MassBay
COMMUNITY COLLEGE

College Catalog 2013-2014

Your dreams. Our mission.

FROM THE PRESIDENT

Welcome to MassBay Community College,
where your dreams are our mission.

At MassBay, our college mission is to foster educational excellence and student success, prepare students for local and global citizenship, anticipate and respond to the needs of surrounding communities, and contribute to evolving regional economic development.

The catalog tells a story about the mission, values, and our relationship with you, our students. As a prospective or current student, you are opening the MassBay Community College catalog to find information to make a decision about attending our college, choosing an academic program, selecting courses, planning for college transfer or determining your next step on a career path. Much of that information is here for you in this catalog.

I recommend that you take a next step after consulting the catalog, a step that is important to us and, we believe, crucial to both a full college experience for you at MassBay and to your academic success. That step is to meet with us. Whether you meet with our admissions or advising teams, with your faculty advisor, or with any of the faculty and staff, we want to get to know you and provide you counsel.

The last pages of the catalog are the crescendo of the story: a listing of our faculty and staff, their roles, and their academic credentials. For an optimal college experience-where you both challenge yourself and experience the joys of learning and growing-I recommend that you build relationships with our faculty and staff. As you learn from coursework, you will also learn from knowing them.

With my best wishes for a successful experience at MassBay Community College,

John O'Donnell, Ph.D.
President

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TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

Visit www.massbay.edu for updated information about our program and course offerings, as content is subject to change.

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 which 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. 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.

MassBay in the Community
MassBay cares about the community, and we show this commitment by instilling in 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 the communities we serve 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 Wellesley Symphony Orchestra, All About Us Performing Arts, MassBay Players, Metrowest Youth Symphony Orchestra, and Newton Country Players. In addition, the on-campus Felix Juliani Gallery hosts numerous art exhibits throughout the year, showcasing local artists with a varied and diverse body of work, as well as an annual Student Art Exhibit. Events are advertised on the College's website, www.massbay.edu.

Visit www.massbay.edu for updated information about our course offerings 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 the New England Association 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 and Colleges
3 Burlington Woods Drive, Suite 100
Burlington, MA 01803-4531
781- 425-7700
Toll Free: 855-886-3272
http://www.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

THE MASSBAY MISSION

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.

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Emergency Medical Technician and Paramedicine
The Massachusetts Department of Public Health
Office of Emergency Medical Services (OEMS)
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 Chauncey Street, 11th Floor
Boston, MA 02111
617-753-8000
Approval #9162P0512

Nursing Associate Degree
Approved by the 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

National League for Nursing Accrediting
Commission, Inc. (NLNAC)
3343 Peachtree Road, N.E. Suite 850
Atlanta, Georgia 30326
404-975-5000
www.nlnac.org

Practical Nursing
Approved by the 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
Commission on Accreditation of Allied Health
Education Programs (CAAHEP)
1361 Park Street
Clearwater, FL 33756
727-210-2350
www.caahep.org

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 CORE 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.

ADMISSIONS APPLICATION INSTRUCTIONS

- 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 a student will be considered for admission.

- Visit us at http://www.massbay.edu and complete your free online application.

- If you do not have access to a computer or the web you may complete and submit a paper application. Submit the completed application to:

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

- Submit proof of high-school graduation or equivalency. Admissions will accept one of the following documents: an official final high school transcript, a copy of high school diploma, a copy of GED certificate, or an official college transcript indicating an associate degree or higher degree. Applicants who are not applying to a Nursing or Allied Health program may self-certify their education credentials if they received their high school diploma or college degree from a school accredited by New England Association of Schools and Colleges (NEASC), or if they received their GED 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 translated into English and evaluated to U.S. standards through a certified credentials agency. Contact the Office of Admissions for more information at 781-239-2500.

- Students who have earned a college degree or college credits from other accredited colleges should forward official transcript(s) to the Office of Enrollment Services on the Wellesley Hills or the Framingham campus to be evaluated for transfer credit.

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

ADMISSIONS

Wellesley Hills Campus • Room 101 • 781-239-2500
Framingham Campus • Front Desk • 508-270-4050

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), 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.

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 courses for transfer 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.

Non-Degree Seeking Students
Students whose intent is to take a course or courses to transfer, and do not intend to obtain a degree or certificate form MassBay, may register for classes without submitting an application for admission. Students who are enrolling in a course(s) that requires a pre-requisite must meet with an academic advisor. Students in this category are considered "non-matriculated" or "non-degree" seeking students and are not eligible for financial aid.

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.

Home Schooling Policy
All home-schooled students without a high school diploma or GED are eligible to apply for admission to a 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. If home-schooled students are under the age of compulsory attendance of 16 years, a letter from the student's school district superintendent or school committee is required. The letter should expressly state that the student is not considered truant and would not be required to attend further schooling prior to enrolling in College. Home-schooled students who have not completed an approved home-school program will not be eligible to enroll in a degree or certificate program until they have obtained a GED.

