healthcare needs of families. Biophysical concepts relating to reproduction are introduced. Expansion of previously introduced biophysical concepts emphasizes the interrelationship of psychosocial and humanistic aspects of care and the impact on family function. An exploration of caring interventions aimed at improving outcomes for individuals and families is undertaken. This course is linked to NU 236 practicum course. Failure in either NU 235 or NU 236 will require a repetition of both courses. 3 credits. Prerequisites: NU 135, NU 160, NU 161, CS 100. Co-requisites: NU 225, NU 226, NU 236, any Humanities Elective. 3 Credits
Prerequisites: NU 135, NU 160, NU 161, CS 100. Co-requisites: NU 225, NU 226, NU 236, any Humanities Elective.

NU 236 CONCEPTS IN FAMILY NURSING PRACTICUM

This course provides students with a clinical experience in the maternal child and family settings. Supplemental activities in other healthcare settings may be incorporated. One to one patient-care assignments provide an opportunity to explore health problems or exemplars that support critical thinking with respect to integrated family concepts introduced in the program to this point. Individual patient-care and family assignments and cognitive clinical activities are used to support achievement of course outcomes. In order to progress to the next nursing course in the curriculum sequence both the theory and practicum must be passing. Failure in one course will require repetition of both the theory and clinical if the student is eligible for readmission to the nursing program. 2 credits. Prerequisites: NU 135, NU 160, NU 161, CS 100. Co-requisites: NU 225, NU 226, NU 235, any Humanities Elective. 2 Credits
Prerequisites: NU 135, NU 160, NU 161, CS 100. Co-requisites: NU 225, NU 226, NU 235, any Humanities Elective.

NU 260 CONCEPTS IN NURSING CARE ACROSS THE LIFESPAN III

This course focuses on pre-graduate analysis and synthesis of complex aspects of interrelated nursing concepts across the lifespan. Professional concepts focus on application of evidence-based practice and quality and safety in acute/care and critical care settings. Biophysical concepts focus on health problems or exemplars that are less predictable. A focus on advanced principles of care management and professionalism, critical thinking, and clinical judgment with respect to the complex needs of individuals requiring nursing care in a variety of healthcare settings is included. This course is linked to the NU 261 practicum course. Failure in either NU 260 or Nu 261 will require a repetition of both courses. 4 credits. Prerequisites: NU 225, NU 226, NU 235, NU 236, any Humanities Elective. Co-requisites: NU 261, NU275. 4 Credits Prerequisites: NU 225, NU 226, NU 235, NU 236, any Humanities Elective. Co-requisites: NU 261, NU275.

NU 261 CONCEPTS IN NURSING CARE ACROSS THE LIFESPAN III PRACTICUM

This course provides students with a second clinical experience in the acute care setting. Supplemental leadership activities in other healthcare settings may be incorporated. One to one patient-care assignments provide an opportunity to explore more complex, less predictable health problems/exemplars. Advanced cognitive clinical assignments and Capstone projects support an understanding of integrated concepts introduced in the program and are intended to prepare students to transition to practice. This course is linked to the NU 260 theory course. Failure in either NU 260 or NU 261 will require a repetition of both courses. 4 credits. Prerequisites: NU 225, NU 226, NU 235, NU 236, any Humanities Elective. Co-requisites: NU 260, NU 275. 4 Credits Prerequisites: NU 225, NU 226, NU 235, NU 236, any Humanities Elective. Co-requisites: NU 260, NU 275.

NU 275 NURSING CAPSTONE

This final course is intended to ensure achievement of end of program activities through a variety of independent and collaborative learning activities. Students will engage in a process of evaluation comprised of written assignments, self-assessment tools and end of program standardized testing to determine areas of strength and those requiring improvement in order to achieve end of program outcomes. Students will meet individually with course faculty to outline a plan for meeting end of program outcomes. Achievements related to each end of program outcomes will be used to develop an e-portfolio showcasing their strengths and providing evidence to support their transition to practice or into a baccalaureate program. 4 credits. Prerequisites: NU 225, NU 226, NU 235, NU 236, any Humanities Elective. Co-requisites: NU 260, NU 261. 4 Credits Prerequisites: NU 225, NU 226, NU 235, NU 236, any Humanities Elective. Co-requisites: NU 260, NU 261.

NU 280 ADVANCED CONCEPTS FOR LPN TO RN BRIDGE WITH PRACTICUM

This course synthesizes an understanding of key professional, psychosocial and biophysical concepts to nursing practice and evidence-based care in the prevention and management of more complex and unpredictable health problems across the lifespan. A variety of strategies are utilized to assist students to develop a deeper understanding of actual and potential healthcare alterations related to concepts such as perfusion, oxygenation, immunity, infection, intracranial regulation and violence. Advanced professional concepts such as healthcare quality, leadership and healthcare systems are evaluated from the perspective of the registered nurse. Students will have the opportunity to apply interrelated nursing concepts in an acute care practicum serving the needs of adults with complex health needs. 6 credits Prerequisites: NU 180, NU 182, EN 102, CS 100, Co-requisite: NU 281. 6 Credits Prerequisites: NU 180, NU 182, EN 102, CS 100, Co-requisite: NU 281.

NU 281 CAPSTONE FOR LPN TO RN BRIDGE

This final course is intended to demonstrate achievement synthesis of program learning outcomes or core competencies through analysis of course work completed in practical nursing studies as well as this program. A variety of independent and collaborative peer activities are intended to elicit the responsibility and self-directed learning required to successfully transition to registered nurse practice including the completion of a series of reflective self-assessments to determine areas that need to be strengthened prior to graduation and the development of an e-portfolio showcasing program achievements. As part of this course students will also be required to complete pre-assessment exit testing, a formal NCLEX-RN review and final exit testing worth a proportion of their grade . 4 credits. Prerequisites: EN 102, CS 100, NU 180, NU 182. Co-requisite: NU 280 4 Credits Prerequisites: EN 102, CS 100, NU 180, NU 182. Co-requisite: NU 280

Nutrition

NS 101 CONTEMPORARY NUTRITION

Contemporary Nutrition examines nutritional principles. A study of the main nutrients, proteins, carbohydrates, lipids, vitamins and minerals is made. Dietary recommendations for optimal health for different age groups are covered and used to design diet plans. Modern society's afflictions due to nutritional excesses or deficiencies are covered, such as obesity, diabetes, heart disease, cancer, anorexia nervosa, and bulimia. Emphasis is given to the use of sound dietary practices as the means for preventing disease. Lecture: 3 hours per week. 3 Credits

Paralegal

PA 100 INTRODUCTION TO PARALEGAL STUDIES

This course examines the various careers available to today's paralegal with an emphasis applicable ethical considerations and provides an introduction to substantive areas of law. Lecture: 3 hours per week. 3 Credits

PA 104 LITIGATION FOR PARALEGALS

Examination of the legal institution of civil litigation; including its method, purpose, ethics, and expectations. As a guide, litigation in the personal injury and tort areas are emphasized, supplemented by procedures applicable to commercial transactions, administrative agencies, and contracts. The course will test analytical capability and provide practical training in litigation support, drafting pleadings and motions, case organization, investigation and discovery techniques, and persuasive argument. 3 Credits

PA 201 LEGAL RESEARCH AND WRITING I

A practical approach to developing and improving basic legal research skills and legal writing ability. Assignments will require students to use a variety of primary and secondary sources found on-line and in a law library. As their research skills develop, students will become involved in drafting legal documents with an emphasis on proper legal style and clear, accurate, and precise presentations. Lecture: 3 hours per week. 3 Credits

PA 202 LEGAL RESEARCH & WRITING II

An extension of the skills acquired in Legal Research and Writing I, this course emphasizes legal writing through the practical study of correct usage, legal terminology, and specific forms such as the case brief, client letters, and legal memorandum. Lecture: 3 hours per week. Prerequisite: PA201 3 Credits
Prerequisite: PA 201

PA 203 REAL ESTATE FOR PARALEGAL

Summary of substantive law related to real estate property, with an emphasis on real estate transactions, purchases and sales documentation, title examination, and contract preparation. Lecture: 3 hours per week. 3 Credits

PA 205 FAMILY LAW FOR PARALEGAL

An overview of family law with particular emphasis on the procedural aspects of the marriage contract, property rights of the parties, adoption, protection from abuse, estate planning, alimony, child support, and termination of marriage. Lecture: 3 hours per week. 3 Credits

PA 251 PARALEGAL INTERNSHIP

This internship is designed to provide students who qualify with the opportunity for a direct "hands-on" fieldwork experience in a legal setting during their last semester of study. Pre-requisites: PA100 and a grade of at least "B" in PA104 and PA201. 3 Credits Pre-requisites: PA100 and a grade of at least "B" in PA104 and PA201.

Paramedicine

PM 111 ADVANCED MEDICAL LIFE SUPPORT

This course provides students with interactive lectures, teaching, experiential laboratory and evaluation stations in the areas of patient assessment, airway management, assessment of the shock patient, dyspnea/respiratory failure, chest pain, altered mental status, and abdominal pain. The course emphasizes using scene size-up, history and physical examination to systematically rule-out or rule-in possibilities and probabilities of the patient's medical problem. The course offers the opportunity to begin in an assessment-based approach and progress to a diagnostic-based approach to develop a specific treatment plan for a specific medical condition, resulting in a differential diagnosis. Upon successful completion of the course, the student will be certified as an Advanced Medical Life Support (AMLS) Provider by the National Association of Emergency Medical Technicians (NAEMT). Lecture/Lab: 5 hours per week 1 Credits Co-requisites: PM 01, PM 102, PM 103, PM 105. Note: A combination of BI 215 and BI 217 may be taken in place of BI 113. Department consent required.

PM 201 FOUNDATIONS OF PARAMEDICINE

This course focuses on the integration of theory, skills, and clinical decision making for the foundations of Paramedicine according to current state and national guidelines. An emphasis is placed on EMS systems, communications and scene management, EMS operations, pathophysiology, and comprehensive patient assessment. The scenario based laboratory component of this course focuses on airway and ventilation management, vascular access and medication administration. The lab fosters team membership, leadership skills, and clinical decision-making. Prerequisite: Admission to paramedicine. Co-requisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 102, PM 103. Department consent is required 4 Credits Prerequisite: Admission to paramedicine. Co-requisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 102, PM 103. Department consent is required

PM 202 PREHOSPITAL PHARMACOLOGY

This course covers all aspects of pharmacology relating to safe and appropriate prehospital pharmaceutical interventions. Students will learn the principals of pharmacology, the FDA approval process, medication administration techniques, and drug dosage calculations. Students will be expected to use problem solving skills in case based practical applications. The lab component of this course focuses on drug dosage calculation strategies. Prerequisite: Admission to paramedicine. Co-requisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 102, PM 103. Department consent is required. In addition to a course average of 77% or higher, students must earn an 80% or higher average on all drug calculation assessments in order to pass this course. 2 Credits Prerequisite: Admission to paramedicine. Co-requisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 102, PM 103. Department consent is required.