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, visit the MassBay website at www.massbay.edu.

Campus Tours
Campus tours can be scheduled by contacting Admissions at 781-239-2500.

Student Immunization
In accordance with Massachusetts General Law (MGL): 220.600 Immunization Requirements for College Students, students must provide evidence of immunization to the Office of Student Development in order to register for classes. These requirements of 105 CMR 220.600 shall not apply where:

1. The student provides written documentation that he or she meets the standards for medical or religious exemption (as set forth in MGL. c. 76, § 15C);
2. The student provides appropriate documentation, including a copy of a school immunization record indicating receipt of the required immunizations;
3. In the case of measles, mumps or rubella, and hepatitis B, the student presents laboratory evidence of immunity. Students may be registered on the condition that the required immunizations are obtained within 30 days of registration.

Students may be registered on the condition that the required immunizations are obtained within 30 days of registration.

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 contact the Office of Admissions at 781-239-2500.

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 Regional Student Program.

International Students
The Office of International Education & Study Abroad Programs is responsible for all international students and administers the regulations governing their status. Support services are provided from acceptance to the College and continues throughout their academic experience. Students who have international documents must have these documents translated into English and evaluated to U.S. standards through a certified credentials agency. Contact the Office of International Education & Study Abroad Programs at 781-239-2642 for more information.

When submitting an International Student application, students should include the following:

1. A completed MassBay application;
2. TOEFL scores (62 iBT required only if applying outside of the US);
3. Proof of high school graduation or equivalency.

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, a student must submit the following forms to the Office of International Education & Study Abroad Programs to receive their Certificate of Eligibility (I-20):

- If a student's sponsor is someone other than their parent or legal guardian, they must submit a letter to the Office of International Education & Study Abroad Programs verifying that they will be assuming financial responsibility for the student;
- A completed immunization form (See "Student Immunization");
- Copy of passport. 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:

Tuition and All-College Fee

$380 per credit (non-resident rate)	$9,120
Facilities & Transportation Fee	$80
Health Insurance	$1049
Estimated Living Expenses (9 months)	
Books and Supplies	$ 1,000
Housing, food, transportation	$10,000
Total Subject to Change	**$21,249**

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 International Education & Study Abroad Programs at 781-239-2642. Student housing is not available on any of the MassBay campuses. Apartment rentals, homestay companies, international student residences and furniture rentals are available in the MetroWest and greater Boston area. The Office of International Education & Study Abroad Programs solely provides a list of housing resources, and is not responsible for placement or details concerning all aspects of student housing.

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 3.0 out of 4.0.
- Placement into college-level math or English classes.

Admission into Specialized & Restricted Programs

Admission into some programs is restricted due to a limited number of openings. In addition to the general admission requirements, these programs have specific requirements and/or recommendations. All applicants to restricted programs will initially be offered acceptance into the General Studies program. When admission requirements have been completed, a student may be considered for a restricted 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 health care providers. 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 (co-op) 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 by the total number of college-level credits completed at MassBay. Priority for admission is given to current MassBay students and to those students who have completed the science courses within the five years that students are reviewed for matriculation/acceptance into the program. Science courses must be repeated if they were taken more than five years before the time of matriculation/ acceptance into a MassBay health science program.

Students with an outdated science course can demonstrate competency in that course by taking a national standardized examination through The Excelsior College New York Testing Program. The passing score for this examination will be a C+. Students can register for the examination by contacting Excelsior College (Excelsior College Examinations Test Administration Office at testadmn@excelsior.edu). An official record of the Excelsior College New York Testing Program exam grade must be submitted to the Office of Admissions prior to the February 1st priority deadline for a September matriculation date, or prior to the June 1st priority deadline for a January matriculation date.

Prospective applicants to health sciences programs are strongly encouraged to attend an information session. 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 certification is required prior to clinical placement and must be submitted to the Health Sciences Division. The Health Care Provider Card (from the American Heart Association) and the Professional Rescuer Card (from the American Red Cross or National Safety Council) are the only types of CPR certification that meet this requirement.

Students who do not have this certification may enroll in a Health Care Provider course through the MassBay Office of Corporate & Community Education.

HEALTH SCIENCES POLICIES

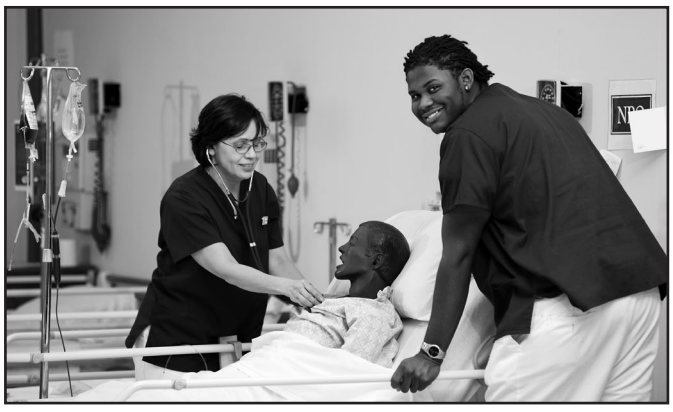
Students enrolled in Health Sciences programs must adhere to policies developed to meet the requirements of the accrediting and regulatory agencies. In addition to academic requirements, there are clinical policies for each program. These policies are detailed in the Division of Health Sciences Student Handbook.