PM 203 CURRENT ISSUES IN PARAMEDICINE

This course covers current issues and emerging trends in paramedic field practice including roles and responsibilities, medical control, occupational stress, safety, affective behaviors, and medical-legal considerations. Each session encourages critical thinking in the areas of protocol interpretation, research design, and preparation for entry into the EMS job market. Prerequisite: Admission to Paramedicine. Co-requisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202. Department consent is required. 1 Credits Prerequisite: Admission to Paramedicine. Co-requisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202. Department consent is required.

PM 204 CARDIOLOGY

This course focuses on the conduction system of the heart, electrocardiography, interpretation of cardiac rhythms, and the treatment of cardiac dysrhythmias. This course also covers the pathophysiology, clinical manifestations, and treatment of cardiovascular emergencies. The lab component of this course provides comprehensive coverage of pathophysiology and management of cardiovascular emergencies using critica thinking through scenario-based approach. Students who successfully complete this course will earn Advanced Cardiac Life Support (ACLS) certification. Prerequisite: Admission to Paramedicine Co-requisite: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 205. Department consent is required. 5 Credits Prerequisite: Admission to Paramedicine Co-requisite: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 205. Department consent is required.

PM 205 MEDICAL EMERGENCIES

This course focuses on the concepts of pathophysiology and priorities for management of medical emergencies across the lifespan. Clinical decision making will be emphasized using a scenario-based approach. Prerequisite: Admission to Paramedicine. Co-requisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204. Department consent is required. 3 Credits Prerequisite: Admission to Paramedicine. Co-requisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204. Department consent is required.

PM 206 TRAUMA AND SPECIAL PATIENT POPULATIONS

This course provides comprehensive coverage of the assessment, pathophysiology and management of Trauma and Special Patient Populations: Obstetrics, Pediatrics, Geriatrics, Chronic Disease, and Patients with Special Needs. The scenario-based lab component is designed to develop team leadership skills and clinical decision-making with an emphasis on assessment, triage and prioritization, diagnostic skills, treatment goals and outcomes. Prerequisite: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205. Co-requisite: PM 207. Department consent is required. 4 Credits Prerequisite: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205. Co-requisite: PM 207. Department consent is required.

PM 207 CLINICAL DECISION MAKING

This course is designed to integrate paramedic knowledge, skills and behaviors through practice and lecture. This scenario-driven course is designed to develop team leadership skills and clinical decision-making in the management of medical, traumatic, and psychological problems across the lifespan. A great emphasis will be placed on paramedic assessment, diagnostic skills, treatment aims and outcomes. Integrated in this course is Advanced Medical Life Support, Pediatric Advanced Life Support, and Neonatal Resuscitation program. Prerequisite: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205. Co-requisite: PM 206. Department consent is required. 3 Credits Prerequisite: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205. Co-requisite: PM 206. Department consent is required.

PM 210 EMERGENCY CARE CLINICAL I

This clinical rotation provides a comprehensive emergency department experience that focuses on theory, assessment skills, invasive skills, and effective behaviors expected of a paramedic under the direction of a preceptor or instructor. The companion lab is designed to cover advanced topics in clinical practice, EMS operations, strategies for success, case review, and standardized patient scenarios. Prerequisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205, PM 206, PM 207. A minimum of 140 hospital clinical hours and 40 lab hours are required. Department consent is required. A minimum of 90% must be achieved on all drug dosage calculations while in clinical. 3 Credits Prerequisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205, PM 206, PM 207. A minimum of 140 hospital clinical hours and 40 lab hours are required. Department consent is required.

PM 211 EMERGENCY CARE CLINICAL II

This clinical rotation provides a comprehensive hospital experience that focuses on theory, assessment skills, invasive skills, and affective behaviors expected of a paramedic under the direction of a preceptor. Students rotate through various hospital rotations. The companion lab is designed to cover advanced topics in clinical practice, EMS operations, strategies for success, case review, and standardized patient scenarios. A minimum of 160 hospital clinical hours and 40 lab hours are required. Prerequisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205, PM 206, PM 207, PM 210. Department consent is required. A minimum of 90% must be achieved on all drug dosage calculations while in clinical. 4 Credits Prerequisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205, PM 206, PM 207, PM 210. Department consent is required.

PM 212 PARAMEDIC FIELD PRACTICE CAPSTONE

The paramedic field practice capstone course is a comprehensive field experience where students work under the supervision of a paramedic on Advanced Life Support (ALS) ambulances for at least 250 hours. Student are required to participate in the comprehensive emergency medical care for at least 50 patients at the ALS level and serve as a team leader for a minimum of 25 of those calls. Students submit written documentation throughout the field rotations. This course also includes 40 hours of National Registry exam preparation at the conclusion of field rotations. Prerequisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205, PM 206, PM 207, PM 210, PM 211. Department consent is required. A minimum of 90% must be achieved on all drug dosage calculations while in clinical. 5 Credits Prerequisites: Anatomy & Physiology (BI 215, BI 217, BI 113, or equivalent), PM 201, PM 202, PM 203, PM 204, PM 205, PM 206, PM 207, PM 210, PM 211. Department consent is required.

Philosophy

PH 101 PHILOSOPHY: PROBLEMS IN PHILOSOPHY

Introductory study of the nature and development of philosophy. Traditional and contemporary philosophical problems are addressed, and investigation into the lives and lifetimes of philosophers is included. Subjects include: concepts of reality, the limitations of human knowledge, the existence of God, ethical behavior, and social justice. Lecture: 3 hours per week. 3 Credits

PH 102 PHILOSOPHY: ETHICS

A philosophical study of representative ethical systems as an approach to moral issues. Problems include: how do we determine good and bad, right and wrong, freedom and responsibility; how do we select the values that guide us to happiness and the “good life”. Discussion-oriented, focusing on the application of ethical solutions to moral dilemmas. Lecture: 3 hours per week. 3 Credits

PH 103 CONTEMPORARY MORAL PROBLEMS

This course will focus on issues that arise in contemporary public debate concerning matters of applied ethics and social justice. Topics will likely include: euthanasia, gay marriage, immigration, racism and racial profiling, gender politics, free speech, hunger and global inequality. Student will be exposed to multiple points of view on the topics and will analyze the moral frameworks informing opposing positions. The goal will be to provide the basis for respectful and informed discussion of matters of common moral concern. The format and topics of the courses will vary relative to existing ethical concerns. One section may focus extensively on issues on medical ethics, another on the morality of war, and another on an entirely different contemporary philosophical issue. 3 Credits

PH 106 PHILOSOPHY AND FILM

Film and stories engage, challenge, and extend our imagination and help us to grapple with significant philosophical questions. It provides important cultural frames for understanding who we are and what we are doing and common ground with which to identify and discuss philosophical issues. In this course, students will locate philosophical themes in film and literature and enter into dialogue with them. By identifying philosophical issues as a part of everyday life, students will become more observant and reflective individuals. This course provides students with an integrated introduction to philosophy and some basic logic and critical thinking materials. Students will critically examine philosophical arguments to think critically about the conduct of life, the justification of beliefs, and the nature of the world. 3 Credits

PH 110 PHILOSOPHY OF RAJA YOGA

Yoga philosophy, one of the six major systems of Hindu Philosophy (darshanas), is the science of meditation. This royal accelerated path to inner discovery has been explained in the Upanisads by ancient sages (rishis) prior to 1,500 BCE and later compiled by Maharishi Patanjali in the famous Yogasutras. The student is introduced to eight steps of Raja Yoga consisting of yama, niyama, asana, pranayama, pratyahara, dharana, dhyana, and Samadhi. With this knowledge, innate desires, emotions, and thoughts may be controlled to experience benefits that include improved physical and mental health, balanced individual growth, harmony in social interactions, fearlessness, increased self-awareness, and a sense of individual calmness that fosters global peace. This is a philosophy course and requires no exercise or practice on the part of the student. 3 credits. 3 Credits

PH 210 HINDU PHILOSOPHY

The course traces the roots of Hindu philosophy from the Vedas and the Upanishads to the Srimad Bhagavad Gita, the Song Divine, a handbook on how every human being can come to live the subtle philosophical principles of the Vedanta while engaged in regular everyday actions. The Song Divine provides the intellectual and effective substratum for developing character, mental strength, work efficiency, individual peace of mind and a spirit of service to work for the well-being of others. Prerequisite: Completion of EN 100 or higher is recommended 3 Credits Prerequisite: Completion of EN 100 or higher is recommended

Phlebotomy

PB 100 PRINCIPLES & METHODS OF PHLEBOTOMY

This course is designed to explore the history of phlebotomy and the development of current practice. Course materials include an introduction to the clinical laboratory and associated topics necessary for the phlebotomist to work in a clinical laboratory. Students will be introduced a variety of health care settings. Students will explore anatomy and physiology of the vascular system, venous and capillary specimen procurement, pediatric and geriatric blood drawing, blood donor collection, electrocardiograph (EKG) procedures, microbiological specimen collection, and glucose testing. Lecture: 3 hours per week. Lab: 3 hours per week. 3 Credits

PB 105 CLINICAL PRACTICUM PHLEBOTOMY

This course will follow the Principles and Methods of Phlebotomy course. The student will be placed in an ambulatory private lab or hospital facility. Each performance objective will consist of the specific tasks of phlebotomy and blood collection procedures, standard of clinical performance, and evaluation of competency expected of an entry-level phlebotomist. The practicum will be a minimum of 180 contact hours. Clinical: 180 hours. Prerequisite: PB100 4 Credits Prerequisite: PB100

Photography

PO 115 PHOTOGRAPHY I

Lecture/darkroom course designed as an introduction to black & white still photography. Emphasis on basic skills and darkroom techniques. Darkroom and shooting assignments outside of class are required. Access to a manual 35mm or larger format camera is required. Lecture: 3 hours per week. 3 Credits

PO 120 PHOTOGRAPHY II

Explores issues of imaging through a study of composition, light, digital filters and exploration of the image space. Integrates traditional and digital modes of imaging expression. Some darkroom time, traditional and electronic, outside of class is required. Lecture: 3 hours per week. Prerequisite: PO 115 or permission of instructor 3 Credits Prerequisite: PO115

PO 125 COLOR PHOTOGRAPHY

An introductory course providing the opportunity for students to learn fundamental color photography skills and techniques and operation of their cameras. Issues of light, filters, exposure, the nature of color, and theories of composition will be explored. Introduces color photography through the medium of the digital camera which will be required after the second class. Cameras with aperture and shutter speed adjustments are preferable but not absolutely necessary. Camera phones are not acceptable. Lecture: 3 hours per week. 3 credits. 3 Credits

PO 126 DIGITAL IMAGING

Foundation course for students interested in digital imaging. This course aims to explore principles of design and composition while enhancing familiarity with image creation and manipulation software, digital image capture, and the inclusion of images in web design. Emphasis is on visual communication using digital art, graphic design, and color. In addition to class work, independent computer lab time is required. Each student will present and defend an end of term project. 3 Credits

Physics

PY 101 COLLEGE PHYSICS I w/LAB

The algebra-based course covers kinematics, dynamics, energy, wave motion, fluids, heat and temperature, and kinetic theory of gases and sound. Lecture: 3 hours per week. Lab: 3 hours per week. 4 Credits

PY 102 COLLEGE PHYSICS II w/LAB

A continuation of PY 101. Electric charge, fields, energy and circuits, magnets electromagnetic waves, geometric and wave optics, relativity, and atomic and nuclear physics. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisite: PY 101 4 Credits Prerequisite: PY101

PY 103 ENGINEERING PHYSICS I w/LAB

First semester of a two-semester calculus-based sequence designed specifically for Engineering majors. Covered are vectors, statics, linear and planar kinematics and dynamics, the conservation principles, the mechanics of fluids, heat, and thermodynamics wave and oscillatory motion. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisite: MA 104. Co-requisite: MA 200 4 Credits Prerequisite: MA 104 Corequisite: MA 200

PY 104 ENGINEERING PHYSICS II w/LAB

Second half of a calculus-based sequence designed specifically for Engineering majors. Included are electrostatic and magnetic fields, Gauss' Law, potential, DC and AC circuits, magnetic induction, waves and wave resonance, and sound and electromagnetic waves. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisites: MA 200, PY 103. Co-requisite: MA 201. 4 Credits Prerequisites: MA 200, PY 103. Co-requisite: MA 201.