CRIMINAL OFFENDER RECORD INFORMATION (CORI) & SEX OFFENDER REGISTRY INFORMATION (SORI)

Students participating in academic programs that include a clinical affiliation or field-based learning component, such as with a private or public health care provider or early childhood learning center, will be subject to a search of records for past criminal or sexual offenses, known as the CORI (Criminal Offender Record Information) check and the SORI (Sex Offender Registry Information) check. CORI and SORI checks are carried out pursuant to Mass. General Laws, Chapter 6, Sections 167-168B and 178C, respectively. There are certain academic programs and related clinical affiliations in which students may not be permitted to participate, depending on the results of CORI or SORI checks. Therefore, names of students in all Health Professions programs, the Early Childhood Program and certain other programs will be submitted to the state for the CORI check and the SORI check. A CORI or SORI check report may preclude eligibility for clinical or field assignment for a student with a criminal record. In these cases, students will be denied enrollment or continued enrollment in the program. CORI/SORIs are completed each semester (fall, spring and summer) for specific College programs.

ADDITIONAL CLINICAL REQUIREMENTS

Some health care facilities may require additional information and/or screening from students prior to clinical placement. These include, but are not limited to, submission of social security number, finger printing, 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 a student's 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 six months prior to entry into a health program. Student should obtain and provide to the College 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) 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 or chest x-ray with documentation of a negative symptom review check;
- 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; and seasonal influenza vaccine (when available). Titers must be submitted on official laboratory reports. The TB test and seasonal influenza vaccine must be updated annually.

AUTHORIZATION FOR RELEASE OF MEDICAL INFORMATION

The Physical Examination & Immunization Record form requires a 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. A student 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.

Technical Performance Standards Form outlines the physical requirements for most health care

professions and requires a student's signature. Students are strongly encouraged to review these requirements with their health care provider prior to signing and submitting this document.

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 Office of Admissions, 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 doubts 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 Office of Learning Accommodations/Disabilities Resources. For additional information, contact the Office of Admissions at 781-239-2500. Technical standards can also be found in the Division of Health Sciences Student Handbook and in the Office of Admissions.

COMPETITIVE PROGRAMS ADMISSIONS GUIDELINES

PROGRAM	ENGLISH PLACEMENT	MATH PLACEMENT	READING PLACEMENT	CORI SORI	PROGRAM & COURSE REQUIREMENTS
Automotive Technology	WR 100	MA 095	N/A	N/A	Valid Driver's License
Central Services & Material Mgmt	N/A	N/A	N/A	YES	Successful Completion of Central Processing Certificate or National Certification by the IAHCSMM.
Nursing (Practical)	EN 101	MA 098	72+	YES	High School Diploma, GED, or equivalent
Nursing (Registered)	EN 101	MA 102-104 or higher	72+	YES	High School or College Chemistry with a grade "C" or better. Course pre-req of College Biology (BI 101) with a grade "C" or better within the past five years.
Paramedicine	EN 100	MA 095	72+	YES	EMT - Basic Certificate
Phlebotomy	N/A	N/A	N/A	YES	N/A
Radiologic Technology	EN 101	MA 102-104 or higher	72+	YES	Course pre-req of College Biology (BI 101) with a grade "C" or better within the past 5 years.
Surgical Technology	EN 100	MA 095	72+	YES	N/A
Maxillofacial Assistant	WR 100	MA 095	72+	YES	Prior background in dental or medical fields

FAST FACTS

HOW TO SIGN UP FOR CLASSES

For new students applying for a degree program:

- Complete application for admission
- 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
- Take placement tests
- Attend Orientation Program to meet an Advisor, search online listings and select courses, and register for classes
- Make payments or arrange for a payment plan

For visiting students:

- Take placement tests
- Search online listings and select courses
- Register for classes
- Make payments or arrange for a payment plan

For current students:

- Pick up a course planner
- Check online or posted lists on each campus to locate advisor
- Call your advisor to schedule an appointment
- Meet with advisor and select courses
- Register for classes online
- Make payments or arrange for a payment plan

Placement Testing:

To register for placement testing, contact the Academic Achievement Center at 781-239-2760 or register online at massbay.edu.