Practical Nursing

PN 102 FOUNDATIONS OF PRACTICAL NURSING

This course focuses on the common core of nursing knowledge and skills necessary to provide nursing care in simple situations across the life span. Using the framework of basic human needs, content is based on safety/sensory, nutrition/hydration, elimination, oxygenation, mobility, comfort/rest, and self-concept/self-esteem needs. These concepts assist the student in recognizing characteristics of individual patients whose ability to meet his/her own basic needs have been compromised. Nursing process is introduced as the method utilized to meet basic human needs. Nursing skills are presented in classroom, laboratory, and clinical areas. Clinical experiences begin in long-term care facilities and progress to rehabilitation/sub-acute facilities. Lecture: 96 hours per semester. Clinical: 180 hours. Lab: 45 hours Pre/Co-requisites: BI 113, BI 118, HL 111, PN 105, PN 107 10 Credits Co-requisites: BI113, BI118, HL111, PN105, PN107

PN 105 ISSUES & TRENDS IN PRACTICAL NURSING

This course focuses on the history of practical nursing in relation to health care workers and the current health care delivery system. The role of the student, graduate, and licensed practical nurse is emphasized. Legal and ethical obligations of the professional are introduced. Content is organized under these basic human needs: safety/sensory, communication/interaction, and self-concept/esteem. Lecture: 1 hour per week. 1 Credits

PN 107 PRINCIPLES OF PHARMACOLOGY I

One of the major practical nursing responsibilities in-patient care is the safe administration of medications. This course provides the beginning knowledge base of general pharmacology principles and information, drug characteristics, legal information, age-related and developmental considerations, and math for pharmacology calculations, including dosage calculation HESI testing. The course explores instruction for correct calculation of divided doses, solid and liquid medications and intravenous fluids and medications. Students will learn how to classify medications, examples of various medications, actions, uses, side effects, patient teaching, and nursing implications. Prerequisite: Acceptance to the Practical Nursing Program (or with permission of the faculty member). Total course credits 3; Lecture: 3 hours per week. 3 Credits Prerequisite: Acceptance to the Practical Nursing Program (or with permission of the faculty member).

PN 109 INTRODUCTION TO MEDICAL/SURGICAL NURSING

This course is an introduction to Medical/Surgical Nursing and focuses in basic care of the adult, including health assessments, wound care, patient treatments and care planning. Using the framework of basic human needs the student is provided the opportunity to collect data and apply the nursing process to selected patients. Application of scientific principles in the provision of patient care is accomplished in the clinical setting as well as during the seminar discussions. Individual progress in the development of the practical nurse role is achieved through completion of patient assessments., care plan formulation and implementation, a written narrative and a HESI examination. Nursing information and skills are presented in lab and clinical area. Seminar is presented in clinical conference settings. Prerequisites: PN102, PN105, PN107, HL111, BI113, and BI118. Lab: 38 hours. Seminar: 8 hours. Clinical:32 hours. 2 Credits Prerequisites: PN102, PN105, PN107, HL111, BI113, and BI118

PN 110 PRINCIPLES OF PHARMACOLOGY II

This course focuses on commonly prescribed drugs used to treat common disorders covered in the practical nursing courses. Students will learn about major factors that provide for the basic human need of safety. In addition to medications and their classification, actions, uses, side effects, and nursing considerations, students will continue to master pharmacology calculations. This course builds on PN 107. It is designed to be taught concurrently with Med/Surg courses. Total course credits 3; Lecture: 3 hours per week. Pre-requisite: PN107. Co-requisite: PN121 and PN122. 3 Credits Prerequisite: PN107Corequisite: PN121 and PN122

PN 121 MEDICAL SURGICAL NURSING I

This course examines the skills necessary to provide practical nursing care to patients across the life span that have common health problems. Basic human needs are the framework for the course content. Nursing information and skills are presented in classroom, laboratory, clinical area, and clinical conference settings. Students utilize critical thinking and the nursing process as the basis for delivery of safe practical nursing care. Students care for patients with common health problems in acute care clinical settings. Lecture: 52.5 hours per 8 wk session (Days) or 12 wk (eves). Clinical: 105 hours. Prerequisite: PN 109. Pre/Co-requisites: PN 105, PN 110, PS 118 7 Credits Prerequisite: PN 109. Pre/Co-requisites: PN 105, PN 110, PS 118

PN 122 Medical Surgical Nursing II

This course examines the skills necessary to provide practical nursing care to patients across the life span that have common health problems. Basic human needs are the framework for the course content. Nursing information and skills are presented in classroom, laboratory, clinical area, and clinical conference settings. Students utilize critical thinking and the nursing process as the basis for delivery of safe practical nursing care. Students care for patients with common health problems in acute care clinical settings. 7 Credits

PN 122 MEDICAL SURGICAL NURSING II

This course examines the skills necessary to provide practical nursing care to patients across the life span that have common health problems. Basic human needs are the framework for the course content. Nursing information and skills are presented in classroom, laboratory, clinical area, and clinical conference settings. Students utilize critical thinking and the nursing process as the basis for delivery of safe practical nursing care. Students care for patients with common health problems in acute care clinical settings. Lecture: 52.5 hours per 8 wk session (Days) or 12 wk (eves). Clinical: 105 hours. 7 Credits Prerequisite: PN 109. Pre/Co-requisites: PN 105, PN 110, PS 118, and PN121

PN 122 MEDICAL SURGICAL NURSING II

This course examines the skills necessary to provide practical nursing care to patients across the life span that have common health problems. Basic human needs are the framework for the course content. Nursing information and skills are presented in classroom, laboratory, clinical area, and clinical conference settings. Students utilize critical thinking and the nursing process as the basis for delivery of safe practical nursing care. Students care for patients with common health problems in acute care clinical settings. Lecture: 52.5 hours per 8 wk session (Days) or 12 wk (eves). Clinical: 105 hours. Prerequisite: PN 109. Pre/Co-requisites: PN 105, PN 110, PS 118, and PN121 7 Credits Prerequisite: PN 109. Pre/Co-requisites: PN 105, PN 110, PS 118, and PN121

PN 130 CARE OF THE FAMILY

This course discusses nursing care of the family unit. The course content builds on knowledge learned in Life Span Psychology to provide an overview of the expected changes and basic human needs of the family unit. Students will explore patient conditions seen because of changes in society. Clinical conferences in this portion will explore various options common in today's PN practice, i.e., the PN in extended care facilities as primary nurse, charge nurse, medication nurse, and team leader. There is discussion of the evolving role of the PN in home care. The clinical component will provide selected experience in long-term care settings. Lecture: 45.5 hours per semester. Clinical: 126 hours. Prerequisites: PN 120, PS 118. 7 Credits Prerequisites: PN120, PS118

Psychology

PS 101 INTRODUCTION TO PSYCHOLOGY

This course is designed to provide a basic understanding of human behavior. General topics will include the history of psychology, research, human growth and development, biological processes of behavior, sensation and perception, consciousness, learning, memory, motivation, intelligence, and personality development. In addition, the course explores a brief introduction to abnormal behavior and current therapies will be included. 3 Credits

PS 113 PSYCHOLOGY OF ADJUSTMENT

A study of the range of normal responses to life's choices and stresses. Emphasis on psychosocial models and mental health. Examines psychoanalytical, behavioral and humanist-existential concepts. Lecture: 3 hours per week. 3 Credits

PS 118 HUMAN GROWTH AND DEVELOPMENT

Examines regularly predicted physical, psychological, and emotional changes from conception through aging. Theories and concepts of the psychology of the life span are integrated. 3 Credits

PS 150 CAREER/LIFE PLANNING

This course will introduce students to the various steps involved in career and life decision making. In relation to career process, theories of Holland, Maslow, Super and Gardner will be presented. Each student will have the opportunity to perform multiple self-assessment inventories and to explore and analyze their skills, values, interests, motives, personality and thinking styles in relationship to career/life options. Resume writing and interview techniques will be addressed. 3 Credits

PS 222 CHILD DEVELOPMENT

This course studies child development from birth to pubescence with a focus on infancy through 6 years of age. Problems of discipline, sibling rivalry, development of responsibility, and social adjustment are covered. Practical applications of developmental theories are discussed, along with an observational component. 3 Credits

PS 223 PSYCHOLOGY OF CRIMINAL BEHAVIOR

This course will examine crime, the criminal justice system (both juvenile and adult) and the psychological roots of criminal behavior. It also focuses on how criminal behavior can be attributed to biology, the psychology/temperament of the person, the society in which the person resides, as well as environmental issues such as overcrowding, pollution, and noise. The course will also take a developmental look at crime starting from childhood into adulthood. It will also discuss different types of crime and how these relate to the offenders and the course will end with a discussion about punishment and imprisonment. Lecture: 3 hours per week. Prerequisites: PS101, PS240 or permission of the instructor
3 Credits Prerequisites: PS101, PS240 or permission of the instructor

PS 231 ADOLESCENT PSYCHOLOGY

Examines biological, psychological, and social development of the individual during the adolescent period. Problems of sexual maturity, independence, identity, and interpersonal relationships will be emphasized. Prerequisite: PS 101 3 Credits Prerequisite: PS 101

PS 240 ABNORMAL PSYCHOLOGY

Analyzes a spectrum of psychopathology, ranging from schizophrenia to depression. Applies a number of theoretical models to the understanding of etiology, behavioral manifestations, and treatment modalities. Prerequisite: PS 101 3 Credits Prerequisite: PS 101

PS 241 GROUP PROCESS

Students learn the techniques and skills, decision-making, communication, leadership styles, left/right brain functions needed to work in and with groups. Journal writing and experiential learning from small group participation are integral elements of this course. Lecture: 3 hours per week. 3 Credits

PS 250 RESEARCH METHODS

The course will cover an overview of scientific research methods steps and process. General topics will include analysis of qualitative and quantitative research designs, sampling strategies, and statistical techniques. Lecture: 3 hours per week. 3 Credits

PS 256 COGNITIVE PSYCHOLOGY

This course will cover the major concepts and principles underlying higher mental functions. Material to be addressed includes but is not limited to the history of cognitive psychology, attention, sensation and perception, consciousness, memory, learning, decision making, language and creativity. Prerequisite: Introduction to Psychology 3 Credits Prerequisite: PS 101 Introduction to Psychology

PS 260 PSYCHOLOGY IN BUSINESS AND INDUSTRY

This course will focus on human relation problems in business and industry. It will also examine personnel issues, consumer psychology, conflict supervision, communication, motivation, and cooperation in the workplace. Case studies will be employed. Lecture: 3 hours per week. 3 Credits

Radiologic Technology

RT 101 RADIOGRAPHIC POSITIONING AND LAB I

This course presents the fundamental theory, principles and practices underlying the art and science of radiographic positioning. The learning activities focus on having the student develop competency in cognitive, psychomotor, and affective domain skills requisite in radiographic positioning. The course will include commonly performed radiographic exams of the chest, abdomen, and upper and lower extremity. Laboratory exercises and practical examination sessions reinforce the theoretical principles covered in lecture. Lecture: 2 hours per week. Lab: 2 hours per week. Co-requisites: RT 111, BI 115 3 Credits
Corequisites: RT111, RT121

RT 102 RADIOGRAPHIC POSITIONING AND LAB II

This course is a continuation of RT 101. The skill clusters relating to radiographic positioning of commonly performed exams of the cervical, thoracic, lumbar, and sacral spine are studied, as well as more involved procedures used to develop image portions of the upper and lower extremity, thoracic cage and pelvic girdle. Lecture material on studies involving the gastrointestinal, urinary, and hepatobiliary systems will be presented. Laboratory exercises and practical competency assessments to reinforce theoretical principles covered in lecture. Lecture: 2 hours per week. Lab: 2 hours per week. Prerequisite: C or better in RT 101, RT 111, BI 115. Co-requisites: RT 112. 3 Credits Prerequisites: RT101, RT121 Corequisites: RT112, RT122

RT 111 RADIOGRAPHIC TECHNIQUE AND LAB I

This course provides an overview of the principles and a process related to radiographic image formation/production and analyzes factors effecting the production and appearance of radiographic density. Learning activities assist student development of skills in manipulating various independent and combinations of factors to produce a quality image. Both analog (film screen) and digital imaging technology will be presented in this course. Laboratory exercises and practical sessions reinforce theoretical principles covered in lecture. Lecture: 2 hours per week. Lab: 2 hours per week. Co-requisites: RT 101 3 Credits Corequisites: RT101, RT121

RT 112 RADIOGRAPHIC TECHNIQUE AND LAB II

This course is a continuation of RT 111. Factors closely related to the production of radiographic contrast and detail resolution will be studied. Effective utilization of imaging accessories and the principles and practices related to the development of an assessment of radiographic quality are included. Laboratory exercises and practical competency assessments reinforce the theoretical principles learned in lecture. Advanced principles and practices related to digital imaging will be considered. Lecture: 2 hours per week. Lab: 2 hours per week. Prerequisite: C or better in RT 111, RT 101. Co-requisites: RT 102 3 Credits Prerequisite: RT111 Corequisites: RT102, RT122

RT 121 CLINICAL EDUCATION I

Prior to assignment to a clinical site, students are required to successfully complete an orientation program. It includes an overview of all program requirements and the HHSE Student handbook and Policy Manual with Radiologic Technology Program Addendum. The orientation includes medical ethics, basic patient care practices and procedures, medical terminology and radiation safety principles and practices related to the cognitive, affective and psychomotor skills for safe participation in the hospital. Students will begin clinical activities that focus on development of basic clinical competency in the manipulation of radiographic equipment and accessories and the performance of x-ray examinations presented in RT 101. Clinical education activities involve two 8-hour days per week. Co-requisites: RT 101, RT 111 3 Credits Corequisites: RT101, RT111

RT 122 CLINICAL EDUCATION II

The student will develop and demonstrate basic competency in the performance of examinations covered in RT 102 including those related to the lower extremities, spinal column, shoulder girdle, and pelvic girdle. In addition, students demonstrate continued competence in the performance of exam categories included in RT 121 and will be expected to be active participants in the performance of tasks and skills associated with routine operations of radiographic/ fluoroscopic suites. Clinical education activities involve two 8-hour days per week. Clinical: 16 hours per week. Prerequisites: RT 101, RT 111 & RT 121. Co-requisites: RT 102, RT112 3 Credits Prerequisites: RT101, RT111, RT121 Corequisites: RT102, RT112

RT 123 CLINICAL EDUCATION III

During this full-time four day per week clinical experience, students will continue to develop and demonstrate an increasing degree of competence in the performance and skills related to independent decision making, efficiency and speed of performance and problem-solving ability required for the area/procedure/ exam categories. Students are required to demonstrate basic competence in the performance of exams of the skull and exams performed at the patient bedside. Clinical: 32 hours per week for Summer Session. Prerequisites: RT 102, RT 112, & RT 122 6 Credits Prerequisites: RT102, RT112, RT122

RT 131 RADIATION PHYSICS

This course presents an overview of the basic laws, theories and principles including basic atomic structure, electrostatics, electrodynamics, and electromagnetism, radioactivity and the electromagnetic spectrum. Classroom lectures, discussions, and assignments assist students in relating facts, theories, and laws to operating principles associated with the components of x-ray generating equipment, nature of the x-ray beam produced and the types of interactions of x-radiation with matter that are associated with medical imaging applications. Lecture: 4 hours per week. Prerequisites: MA 098 4 Credits Prerequisites: RT111, MA103

RT 203 RADIOGRAPHIC POSITIONING AND LAB III

This course presents the skill clusters of less commonly performed exams of skeletal anatomy, more involved procedures used to image the facial bones, the mammary glands, the salivary gland, trauma, and pediatric radiography and other minor special procedures. Male and female reproductive systems will be studied. Laboratory exercises and practical competency assessments reinforce theoretical principles presented in lecture. Lecture: 2 hours per week. Lab: 2 hours per week. Prerequisite: ?C? or better in RT 102, BI 116, RT 112. Co-requisites: RT 214 3 Credits Prerequisite: RT123 Corequisites: RT214, RT221

RT 213 RADIOBIOLOGY AND RADIATION PROTECTION

This course presents biological effects (at the atomic, molecular, cellular, tissue, organ, and organism level) of exposure to ionizing radiation. The relative risks-vs-benefits associated with medical radiation exposure theories, principles underlying radiation safety/protection practices/ procedures and accessory usage will be studied. Lecture: 2 hours per week. Prerequisites: RT 131, BI 116 2 Credits Prerequisites: RT112, RT131

RT 214 RADIOGRAPHIC TECHNIQUE AND LAB III

This course presents the factors related to the development of technical factor protocol systems. The equipment, principles, and practices associated with radiographic quality control will also be studied. Both analog (film screen) and digital imaging technology will be presented in this course. Laboratory exercises and practical sessions reinforce the theoretical principles presented in lecture. Lecture: 2 hours per week. Lab: 2 hours per week. Prerequisite RT 102, RT 112 . Co-requisites: RT 203 2 Credits Prerequisites: RT112, RT131Corequisites: RT203, RT221

RT 216 MEDICAL AND SURGICAL DISEASES

This course presents basic pathologic diseases, radiographic exam indicators and common radiologic findings in routine and specialized modalities. In addition, pharmacology of contrast agents and drugs commonly used in radiology are presented. Lecture: 3 hours per week. Prerequisites: RT 203, RT 214. Co-requisites: RT 217 3 Credits Prerequisites: RT203, RT214, RT221Corequisites: RT217, RT222

RT 217 ADVANCED RADIOLOGIC TECHNOLOGY

This course provides a comprehensive Registry Review covering all topics within the Radiologic Technology Program's curriculum, a review of the allied imaging modalities of CT, MRI, ultrasound, cardiovascular, and nuclear medicine including relevant sectional image appearances and anatomy, job searching strategies, and test taking strategies. A review will be conducted of radiographic image production, radiologic equipment operation and maintenance, radiation protection, radiographic procedure performance and related anatomy; and patient care delivery. The last section of the course will focus on developing strategies for success in taking the ARRT exam using simulation examination. Lecture: 3 hours per week. Prerequisites: RT 203, RT 214. Co-requisites: RT 216 3 Credits Prerequisites: RT203, RT214, RT221Corequisite: RT222

RT 221 CLINICAL EDUCATION IV

Students demonstrate competency in advanced skills related to independent decision-making, efficiency and speed of performance, and problem solving associated with the area/ procedure/exam categories contained in all previous clinical courses. In addition, students will develop and demonstrate basic competence in the performance of exams presented in RT 203 including minor special procedures, trauma radiography and pediatric radiography. Clinical education activities involve three 8-hour days per week for two weeks during college intersession. Clinical: 24 hours per week. Prerequisites: RT 102, RT 112, BI 116. Co-requisites: RT 214, RT 203 4 Credits Prerequisites: RT102, RT112, RT122

RT 222 CLINICAL EDUCATION V

Students will demonstrate competency in advanced skills related to independent decision-making, efficiency and speed of performance and degree of problem solving associated with the area/procedure/ exam categories contained in all previous courses. In addition, students will develop and demonstrate basic competency in procedures for exams presented in RT 203 and as a participant in advanced imaging procedures. Clinical: 24 hours per week. Prerequisites: RT 203, RT 214, RT 221 4 Credits Prerequisites: RT203, RT214, RT221

TO 201 COMPUTED TOMOGRAPHY (I) INTRODUCTION

Computed Tomography (I) Introduction will reinforce the basic principles/concepts concerning how the energized beam originates, is focused, captured, measured, digitized and formatted to obtain diagnostic quality imaging. Specific Topics: Basic Computer Principles, Computed Tomography Principles, Operation and Components Image Processing and Acquisition, Image Reformatting, Radiation Physics, Interactions with Matter, Radiation Biology & Effects, Geometric Measurements, Multiplanar Retrospective Reconstruction. Prerequisite: Candidates must hold current A.R.R.T. accreditation & certification in either Diagnostic Radiology, Nuclear Medicine Technology, or Radiation Therapy. Co-requisite: TO 214 CT Cross Sectional Anatomy 2 Credits Prerequisite: Candidates must hold current A.R.R.T. accreditation & certification in either Diagnostic Radiology, Nuclear Medicine Technology, or Radiation Therapy. Co-requisite: TO 214 CT Cross Sectional Anatomy

TO 202 COMPUTED TOMOGRAPHY (II) ADVANCED

Computed Tomography (II) Advanced will reinforce Patient Care and Safety related topics for the proper administration of Radiation Dose and Contrast medias that are used in Computed Tomography. The course will also build from the previous course (Computed Tomography (I) Introduction) and deliver more in-depth physics and imaging related topics. Specific Topics: Patient Care and Assessment, Immobilization, Monitoring, Heart Rhythm and Cardiac Cycle, Medical Devices, Lab Values and Contraindications, Venipuncture, Contrast Media and Dose Calculations, Adverse Reactions, Image Processing and Display, Informatics, Image Quality and Artifact Recognition, Quality Assurance, Hounsfield Units and Display, 3-D Reconstruction, Calibration Checks, Spatial and Contrast Resolution. Prerequisite: TO 201 Computed Tomography (I) Introduction. Co-requisite: TO 215 Pathology & Procedures. 2 Credits Prerequisite: TO 201 Computed Tomography (I) Introduction. Co-requisite: TO 215 Pathology & Procedures.