READMISSION POLICY

Students who have been dismissed or who have withdrawn from any program within the MassBay Division of Health Sciences will be considered only once for readmission to the same program. Students who have not been successful in one Health Sciences program can apply for admission to a different program only once if they have an overall College GPA of 2.0 or better. Application for readmission must be made within 12 months of withdrawal or dismissal from the original program. Readmission application deadlines are February 1st for the fall semester and June 1st 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. Depending 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. Students who have not attained a passing grade on skill or competency testing will be required to retake the course(s). Students are ineligible for readmission to Division of Health Sciences programs if they:

• Have been dismissed or withdrew from a restricted health science program with a GPA of less than 1.3 (67) in that health science program courses.

• Have been dismissed or withdrew from a program for reasons of "clinically unsafe practice/behavior" as defined in the Division of Health Science Student Handbook and Policy Manual.

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

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. Students who are granted a medical or family leave will be accommodated in the subsequent offering of that course, after first providing medical documentation

approving their participation. Students will have 12 months to be reinstated in the withdrawn course for medical reasons. If additional time is required, the student will be withdrawn from the Health Sciences program and if eligible, provided the process for readmission. 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.

FAST FACTS
THE REGISTRATION PROCESS

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

- Students will not be allowed to register if they have an outstanding financial obligation with the College.
- Registration in Math or English courses require placement exam results unless the student has been waived from the placement test by the Advising Center.
- 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 who have been accepted to a restricted program, such as many of the Health Professions programs or Automotive Technology programs, must obtain their program advisor's signature to register for any courses.
- 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. Beyond that, the signature of the program's dean is required.
- To obtain information on the semester schedule, class meeting times and places, visit our website at massbay.edu.

FINANCIAL AID

Wellesley Hills Campus / Room 111 / 781-239-2600
Framingham Campus / Room 100 / 508-270-4010

Financial Aid Eligibility Guidelines
Generally, to receive aid from federal and state student aid programs, students 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 or private school under state law.
- Enroll in an eligible program as a regular student seeking a degree or certificate. An admissions application must be completed.
- Be registered with the Selective Service, if required. Generally, this is a requirement for males age 18 through 25.
- Meet satisfactory academic progress 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. Students might not be eligible for federal student aid if they have been convicted under federal or state law of selling or possessing illegal drugs. To find out your status, 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, simply follow these two easy steps:

1. Complete the Free Application for Federal Student Aid (FAFSA). 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. Students may complete the application online by visiting www.fafsa.ed.gov.
2. Submit additional documents to the financial aid office, if requested by the school. Check the MassBay website for the date of the priority deadline. Students who complete the application process by this date should have an award decision prior to the fall semester payment deadline. 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.

Office of Financial Aid
The Office of Financial Aid is committed to providing financial options to admitted students to assist them in obtaining a college education, regardless of their economic circumstances. This overview of current financial aid resources, policies, and procedures at the college may be affected by changes in federal, state, and/or institutional policies. The federal government places the primary responsibility of financing a college education on the student and the student's family. Since financial aid is considered only a supplement to a student's personal resources, counselors in MassBay's Financial Aid Office are well versed in researching available funding avenues with students.

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. Visit the Office of Financial Aid for details. Contact the Financial Aid Office at 781-239-2600 for a copy of the Financial Aid Handbook, which explains the eligibility requirements for financial aid.

Sources of Financial Aid
Federal Work-Study (FWS) is a federally-funded program that provides part-time jobs in non-profit institutions on- and off-campus. FWS awards are awarded on a funds available basis. Eligibility is determined from the information provided on the Free Application for Federal Student Aid (FAFSA). If a student is awarded FWS, the amount shown on their financial aid award notification reflects the maximum amount he or she may earn during the academic year. FWS student employees will receive a paycheck every two weeks based on the actual number of hours worked. 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 Financial Aid Office to view a listing of available positions and to complete any necessary paperwork.

William D. Ford Federal Direct Stafford Loan Program
This federal program, created by the U.S. Department of Education, enables students to borrow funds to help pay for educational expenses. MassBay is responsible for determining eligibility based on the information reported on the FAFSA, in conjunction with 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. All recipients must complete federally mandated loan counseling and complete a master promissory note prior to disbursement of funds. Exit counseling must be completed before graduation, at termination of enrollment, or if a student's course load 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 less).

For additional information regarding these federal loan programs including current interest rates, fees, and repayment options, please contact the MassBay Financial Aid Office, or visit the Direct Loan website at http://www.direct.ed.gov/

Federal Pell Grants
The Federal Pell Grant is a need-based grant program from the federal government for undergraduate students with significant need. Pell Grant awards range from $575 to $5,550 for an academic year. Students must complete the Free Application for Federal Student Aid (FAFSA) and demonstrate financial need as dictated by the federal methodology. In order to be eligible for a Pell Grant, a student must have a valid 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 to students who are recipients of a Pell Grant. The amount of a typical FSEOG is $200.