TO 214 COMPUTED TOMOGRAPHY CROSS SECTIONAL ANATOMY

Computed Tomography Cross Sectional Anatomy will give students an in-depth knowledge of anatomic structures throughout the human body that are critical to becoming proficient as a Computed Tomography Technologist and an integrated part of the critical care team. Specific Topics: Cranium & Facial Bones, Brain, Spine, Neck, Thorax, Abdomen, Pelvis, Upper and Lower Extremities. Arterial and Venous structures throughout the body will be studied in depth along with blood flow travel times for computed tomography contrast examinations. Prerequisite: Candidates must hold current A.R.R.T. accreditation & certification in either Diagnostic Radiology, Nuclear Medicine Technology, or Radiation Therapy. Co-requisite: TO 201 Computed Tomography (I) Introduction 2 Credits Prerequisite: Candidates must hold current A.R.R.T. accreditation & certification in either Diagnostic Radiology, Nuclear Medicine Technology, or Radiation Therapy. Co-requisite: TO 201 Computed Tomography (I) Introduction

TO 215 COMPUTED TOMOGRAPHY PATHOLOGY & PROCEDURES

Computed Tomography Pathology & Procedures will allow the student to recognize pathologies within the human anatomy after a Computed Tomography scan has ended. Recognition of adverse pathologies that can be identified by a technologist is vital to helping the Radiologist prioritize reading of exams and triaging cases appropriately. This course will also cover the invasive procedures that are performed within the Computerized Tomography field, so that the technologist can effectively deliver optimal scanning techniques, ensure sterile field integrity and assist the Radiologist during procedures. Specific Topics: 3-D Studies, Radiation Therapy Planning, Drainage and Aspiration Procedures, Virtual Colonography, Brain Perfusion Studies, Myelography, CT Arthrography, Diskography, Carcinoid, Colorectal Cancer, Chrohn's Disease, Ulcerative Colitis, Intussusception, Mesenteric Ischemia, Hemangioma, Adenocarcinoma, Polycystic Kidney Disease, Diverticulitis, Aortic Aneurysm, Uterine Leiomyoma, Sarcoidosis, Hepatic Adenoma, Pulmonary Embolism, Stroke, Traumatic Brain Injury, Splenic Injury, Intra-abdominal Free

Fluid, Cholelithiasis, Renal Calculi, Lymphoma, Metastatic Disease, Lung Nodule, Transplant Studies, Pelvis Trauma, Vascular Studies, Appendicitis, Enterogmphyytud)\ Multi-phase Examinations.
Prerequisite: TO 214 CT Cross Sectional Anatomy. Co-requisite: TO 202 Computed Tomography (II)
Advanced 2 Credits Prerequisite: TO 214 CT Cross Sectional Anatomy. Co-requisite: TO 202 Computed Tomography (II) Advanced

TO 220 CLINICAL EDUCATION I

Students will begin clinical activities that focus on development of basic clinical competence examinations of Head, Neck, Abdomen, Pelvis and Extremities. Students can participate in, but will not be able to attempt clinical competencies on any CTA (angiography) examinations, CT procedural examinations (biopsies/drainage insertions or pulls/ablations) or begin Intravenous Short Peripheral Catheter Insertions (I.V. starts) during Clinical I. Clinical education activities involve two 8-hour days per a week. 3 Credits 3 Credits Corequisite: TO 201 COMPUTED TOMOGRAPHY (I)
INTRODUCTION TO 214 COMPUTED TOMOGRAPHY CROSS SECTIONAL ANATOMY

TO 225 CLINICAL EDUCATION II

Students demonstrate competency in admnced skills related to independent decision-making, efficiency, speed of performance, and problem solving associated with the area/procedure/exam categories contained in Clinical Education I. In addition, students will and demonstrate basic competence in the performance of examinations involving CTA (angiography), CT procedural examinations (biopsies/drainage insertions or pulls/ablations) and Intravenous Short Peripheral Catheter Insertions (I.V. starts). 3 Credits 3 Credits
Prerequisite: TO 201 COMPUTED TOMOGRAPHY (I) INTRODUCTION TO 214 COMPUTED TOMOGRAPHY CROSS SECTIONAL ANATOMY TO 220 CLINICAL EDUCATION I

Corequisite: TO 202 COMPUTED TOMOGRAPHY (II) ADVANCED TO 215 COMPUTED TOMOGRAPHY PATHOLOGY & PROCEDURES

Science

SC 102 INTEGRATED SCIENCE I

This course is a study of the basic concepts of chemistry, physics, geology, metrology, astronomy and environmental sciences. Topics covered include energy, heat and the laws of thermodynamics, properties and states of matter, motion, electricity and magnetism, the stars, cosmology, the Earth and other planets, the climate and weather, and the environment. The laboratory entails experiments covered in lecture.
Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits

SC 103 INTEGRATED SCIENCE II

This course is a study of the concepts governing living organisms. Topics covered include the cell, cell membranes, biochemical pathways, cell division, Mendelian and molecular genetics, human organ systems, evolution, and interaction of organisms between themselves and their environments. The laboratory entails experiments covered in lecture. Lecture: 3 hours per week. Lab: 2 hours per week. 4 Credits

SC 170 SP TOPICS IN SCIENCE SEMINAR I - WEAPON MASS DESTRUCTION

An Honors-Level seminar course that examines specialized topics in science. This module examines the scientific foundations of biological, chemical and nuclear weapons, their implications, protection, detection and the fundamental responses. 1 Credits Prerequisite: BI101

SC 171 SP TOPICS SCIENCE SEMINAR II - SCIENCE OF ILLUSION

An Honors-Level seminar course that examines specialized topics in science. This module examines how the principles of mathematics and science are used to create some of the greatest illusions in magic. 1 Credits

SC 172 SP TOPICS SCIENCE SEMINAR III - A HEALTHY HEART

An Honors-Level seminar course that examines specialized topics in science. . This module examines how genetics, diet, obesity, diabetes, lack of exercise and smoking can lead to atherosclerosis and coronary heart disease. 1 Credits

Sign Language

SL 101 INTRODUCTION TO AMERICAN SIGN LANGUAGE I

Introduces students to American Sign Language (ASL) through unit lessons, interactive practice, videotapes, and storytelling. Students learn approximately 600 functional words, basic grammar and syntax, and finger-spelling. Readings and class interactions reflect on current issues of Deaf culture and encourage variety of communication strategies. Lecture: 3 hours per week. 3 Credits

SL 102 AMERICAN SIGN LANGUAGE

A continuation of SL 101. Students increase their vocabulary and learn proper use of ASL grammar and syntax. Special attention is paid to expressive and receptive skills. Learning is fostered through dialogues, directed practice, videotapes, and readings. Lecture: 3 hours per week. Prerequisite: SL 101 3 Credits
Prerequisite: SL101

Sociology

SO 101 INTRODUCTION TO SOCIOLOGY

Introduces students to the major concepts and theoretical approaches of the field. Emphasis on social structure, social interaction, stratification, community, power, and social change. Lecture: 3 hours per week. 3 Credits

SO 113 SOCIOLOGY OF THE FAMILY

Examines marriage and family as social institutions; Focus on the roles of men and women and their interpersonal relationships during dating, engagement, marriage, parenthood, and later years. Emergent and alternative family structures are considered. Lecture: 3 hours per week. 3 Credits

SO 115 SOCIAL PROBLEMS

Examines selected problems affecting life in contemporary society. Topics may include aging, crime and delinquency, drugs, race/ethnicity, and minority issues. Develops awareness and understanding of why and how problems arise, and the means for dealing with them. Lecture: 3 hours per week. 3 Credits

SO 120 DISABILITIES: DIAGNOSIS AND INTERVENTIONS

Examines the etiology and symptomology of disabilities, including physical and mental health, modality deficits, and language-based learning disabilities. Students become familiar with legislation, social policies, diagnosis and treatment, as well as appropriate intervention strategies. This course is required of all Early Childhood Education and Human Services majors. Lecture: 3 hours per week. 3 Credits

SO 203 RACE AND ETHNIC RELATIONS

Examines racial and ethnic groups in America through a comparison of values, beliefs, historical experiences, and present life-styles. Issues of prejudice, discrimination, subordination, and domination will be explored through theoretical orientations and social science constructs. Prerequisite: SO 101 3 Credits Prerequisite: SO 101

SO 204 URBAN SOCIOLOGY

Examines the social institutions, problems, value conflicts, and social changes associated with urban communities and metro areas. Both theoretical and practical issues are discussed. 3 Credits

SO 220 MEDICAL SOCIOLOGY

Historical and contemporary study of health, illness, health care systems, and delivery of health services. Comparative analysis of socio-political factors affecting health care, along with a discussion of health care reform strategies. 3 credits 3 Credits

SO 221 DRUGS AND SOCIETY

Examines the history of drugs in American culture. Topics may include the social, economic, legal, medical, and issues concerning drug use and abuse; The causes of drug use and abuse; the impact of drugs on the individual and society; views of youth, medical, and legal experts. Lecture: 3 hours per week. 3 Credits

SO 222 AGING AND SOCIETY

An introduction to the study of late life, which promotes awareness of the theoretical, biological, cultural, and historical variables of aging. Topics include: biological, psychological, and cultural factors in the aging process, work vs. retirement, and public policy as it relates to the senior population. Lecture: 3 hours per week. 3 Credits

SO 223 DYSFUNCTIONAL FAMILIES

This course investigates dysfunctional family relationships, which unfortunately is a part of our society. Topics such as substance abuse, as it relates to family violence, incest, child abuse, elder abuse, and ritualistic behavior will be covered. Going beyond the immediate family, topics such as stalking and sexual abuse in vulnerable populations such as the elderly and the disabled will also be explored. Current theories as to why these behaviors exist will be covered as it relates to the topic. The course will look at the physiological, genetic, social and cultural aspects of each behavior. Lecture: 3 hours per week. Prerequisites: SO 113 or permission of the Instructor 3 Credits Prerequisites: SO 113 or permission of the Instructor