Federal Parents' Loans for Undergraduate Students (PLUS)
The PLUS loan is a federal government loan borrowed through the College in the parent's name. The PLUS loan application and completion of the master promissory note are accessible online at https://studentloans.gov/. The disbursement of funds is done 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 contact the MassBay Financial Aid Office, or visit the Direct Loan website at http://www.direct.ed.gov/

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 Free Application for Federal Student Aid (FAFSA) must be filed to be considered for this grant. The FAFSA filing deadline for this program is May 1st.

Massachusetts Part-Time Grant
This grant is awarded to eligible undergraduate students who are enrolled in 6 to11 credits each semester and who do not have a prior bachelor's degree. The Massachusetts Part-Time Grant is awarded on a funds available basis.

Foster Child Grant
This grant is awarded to Massachusetts residents who have resided in the state for at least one year. The Foster Child Grant is awarded on a funds available basis and can only be applied towards tuition and mandatory fee charges.

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.

Additional Sources of Financial Assistance
Additional sources of financial assistance are available through the MassBay Community College Foundation. For further information, please contact the MassBay Foundation Office at 781.239.3125 or tmortell@massbay.edu.

MassBay Foundation Scholarships
- *The Leonce Cadet Berotte Scholarship*
  The Leonce Cadet Berotte Scholarship was established in honor of MassBay's Past President Berotte Joseph's father. The scholarship will be given to a deserving international/immigrant dream chaser annually, to be used towards tuition and fees up to $1,000 per semester.
- *The President's Top 10 Scholarship*
  This scholarship is available to two academically superior high school students from the MassBay service area that is entering MassBay. The student must have a Grade Point Average of 3.0 and or be in the top 10% of their high school class. The scholarship covers recipients' tuition and fees for two full years at the College.
- *The General Scholarship Fund*
  $1,000 scholarships are awarded annually from this fund to needy MassBay students who are in good academic standing. Scholarships are given in the fall semester to as many as 10 students.

- *The Virginia F. Sapienza Scholarship Fund*
  The Virginia F. Sapienza Scholarship Fund was established in honor of former long-time MassBay music professor Virginia Sapienza. The scholarship is a one-semester award given to provide support to a musician or other artist. The scholarship is for $500, and given to one student in the fall semester and one student in the spring semester.
- *The Maxine Elmont Educational Opportunity Fund*
  The Maxine Elmont Educational Opportunity Fund is named after the College's beloved Professor Elmont. This fund will provide scholarships to non-traditional re-entry students who are at least 25 years of age. This is a one- time $500 scholarship given annually.
- *Rosemary Murphy Scholarship*
  The Rosemary Murphy Scholarship was established in memory of Rosemary Murphy, a life-long resident of Needham, MA to be given to a Needham resident. This $500 scholarship is given to one student in the fall or spring semester and for two consecutive semesters.

For a list of sources of funding available in private aid, please contact the Financial Aid Office or visit the Financial Aid page on the College's website.

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.

- *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 the State Colleges. 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 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.

  To be eligible for a Paul Tsongas Scholarship, a student must:
  - Meet eligibility criteria established by the State College 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.

STUDENT ACCOUNTS

Wellesley Hills Campus / Room 114 / 781-239-2540
Framingham Campus / Front Desk / 781-239-2540

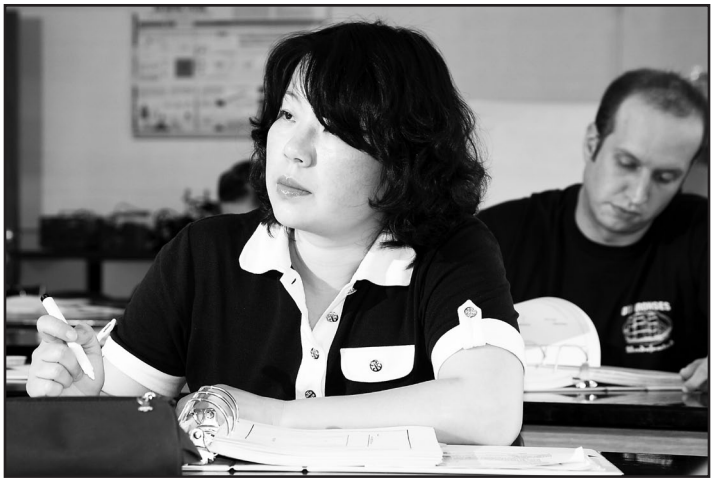
The Student Accounts Office collects all student tuition and fee monies and is also responsible for disbursement of funds owed to students. Tuition and fees are subject to change without notice. It is ultimately the student's responsibility to satisfy his or her financial obligations. Once a student registers, he or she is responsible for paying in full all tuition and fees by the posted due date. Registration is not complete until all charges are paid in full. 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
A student who has outstanding financial obligations to the College will not be permitted to register. If a student has already registered, he or she will not be permitted to attend classes or access email or Blackboard, which are the online systems required for some classes. Students with outstanding financial obligations will not receive grade reports, attendance reports, transcripts of grades, or diplomas without the final approval of the Student Accounts Office. 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 and dunning notices and 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.