SO 224 SOCIOLOGY OF DEVELOPMENTAL DISABILITIES

Introduction to the theories, definitions and descriptions of developmental disabilities. The biological, psychological, and historical factors, which promote awareness in understanding are covered, as well as successful strategies for dealing with family and public attitudes and public policy issues. 3 Credits

SO 250 VICTIMOLOGY

This course will examine current theories and research related to victimization. Students will examine the roots of violence, the experience of victimization, and the interaction of the victim with the criminal justice system. 3 Credits

Spanish

SP 101 BEGINNING SPANISH I

Designed to develop basic oral and written skills. Graded readings required. Lecture: 3 hours per week. 3 Credits

SP 102 BEGINNING SPANISH II

A continuation of SP 101. Emphasis on oral, aural, and writing skills. Graded readings. Lecture: 3 hours per week. Prerequisite: SP 101 3 Credits Prerequisite: SP101

SP 111 BEGINNING CONVERSATIONAL SPANISH

This introductory course focuses on speaking and listening. Students will study vocabulary and grammar in context through reading stories in Spanish. 3 credits 3 Credits

SP 115 SPANISH FOR HEALTH PURPOSES I

This course will introduce students to essential medical vocabulary. Students, whether professionals already working in the field or career/goal students in an occupational training program, will be able to comprehend basic conversations in the target language. Focus will be given to the understanding of familiar vocabulary, grammar structures, and simply unfamiliar passages with cognates as well as knowledge of the customs, lifestyles and environments of the Spanish-speaking world. Students will practice communicative survival using key vocabulary essential to enable them to utilize their Spanish in the real world at work. Lecture: 3 hours per week. 3 credits 3 Credits

SP 200 SPANISH IN THE COMMUNITY: SERVICE LEARNING AND STUDY ABROAD

Students will engage in service learning projects while using the Spanish to communicate. This course is intended for those who already have some skills in Spanish, whether they are heritage, native, or second-language learners. Additionally, students will look at different theoretical perspectives on the topic of service-learning as a pedagogical process, and as a method to create or enhance community-building. Prerequisite: Students must have a minimum GPA of 2.500 and SP 101 (Completion of SP 102 also recommended) or instructor permission. 3 Credits Prerequisite: Students must have a minimum GPA of 2.500 and SP 101 (Completion of SP 102 also recommended) or instructor permission.

SP 201 INTERMEDIATE SPANISH I

Mastery of basic skills with stress on understanding and speaking Spanish. Continued development of syntax, idioms, and passive and active vocabularies in meaningful contexts. Lecture: 3 hours per week. 3 Credits

SP 202 INTERMEDIATE SPANISH II

Continued emphasis on mastery of basic speaking skills, vocabulary development, idiomatic usage. Selected readings. 3 Credits

Speech/Theater/Film

SF 145 ACTING I

Introduction to the work of the actor. Laboratory exercise in the actor's use of the body in movement and attitude and of the imagination, observation, concentration, and emotional sense memory. Includes opportunities for public performances. Lecture: 3 hours per week plus additional rehearsal time. 3 Credits

SF 146 ACTING II

Students continue development of their craft, preparing scenes from various genres of drama and film. Students perform scenes before other members of the class and the public. Lecture: 3 hours per week. 3 Credits

SF 221 INTRODUCTION TO FILM

Issues related to the phenomenon of American cinema are introduced. The cultural history of film is explored through genres, topics, performances and various periods and techniques of film development. American cinema is analyzed to reveal cultural conditions that stimulate film productions and attract audiences. Students concentrate on becoming more active and critical viewers. Lecture: 3 hours per week. 3 Credits

Engineering Technology

ET 111 iCREAT-I: INTRODUCTION TO CODING, ROBOTICS, ENGINEERING, AND TECHNOLOGY

This interdisciplinary project-based course introduces the basics of programmable robotic systems. Using a systematic approach, students will learn to use a design process to apply engineering and programming concepts to create simple robotic projects. This course will run in a studio-like setting using an active learning method of instruction. Problem-based projects, small group discussions and team collaboration will facilitate the development of critical thinking and logical reasoning skills, creative thinking and communication skills. Students are encouraged to take advantage of available career exploration and mentoring opportunities. 3 Credits

ET 211 iCREAT-II

This interdisciplinary project-based course is a continuation of topics covered in iCREAT I (ET111) to design, develop, and implement a complete programmable robotic system using a systematic approach. Students will apply networking and security concepts to implement communication between computing devices. 3D design and manufacturing techniques will be used to complete the project. This course will run in a studio-like setting using an active learning method of instruction. Problem-based projects, small group discussions and team collaboration will facilitate the development of critical thinking and logical reasoning skills, creative thinking and communication skills. Students are encouraged to take advantage of available career exploration and mentoring opportunities. Prerequisite: iCREAT-I (ET111) 3 Credits
Prerequisite: iCREAT-I (ET111)

Study Abroad

SA 211 TAIWAN: LANGUAGE AND SOCIETY

Offered by MassBay Community College in collaboration with Aletheia University, Taipei, Taiwan. <http://www.au.edu.tw/eng> This course has two components. One component is study of Mandarin Chinese for students with little or no prior knowledge of Chinese language. Mandarin Chinese is the national standard language of the Republic of China (Taiwan) and the People's Republic of China. The course contains basic pronunciation and grammar rules, intonations, basic communication skills, and basic Chinese characters. They will also learn to construct correct sentences and convey them orally. This course will also provide an introduction to contemporary Taiwanese culture and society by means of a descriptive survey of chosen topics, including historic events, traditions, ancient philosophies, schools, economic development and social norms. Taught from a comparative perspective, the student will gain an understanding of the origin and evolution of the Taiwanese society with its unique characteristics. 3 Credits

Study Skills

SK 96 LEARNING STRATEGIES *

Aimed at improving students' abilities to develop and use appropriate study strategies in order to become more effective in the college classroom. Included are strategies for note-taking, reading, analyzing assignments, test-taking, and use of the library. Should be taken in conjunction with a content academic course. Lecture: 3 hours per week. 3 Credits

SK 100 SUCCESSFUL STUDENT SEMINAR *

Lab-based course providing support for students enrolled in Student Success Programs. The overall goal is to help students to understand and meet the expectations of academic life. Seminar format includes workshops by various MassBay support personnel; students will be expected to assess their learning strengths and weaknesses and develop effective plans and goals for success within the Student Success Program. Lab: 2 hours per week. 2 Credits

Surgical Technology

SX 110 PRINCIPLES OF SURGICAL TECHNOLOGY I

This course introduces the field of Surgical Technology. Emphasis is on aseptic technique, decontamination, sterilization and basic case preparation. Topics presented include pathophysiology, anesthesia and pharmacology transport and positioning, history of surgical technology, microbiology and wound healing, legal, ethical and moral principles, operating room hazards, and handling of specimens and patient property. OR records and required counts are presented along with hospital and operating room organizational structures and professional roles. Medical Terminology is presented as a self-instructional module. Lecture: 4 hours per week. Lab: 8 hours per week. Co-requisite: BI 101, BI 113 8 Credits Corequisite: BI 101, BI 113

SX 120 PRINCIPLES OF SURGICAL TECHNOLOGY II

This course is a continuation of SX 110. It covers electricity and physics, robotics, laser, computer application, major general surgery, genitourinary, peripheral vascular surgery, orthopedics, endoscopic procedures. Preoperative and postoperative routine, central processing practice and hands-on experience. Clinical education integrates the lecture content with skills in the operating room setting, endoscopic unit, labor and delivery, and central processing department. In the OR setting students are expected to function with increasing autonomy in various procedures. Lecture: 4 hours per week. Clinical: 24 hours per week. Prerequisites: SX 110, SX 110L, BI 101, BI 113. Pre or Co-requisite: BI 123 8 Credits Prerequisites: SX 110, SX 110L, BI 101, BI 113. Pre or Co-requisite: BI 123

SX 130 PRINCIPLES OF SURGICAL TECHNOLOGY III

This course is a continuation of SX 120. It emphasizes specialty procedures, e.g. cardiothoracic, neuro surgery, oral and maxillofacial, ophthalmic procedures, otorhynolaryngologic surgery, and transplants. Students will now move through all specialties. Students will sit for the NBSTA Certification exam. Lecture: 3 hours per week. Clinical: 24 hours per week. Prerequisite: SX 120 7 Credits Prerequisite: SX120

College Regulations & Policies

Family Educational Rights and Privacy Act (FERPA) of 1974

The Family Educational Rights and Privacy Act (FERPA 20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents (or guardians) certain rights with respect to their children's education records. These rights transfer to the student when he or she reaches the age of 18 or attends a school beyond the high school level. Students to whom the rights have transferred are "eligible students." Parents (or guardians) or eligible students have the right to inspect and review the student's education records maintained by the school. Schools are not required to provide copies of records unless, for reasons such as great distance, it is impossible for parents or eligible students to review the records. Schools may charge a fee for copies. Parents (or guardians) or eligible students have the right to request that a school correct records which they believe to be inaccurate or misleading. If the school decides not to amend the record, the parent (or guardian) or eligible student then has the right to a formal hearing. After the hearing, if the school still decides not to amend the record, the parent (or guardian) or eligible student has the right to place a statement with the record setting forth his or her view about the contested information. Generally, schools must have written permission from the parent (or guardian) or eligible student in order to release any information from a student's education record. However, FERPA allows schools to disclose those records, without consent, to the following parties or under the following conditions (34 CFR § 99.31):

- School officials with legitimate educational interest.
- Other schools to which a student is transferring.
- Specified officials for audit or evaluation purposes.
- Appropriate parties in connection with financial aid to a student.
- Organizations conducting certain studies for or on behalf of the school.
- Accrediting organizations.
- To comply with a judicial order or lawfully issued subpoena.
- Appropriate officials in cases of health and safety emergencies.
- State and local authorities within a juvenile justice system, pursuant to specific State law.

Schools may disclose, without consent, any "directory" information such as a student's name, address, telephone number, date and place of birth, honors and awards, and dates of attendance. However, schools must tell parents [or guardians] and eligible students about directory information and allow parents [or guardians] and eligible students a reasonable amount of time to request that the school not disclose directory information about them. Schools must notify parents and eligible students annually of their rights under FERPA. The actual means of notification (special letter, inclusion in a PTA bulletin, student handbook, or newspaper article) is left to the discretion of each school. For additional information or technical assistance, you may call (202) 260-3887 (voice). Individuals who use TDD may call the Federal Information Relay Service at 1-800-877-8339. Or you may contact the following address:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202-4605

Notice of Non-Discrimination

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

Crime Awareness & Campus Security Act

MassBay complies with the Crime Awareness and Campus Security Act of 1990, Section 485 (f) (1) (F) of 20 U.S.C. 1092 (a) (1) (Public Law 101-542). The College also complies with the Higher Education Amendments of 1992 (Public Law 102-325) by developing, including and distributing, as part of the College's annual security report, a statement of policy regarding the College's annual security report, a statement of policy regarding the College's sexual assault programs, and the procedures to be followed once a sex offense has occurred. On November 8, 1990, the U.S. Congress enacted the Crime Awareness and Campus Security Act of 1990 under Public Law 101-542, Title II. This Act requires that institutions of higher education receiving federal funding collect information with respect to crime statistics and campus security policies and, as of September 1992, prepare, publish and distribute an annual security report. MassBay, in accordance with legal mandates and its philosophy of establishing and maintaining an environment of learning and a supportive climate in which to conduct the business and mission of the College, provides this information to the College community through the Office of Public Safety.