Residency Status
A Massachusetts resident is currently defined as a U.S. citizen or Resident Alien and having at least **six (6) consecutive months of permanent primary domicile in the Commonwealth prior to registration. See the Office of Admissions for details.**

Federal/State Refund Policy / Return to Title IV Funds
A portion of Title IV, State Grants, and/or loan funds (but not Federal Work-Study funds) may be returned to the appropriate programs upon a student's withdrawal. Withdrawal date is the day the student withdraws (as determined by MassBay):

1. A students begins the withdrawal process prescribed by the school;
2. A student otherwise provided the school with official notification of the intent to withdraw; or
3. For the student who does not begin the school's withdrawal process or notify the school of his/her intent to withdraw, the mid-point of the payment period (semester), unless the school can document a later date.



TUITION AND FEES

All fees, tuition charges, refunds, and academic requirements are effective for the academic period 2012-2013 and are subject to change without notice by the College and/or the Board of Higher Education. Check www.massbay.edu for current information.

FALL AND SPRING TUITION

DAY RESIDENT

Tuition	$ 24.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Total per credit	**$174.00**

DAY NON-RESIDENT

Tuition	$ 230.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Total per credit	**$380.00**

EWP RESIDENT*

Tuition	$ 24.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Total per credit	**$174.00**

EWP NON-RESIDENT*

Tuition	$ 230.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Total per credit	**$ 380.00**

DAY NURSING RESIDENT

Tuition	$ 24.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Course/Lab Fee	$ 70.00
Total per credit	**$ 244.00**

DAY NURSING NON-RESIDENT

Tuition	$ 230.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Course/Lab Fee	$ 70.00
Total per credit	**$450.00**

DAY LPN RESIDENT

Tuition	$ 24.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Course/Lab Fee	$ 70.00
Total per credit	**$ 244.00**

DAY LPN NON-RESIDENT

Tuition	$ 230.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Course/Lab Fee	$ 70.00
Total per credit	**$450.00**

EWP NURSING RES/NON-RESIDENT*

Tuition	$ 128.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Course/Lab Fee	$ 70.00
Total per credit	**$ 348.00**

EWP LPN RESIDENT/NON-RESIDENT*

Tuition	$ 100.00
All College Fee	$ 130.00
Technology Fee	$ 20.00
Course/Lab Fee	$ 70.00
Total per credit	**$320.00**

***EWP–** 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
MR/HL	Medical Coding	$ 30.00
MR	Medical Records	$ 30.00
MX	Maxillofacial	$ 60.00
NU	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 Tech	$ 60.00
WR	College Writing	$ 20.00

COURSE/LAB FEES per course

LN 090	Intro to Language	$ 80.00

COLLEGE FEES

Textbook Fund*	$ 5.00	per semester
Parking & Transportation Fee	$ 10.00	per semester
Facility & Improvement Fee	$ 30.00	per semester
MASSPIRG*	$ 9.00	per semester
Health Insurance*	$ 1,049.00	Full-year coverage beginning with fall semester
Health Insurance*	$ 695.00	Half-year coverage beginning with spring semester
Transcript Fee	$ 10.00	per transcript
Late Fee	$ 50.00	Applies to students who register after the first day of classes

*May be waived

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 issues. 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 our 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 PeopleSoft.

Student Textbook Fund
The Student Government Association and the MassBay Foundation have 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 PeopleSoft.

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.

Liability Insurance
All Health Sciences students in good standing are covered by the College's approved professional liability insurance.

Tuition Payment Plan
To help you meet your educational expenses, MassBay Community College 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 in the following ways: Automatic Bank Payment Credit Card.

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 Registrar's Office 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. Fees are assessed for all such non-credit courses/workshops.

STUDENT ORIENTATION, ADVISING AND REGISTRATION (SOAR)

SOAR provides new students with the tools they need to succeed at MassBay. Every student has unique needs, so we have designed a SOAR process to meet every student's specific goals. We strongly recommend that all new students attend a SOAR session.

At SOAR students:
- Explore their academic, career, and transfer goals with MassBay academic advisors and faculty.
- Plan their first semester schedule, register for courses, and get their MassBay student ID.
- Become familiar with MassBay's technology, including their email, student account, and classroom tools.
- Learn about the extracurricular and leadership opportunities available to them.
- Are introduced to a wide range of support services.

At SOAR students will meet:
- MassBay Faculty and Staff, including Academic, Career and Transfer Counselors.
- Orientation Leaders (current students).
- Fellow NEW MassBay students.

After attending SOAR, students will:
- Have their printed schedule for their first semester.
- Have their MassBay Buc$ ONE Card student ID.
- Know how to log into their MassBay email, Blackboard, and PeopleSoft student account to pay their tuition, change their schedule, and view their grades.
- Be able to identify all of the resources available to them at MassBay.
- Be confident in beginning their first semester
- at MassBay.
- Have a plan for success.

What is My SOAR Process?
For all new students, the first step in the SOAR process is to complete placement testing

- Go to www.massbay.edu/placementtesting for more information and to sign up for a placement test date.
- Students who have completed college level math and/or English courses may be eligible to waive placement testing, go to www.massbay.edu/placementtesting for more information.

Students who have already completed placement testing, visit www.massbay.edu/soar to find out which SOAR process is best for you.

For more information and questions contact the SOAR office: 781-239-2721 or email at SOAR@massbay.edu.

ACADEMIC AFFAIRS

MassBay offers more than 70 associate degree and certificate programs through five academic divisions: Health Sciences; Humanities; Science, Technology, Engineering and Mathematics (STEM); Social Sciences and Professional Studies; and Transportation and Energy. Within each division, students benefit from a dynamic learning environment facilitated by accomplished faculty with experience in their respective fields, and many with strong connections to business and industry. Associate degree programs are generally equivalent to two years of a baccalaureate program at a four-year college or university. Benefitting from MassBay's outstanding record of successful student transfers, and with transfer agreements with public and private four year colleges and universities, our students go on to achieve their academic goals thanks to the foundation of learning they built at MassBay.

Our certificate programs are typically shorter in duration than associate degree programs, and they provide students with opportunities to gain employment in high-demand occupations. Please visit www.massbay.edu for detailed information about MassBay's certificate programs.

HEALTH SCIENCES

The Division of Health Sciences is located on our Framingham campus and dedicated to offering high quality, competency-based associate degree and certificate programs that serve the needs of health care professionals and employers. The latest technology is incorporated into lecture, laboratory, and real world clinical and practicum experiences to provide optimal preparation for the workplace. Program offerings within the Health Sciences division include nursing, emergency medical technician (EMT) and paramedicine, medical coding, medical office administrative assistant, maxillofacial technician, radiologic and surgical technology, phlebotomy, central services & material management, and central processing technology.

HUMANITIES

The humanities have always been at the core of the college experience. The Division of Humanities offers programs that focus on a broad understanding of the world while developing writing, critical thinking, and problem solving skills. Our programs offer students a high-quality liberal arts education that prepares them for successful transfer to four-year institutions and develops life-long skills and abilities. Humanities courses introduce students to the cultural forces that shape human existence from artistic, literary, philosophical and linguistic perspectives. Courses in this division include art, communication, critical thinking, English as a second language (ESL), film, literature, music, philosophy, photography, religion, world languages, and writing.

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Science, technology, engineering, & mathematics (STEM) programs provide students with the academic background and training necessary to pursue an advanced degree, or to immediately launch a career in the workplace. Available programs cover a wide range of technical areas, such as biotechnology, mathematics and computer science, engineering technology, environmental and life sciences.

SOCIAL SCIENCES & PROFESSIONAL STUDIES

The Division of Social Sciences & Professional Studies educates students for a variety of fulfilling and high-demand transfer opportunities and career options in business, the social sciences, human service, education, law enforcement and legal studies. The Social Science programs focus on the development and experience of people in their social context. Degree and certificate programs are offered in psychology and sociology, education, human services and community health. Professional Studies programs focus on building an understanding of the contemporary world of business and law. Areas of study include paralegal studies, accounting, business, criminal justice, law, management and marketing.

TRANSPORTATION & ENERGY

The Division of Transportation & Energy offers training on the most advanced diagnostic equipment in MassBay's state-of-the-art Automotive Technology Center. Programs are underwritten by four major automotive brands: BMW, Chrysler, General Motors and Toyota/Lexus. Students receive technical, customer service and business management training, by working in local dealerships through paid cooperative education programs. Both associate degree and certificate programs are offered in this division.

ONLINE, EVENING & WEEKEND PROGRAMMING

The College offers a wide variety of courses and of degree and certificate programs that can be completed evenings, weekends, online, in the summer, and during the accelerated winter (intersession) term. Admission requirements, academic standards, transfer policy and procedures, grading policies and instructional standards are the same as students enrolled during the day. Classes are delivered in a variety of formats including traditional face-to-face lecture, online, and hybrid (lecture online with face-to-face labs). There are also several options for course length including our standard 15-week semester, accelerated 8-week semesters, 6-week summer semesters or over just three weekends. All courses meet the required number of hours of instruction regardless of the format or length offered. Evening courses are available Monday through Friday between 5:00 pm and 10:00 pm. Weekend programs are offered Friday, Saturday and Sunday, with some courses online.