The Violence Against Women Reauthorization Act ("VAWA")

Created new reporting obligations under the Campus Sexual Violence Act ("SaVE Act") provision, Section 304. Under VAWA, MassBay is required to:

- Report domestic violence, dating violence, and stalking, beyond crime categories the Clery Act already mandates;
- Adopt certain student discipline procedures, such as notifying victims of their rights; and
- Adopt certain institutional policies to address and prevent campus sexual violence, to train in particular respects pertinent institutional personnel.

VAWA's SaVE Act provision adds domestic violence, dating violence, and stalking to the categories that, if the incident was reported to a campus security authority or local police agency, must be reported under the Clery Act. The provision also adds "national origin" and "gender identity" to the hate crime categories, involving intentional selection of a victim based on actual or perceived characteristics that must be reported under the Clery Act. Under VAWA, new students and new employees must be offered "primary prevention and awareness programs" that promote awareness of rape, acquaintance rape, domestic violence, dating violence, sexual assault, and stalking.

Policy Concerning Sexual Assault

Community colleges are committed to providing an atmosphere for learning that is free of any conduct that could be considered harassing, abusive or disorderly. Sexual assault is a criminal offense. Sexual assault in any form, including acquaintance rape, will not be tolerated. Sexual assault, as defined in the Federal Bureau of Investigation Uniform Crime Reporting System, includes forcible and non-forcible offenses. When an allegation of sexual assault is made, MassBay will encourage the alleged victim to pursue criminal prosecution under the Massachusetts criminal statutes. In addition, appropriate campus disciplinary action may be pursued. Sanctions for sexual assault violations may include, in addition to criminal charges, suspension, dismissal or expulsion from the College. All allegations of sexual assault will be handled confidentially to the extent possible and will be investigated. Both the accuser and the accused will have equal opportunity for hearing. Copies of this policy are available in the Office of Student Development, Human Resources, Corporate & Continuing Education, Evening & Weekend Programming, Public Safety, Division Offices, and the Library.

Policy on Sexual Harassment

Sexual harassment is a form of sex discrimination and is unlawful, unacceptable, impermissible, and intolerable. For general purposes, sexual harassment may be described as unwelcome advances, requests for sexual favors, and other physical conduct and/or expressive behavior of a sexual nature when:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education;
2. Submission to or rejection of such conduct by an individual is used as the basis for academic or employment decisions affecting that individual; *or*
3. Such conduct has the purpose or effect of substantially interfering with an individual's academic or professional performance and creating an intimidating, hostile, or demeaning employment or educational environment. In addition to sexual harassment being unlawful, it is also unlawful to retaliate against a student, employee, or any other person in the College for filing a complaint of sexual harassment or for cooperating in an investigation of sexual harassment.

A student, employee, or any other person in the College who is found to have engaged in sexual harassment is subject to discipline up to and including termination of employment or expulsion.

A full copy of the Policy of Affirmative Action, Equal Opportunity & Diversity (PAA) is available from Affirmative Action Office and the MassBay Website.

Facility Use Policy

Massachusetts Bay Community College (MassBay) is a public institution of higher education funded in major part by legislative appropriations and student tuition and fees. Over the years considerable money and other resources have been spent to build, improve, and equip MassBay facilities for students and staff alike, and to provide essential community services. As a steward of the public trust, MassBay facilities are operated at all times in a safe, healthy and secure manner for all appropriate, approved users of the College's physical assets. Therefore, MassBay physical facilities of any kind or nature are for the sole use of current students and staff, approved community users, or other groups or individuals who have, upon appropriate application to the College, been approved by the President or his/her designee to use a specific physical asset of MassBay. Below are specific policies for internal and external facility use. Failure to comply with the facility use policy by internal individuals and/or groups shall result in discipline, up to and including

termination. Failure to comply with the facility use policy by external individuals and/or groups shall result in immediate contract cancellation. All groups, internal and external, by scheduling an event, meeting or gathering agree to adhere to these policies. All groups, internal and external, by scheduling an event, meeting or gathering, agree to follow the published emergency procedures in the event of an emergency.

Classrooms, laboratories, Automotive Technology Bay Use

Classrooms, laboratories (computer, clinical, or research), and automotive technology bays are restricted to authorized use only by MassBay faculty and staff, registered MassBay students, and others designated by an appropriate and authorized College official.

Academic use of, and access to, classrooms and labs (computer, clinical, or research) is granted by the Office of the Registrar only. Academic use of, and access to, the automotive technology bays is granted by the Office of the Registrar or Director of the Automotive Technology Program only.

Non-academic use of, and access to, classrooms and labs (computer, clinical, or research) is granted by the Manager of Special Events only. Non-academic use of, and access to, automotive technology bays and other Ashland facilities is granted by the Manager of Special Events or Director of the Automotive Technology Program only.

Classrooms, labs (computer, clinical, or research), and automotive technology bays will be locked when not scheduled for use.

Students may not be provided with keys to any College facility, including classrooms, labs (computer, clinical, or research), or automotive technology bays, unless authorized by the President or his/her designee. At all times, students in a clinical or research lab must be accompanied by a faculty member or authorized College personnel.

Use of classrooms, labs (computer, clinical, or research), or automotive technology bays are limited to College course-related instruction, research, or projects, unless authorized by the President or his/her designee.

Upon request, individuals using College facilities will be required to provide proof of registration and must have a MassBay faculty or staff member present at the event.

Students must abide by all lab safety procedures. Any action that jeopardizes student safety will not be tolerated and will be handled in accordance with the College's code of conduct.

General Facility Use

MassBay is a public institution of higher education funded in part by legislative appropriations and student tuition and fees. Over the years, considerable money and other resources have been spent to build, improve, and equip MassBay facilities for students and staff alike, and to provide essential community services. As steward of the public trust, MassBay facilities are operated at all times in a safe, healthy and secure manner for all appropriate, approved users of the College's physical assets.

Therefore, MassBay physical facilities are for the sole use of current students and staff, approved community users, or other groups or individuals who have, upon appropriate application to the College, been approved by the President or his/ her designee to use a specific physical asset of MassBay.

Below are specific policies for internal and external facility use. Failure to comply with the facility use policy by internal individuals and/or groups shall result in discipline, up to and including termination or expulsion. Failure to comply with the facility use policy by external individuals and/or groups shall result in immediate contract cancellation. All groups, internal and external, by scheduling an event, meeting or gathering, agree to adhere to these policies. All groups, internal and external, by scheduling an event, meeting, or gathering, agree to follow the published emergency procedures in the event of an emergency. Additional policies may be implemented at the discretion of the President or his/ her designee. Usage policies for new and/or expanded facilities will be adopted and implemented as necessary.

Library Use

Users who are not registered MassBay students or MassBay faculty/staff must check in with the librarian upon arrival. Otherwise the library is restricted to authorized use only by MassBay faculty and staff; registered MassBay students; or others designated by an appropriate and authorized College official. The library will be locked when not scheduled for use.

Wellness & Recreation Center & Athletics Fields

MassBay's Wellness & Recreation Centers and athletic fields are restricted to authorized use only by MassBay faculty and staff; registered MassBay students; and others designated by an appropriate and authorized College official. The Wellness & Recreation Centers and athletic fields may be reserved and scheduled by the Manager of Special Events and the Athletic Director only. Additional policies may be implemented at the discretion of the President. Usage policies for new and/or expanded facilities will be adopted and implemented as necessary.

Facilities Use for On Campus Events and all other Non-Academic Purposes

The President of MassBay Community College or his/her designee is authorized to approve or arrange for scheduling the use of facilities by members of the MassBay community for academic and non-academic uses in concert with and/or in support of the mission statement of MassBay. The right is reserved to revoke any such permit, without liability, should such action be deemed necessary or desirable by the College.

All academic use of MassBay facilities will be coordinated through the Office of the Registrar.

All non-academic use of MassBay facilities must be coordinated through the Manager of Special Events.

Use may include:

- Faculty, staff, or department meetings
- Student organization or group meetings
- Rehearsals
- Exams, academic help, or individual tutoring sessions that have not been scheduled by the Registrar's office as part of class schedule
- Other use of facilities not covered in the facilities use policy above.

The following types of events are specifically prohibited:

- Activities that promote any theory or doctrine in conflict with the laws of the United States or any political subdivision thereof.
- Activities that advocate governmental, political, or social change through violence.
- Activities that may be injurious to individuals, the buildings, grounds or equipment.

Food and Beverage Service

Student groups and College departments are encouraged to utilize the College's food service vendor for food and non-alcoholic beverages. All health code regulations must be followed regarding food distribution on campus.

Cleaning Service

If external food and/or beverages have been used during an event, students and designated groups are responsible for cleaning up after the scheduled use of facilities.

Please refer to RECREATION WELLNESS CENTER & ATHLETICS for related policies

Facilities Use Policy for External Groups

Facilities at MassBay are primarily for purposes of college instruction, college programs, student life and public service. At times and with appropriate approvals, facilities may be used by the community but they are not available for unrestricted use by non-college groups.

The President of MassBay or his/her designee is authorized to approve or arrange for scheduling the use of facilities by applicants who may be community members and stakeholders in the mission of MassBay, but in any event are not in direct conflict with the mission statement of MassBay. The right is reserved to revoke any such permit, without liability, should such action be deemed necessary or desirable by the College.

Use of MassBay facilities by external groups will be coordinated through the Manager of Special Events.

The following types of activities are specifically prohibited:

- Promoting any theory or doctrine in conflict with the laws of the United States or any political subdivision thereof;
- Advocating governmental change by violence;
- Activities that may be injurious to individuals, the buildings, grounds or equipment.

All rules, regulations, ordinances and statutes applicable to MassBay Community College apply also to any individual or organization using College facilities. A contract must be executed and signed by both the external client and the College. Proof of comprehensive general liability insurance must also be provided to the College.

Food and non-alcoholic beverages may not be sold, distributed, or served in College facilities by anyone other than the College's food service vendor without prior written approval from the President or his/her designee. Separate charges apply for both the on-campus and outside food vendors, and payment is to be made directly to the vendor.

Individuals or organizations using College facilities may not bring, store, or serve alcoholic beverages in College facilities. If external groups would like to serve beer and/or wine only, they must arrange for these beverages through the College's food service vendor, who will obtain the appropriate licenses and permits for sale and distribution of alcoholic beverages. The food service vendor will also provide certified bartenders, at the client's expense.

Fees for facility rental, IT/AV equipment use, maintenance, security, etc. will be established according to MassBay policies for the specific facility being used, type of activity, numbers in attendance, and/or at the discretion of the President or his/her designee.

The College reserves the right to close the facilities on the day of an event due to an emergency, weather related matter, and/or facility issue. The College assumes no obligation for any business related expenses that may arise from such an occurrence.

Booking and Coordination

All use of MassBay facilities by external individuals or groups must be coordinated through the Office of Special Events and is subject to approval by the President of the College or his/her designee. All clients will be required to enter into a formal contract regarding space use, hours of use, equipment use, any associated fees, etc. according to MassBay events use policies. All rules, regulations, ordinances and statutes applicable to MassBay students, faculty, and staff also apply to any external individual or organization using College facilities. The applicants or the event itself may not be in direct conflict with MassBay's mission.

Permits and Insurance

Necessary permits and insurance must be obtained and proof thereof provided for events at which alcoholic beverages are to be served. Fees for facility use, equipment use, maintenance, security, etc. will be established according to MassBay policy for the facility being used, type of activity, numbers in attendance and/or at the discretion of the President or his/her designee.

Cancellation of Event

Notification of event cancellation must occur five (5) days prior to the event or fees will be forfeited. While facilities are available for use to external clients, the College reserves the right to restrict use by non-College affiliated groups. The right is also reserved to revoke any such permit, without liability, should such action be deemed necessary or desirable.

The following types of activities are specifically prohibited:

- Activities that promote any theory or doctrine in conflict with the laws of the United States or any political subdivision thereof.
- Activities that advocate governmental, political, or social change through violence.
- Activities that may be injurious to individuals, the buildings, grounds or equipment.

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B.A., College of the Holy Cross

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A.S., CUNY: Borough of Manhattan Community College

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B.A., Art Institute of Los Angeles

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M.S., Long Island University
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M.S., University of Chicago
B.S., University of Texas
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B.A., St. Michael's College

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A.S., MassBay Community College

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B.S., Worcester State University

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M.S., Massachusetts Institute of Technology
B.S., Central University of Venezuela

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Ph.D., University of New Hampshire
M.A., University of Colorado
B.S., University of Connecticut

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M.Sc. TMBU, India
B.S., TMBU, India

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M.S., State University of New York
Certificate, Universite Scientifique et Medicale, Grenoble
Diplome Universitaire de Technologie, Grenoble

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A.S., MassBay Community College

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B.A., Middlebury College

Linda Strayhorn

Administrative Assistant I, Disability Resources

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Ph.D., University of Lowell
B.S., Beijing Institute of Chemical Technology

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A.M., Boston College
A.B., College of the Holy Cross

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Associate Professor, English
M.F.A., University of Massachusetts, Amherst
B.A., University of Washington

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Building Maintenance Supervisor II, Facilities

Lawrence Vallee

Accountant III, Payroll

Radhames Vasquez

Painter I, Facilities

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M.A., Framingham State College
B.A., Framingham State College

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M.S., Northeastern University
B.A., University of Massachusetts Boston

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B.S., Framingham State University

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M.S., University of Massachusetts, Lowell
B.S., University of Massachusetts, Dartmouth

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M.A., Hollins University
B.A., St. Michael's College

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B.A., Salem State University

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M.A., Simmons College
B.A., Indiana University

Rhian Waterberg

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M.A., University of Michigan
B.A., University of Vermont

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Director of Corporate Partnerships and Workforce
Development, Corporate Partnerships and Workforce
Development
M.Ed., Framingham State College
B.A., Framingham State College

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B.A., State University of New York, Potsdam

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B.A., University of Massachusetts, Boston

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M.S., State University of New York

B.S., The Open University of Sri Lanka.

Monifa Wilds*Clerk IV, Evening & Weekend Programming***Richard Williams***Assistant Dean of Student Success, Student Development*

M.F.A., Emerson College

B.S., Texas A&M University

Sharon Williams*Administrative Assistant II-Facilities, Facilities*

H.S., Scituate High School

Heidi Williams-Mackey*Enrollment Services Specialist, Student Accounts*

B.S., Southern Connecticut State University

A.S., Mount Ida College

Frances Winter*Professor, English*

M.A., Columbia University

B.A., Cornell University

Gabriela Zakak*Professor, Nursing*

M.S.N./Ed., University of Phoenix

B.S.N., Lynn University

A.D.N., Palm Beach Community College

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M.S., University of California, Berkeley

B.S., University of Athens

Mohamed Zefzaf*Professor, ESL & English*

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B.A., University of Massachusetts, Boston

Adjunct Faculty *

* Adjunct faculty who taught during the 2016-2017 Academic Calendar.

Division of Automotive Technology

John Gallagher

Division of Business & Professional Studies

Roberta Allison
Clement Ampadu
Scott Bushway
Clifton Chow
Martin Comack
Raphael Constantino
Margaret Crowe
John Cutone
Paul DeFazio
Edward Derba
Heather DeVincent-Cook
Edward Donahue
Melissa Dowling Mack
Kathleen Duchaine
Donald Ferland

Florencia Gabriele
Carolyn Gould
Karen Grady
Sabrina Gray
Brian Hurley
Mona Khaitan
Tina Klarakis
Deborah Leotsakos
James Lindelof
Guy Lochiatto
Kara Lucciola
Jason Mazaik
Kyla McSweeney
Dean Marzullo
Mary Meehan

Richard Metzger
Karen Nardone-Lemons
Thomas Niemi
Roger Pao
Charles Phair
Warren Powell
Nancy Railsback
James Regan
Sara Rogers
Daniel Rubenstein
Brian Saulnier
Joanne Tsakas Barros
Lawrence Wolozin
Margaret Woodward
Andrew Wrobel

Division of Health Sciences

Kimberly Altavesta
Kathleen Bangma
Kristine Bonneau
Laura Bowen
Jesse Briggs
Mary Bruni
Paul Carbonneau
Keith Champney
Ian Cissel
Jeffrey Cohen
William Cote
Matthew D'Inncenzo
Christine Duggan
Paula Forcier

Tobias Geraghty
Kelly Greaves
Brianna Greeley
Jennifer Gregoire
Paula Haddad
Jacob Hanley-McCarthy
Michael Hanley-McCarthy
Karen Hansen
Donna Harris
Michael Ifill
Lise Johnson-Kinahan
Rose Kelly
Judith Kelly
George Kinahan
Joseph Kuchinski

Ryan LeBlanc
Deborah Lovewell
Donna Malone
Ana Olivar
Richard Paschal
Emmelyne Pasquis
Christian Pierce
Denise Pruitt
George Roberts
Kathryn Santilli
Gerard Smith
Keith Schnabel
Karen Steinhoff
Olga Walker
Carla Whitmor

Division of Humanities and Social Sciences

Demola Adeyem	Elizabeth Hannigan	Neil Pischner
Joan Alegi-Feeney	Diane Harper	Chaya Radin
Robert Baroz	Lisa Huber	Nancy Railback
Denise Barsky	Mary Hughes	Joseph Ray
Jennifer Bauder	Brian Jones	ShaQuan Read
Catherine Berlinghieri-Rossi	Brian Keegan	Benjamin Remillard
Elizabeth Blumberg	Rose Kelly	Norvel Rice
Steve Bonkowski	Mona Khaitan	Sara Rogers
Dominique Bourdon	Kelly Keough	Louis Rosenberg
Yaneth Bustos	Lori Lamothe	Daniel Rubenstein
Andrew Byrne	Kathleen Lampert	Blake Ruehrwein
Martin Comack	Robert LeBlanc	Rita Rzezuski
Alfred Corbosiero	Nancy Levine	Marjorie Saunders
Ilijana Cordova	Robert Littlefield	Joyce Scott
Jeanne Cosmos	Melinda Marchand	Jeffrey Seideman
Margaret Crowe	Sean Mccarthy	Gary Senecal
Celeste Cunningham	Kathryn McGrath	Helene Simon
John Dirlam	Marco Mena	Ellen Stewart
John Donato	Theresa Mislick	Robert Tarpey
Melissa Dowling Mack	Denny Morell	Robert Tarutis
John Dunn	Karen Nardone-Lemons	Wayne Taylor
Edward Eaton	Joseph Nee	Alexander Tedeschi
Joseph Ethier	Donna Nelson	Joanne Tsakas Barros
Richard Farrell	John Northgraves	Christiane Turnheim
Michele Giargiari	Farideh Oboodiat	Matthew Walsh
Anita Gilbert	Joel Ohren	Elizabeth Watson
Kelly Gleason-Gentile	Ruth Palumbo	Bryan Wint
Lawrence Goff	Meikle Paschal	Frances Winter
Jeffrey Goldberg	Marilyn Paschal	Kristin Wivagg
Alan Goldman	Andrew Pearlman	Margaret Woodward
Thomas Gunnoud	Michael Pecora	Holly Worthington
Carolyn Guttilla		

Division of Science, Technology, Engineering & Mathematics

Clement Ampadu	Susan Copen	Wayne Gonnerman
Arwa Alkhateeb	Kunagming Covitz	Dennis Goodwin
Laith Asfar	Deborah Dahl	Ellen Graham
Marion Bank	Christopher Daniele	Hollis Graves
Igor Baryakhtar	Gene Davis	Linda Grisham
Mohammad Bastani	Nancy Del Prato	Yuangang Gu
Marina Bograd	Robert Dubow	Mary Hughes
Tatyana Bronstein	Kathleen Duchainey	Bhagwat Jaiman
Richard Canale	Judith Elliston	Wesley Johnson
Jeanne Canale	Michael Englander	Brian Keegan
Robert Cantin	Vincent Falcone	Roy Kennedy
David Clark	Orland Fernandes	Farkhondeh Khalili
Gary Clifford	Catherine Flaherty	Heather Knuth
William Comery	Susan Fleck	Karna Krishna

Terry Lemons
Alan Levy
Paul Lienard
Janine Lloyd
Kenneth McGourty
Anu Meacham
Suhad Miro
MaryBeth Mittaz
Shamsi Moussavi
Raman Nambudripad
Peter Nassiff
Amerline Occean
Robert O'Connell
Chandrakant Panse
Ujwala Panse
Michael Wolchonok
Delano Young
Aaron Zwicker

John Paradise
Tamara Paul
Saviniano Perez
Salvatore Petricone
Jose Pinto
Daryoosh Rajabi
Tina Ramme
Stephen Roll
Mitra Rozati
Sarmad Saman
Sibaji Sarkar
Behrooz Satvat
Willy Schild
Giuseppe Sena
Judith Shea

Nirmal Singh
Reed Smith
Jessica Smith-Rohrberg
Michael Smolowitz
Andrew Staley
Bonnie Stevenson
Alice Tamaccio
Ann Tamulinas
Indira Thimmiah
Leanne Velichansky
Dennis M Walsh
Suzzette Waters
Elizabeth Watson
Meredith Watts