Online and Hybrid Learning

In addition to traditional classroom study, MassBay offers online and hybrid courses. These academic courses are the same courses offered in the classroom and follow the same semester schedule. Online and hybrid classes are taught by MassBay faculty and are an appropriate choice for many students. Fully online courses typically require no class time on campus although may include an on-campus orientation session or proctored examinations. Online courses are not self-paced. They follow the same semester schedule as classroom-based courses. They include assignment deadlines and course participation requirements. Online courses differ from classroom-based courses in that instruction is conducted entirely online using a variety of technologies. Technologies that students may use in online courses include: discussion boards, multimedia presentations, and Web 2.0 tools (blogs, wikis, and ePortfolios). Students in hybrid courses have scheduled class time on campus but 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.

Evening Programming
Evening courses are available Monday through Friday between 5:00pm and 10:00pm.

Degrees

Business Administration
Computer Information Systems
Criminal Justice
Early Childhood Education
General Business
General Studies (AA)
General Studies (AS)
Liberal Arts
Liberal Arts: Communication
Liberal Arts: Community Health
Liberal Arts: Early Childhood
Liberal Arts: Elementary Education
Liberal Arts: Human Services
Life Sciences
Nursing - Evening
*Radiological Technology (flex option)**

Certificates

Computer Aided Design
Early Childhood Education
Childhood Ed: Infants/Toddlers
Emergency Medical Technician
Interior Design
Liberal Arts
Medical Coding
Medical Office Admin.
Paramedicine
Practical Nursing Assistant
*Surgical Technology (flex option)**

**Class lectures and labs are held during evening hours. Clinicals are held during day and early evening hours.*

Weekend Programming
Our weekend programs consist of attending courses on Friday 5:30-9:30 pm, Saturday 9:00 am-4:00 pm, and Sunday 12:30-4:30 pm and enrolling in online courses.
Associate Degree programs:
Business Administration
Liberal Arts
Certificates:
Early Childhood Education
Early Childhood Education: Infants & Toddlers
Phlebotomy (Fall and Spring, Saturdays)

Science on Sundays
Science courses take place every Sunday afternoon during the fall and spring semesters.
Classes begin at 12:00 pm

Summer Sessions
Summer courses are offered in three sessions:
- 6 Week I – Begins the last week of May and runs until the first week of July.
- 6 Week II – Begins after Independence Day and runs through mid-August.
- 10 Week – Begins the last week of May and runs until the last week of July.

Intersession
Students can complete an entire course in just 10 days. Classes run Monday through Friday for two consecutive weeks beginning the first week of January. Hours vary based on the number of credits: Three credits: 9:00 am – 2:00 pm; Four credits: 9:00 am – 4:00 pm.

CORPORATE & COMMUNITY EDUCATION

The Office of Corporate & Community Education serves as an educational and training resource for individuals, companies, and agencies in Massachusetts, providing high-quality professional training to meet business and industry needs. The Office offers non-credit courses in practical business, personal enrichment and management areas, as well as computer courses. MassBay also offers a wide variety of corporate and community education courses, programs, onsite training, seminars and workshops, developing and delivering programs tailored specifically to a client's training needs.

Continuing Education Units/Professional Development points are available for several courses offered through the Office.

LEARNING OPPORTUNITIES

Honors Program
MassBay's Honors Program admits students based on academic achievement. Students accepted into the program may enroll in special courses including a seminar in advanced writing, independent study, and 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 to promote continuing academic excellence. To become a member, students must be enrolled in a business division program, have completed at least 15 credits, and have a cumulative GPA of 3.0. MassBay's chapter of the Society is Kappa Epsilon.

Alpha Kappa Lambda, the MassBay 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 among two-year college students by providing opportunities to develop leadership 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 who 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, are eligible for membership.

Learning Communities
Research shows that students participating in Learning Communities have a stronger sense of belonging, increased engagement in their studies, and noteworthy academic success. The Learning Communities program at MassBay is designed to enhance student learning by connecting students with different academic disciplines and to each other. 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.

Service Learning
Many courses at MassBay are enhanced by a learning through serving approach, commonly referred to as service-learning. 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 will fully understand what they are learning in the classroom by participating in a real-world project and reflecting on it in relation to the academic content of the course.

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.

Study Abroad
The Office of International Education and Study Abroad provides a variety of opportunities for MassBay students who are interested in travel, study, and exchange programs abroad. The Office 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. In addition, The Office of International and Study Abroad staff can make arrangements through local cooperating colleges and universities, as well as through various organizations, for students to study abroad for a semester or a full academic year with academic credit.

LIBRARY AND LABS

Library
MassBay's library collection contains approximately 50,000 volumes and 200 print periodical and newspaper subscriptions. MassBay is a member of the Minuteman Library Network, a consortium of 35 public and seven academic libraries which collectively hold over six million items. Students can access the Network's resources from either the catalog workstations in the library or from the College's web page. In addition, students have access to the College's electronic resources using computers and mobile devices from both on and off campus. Reserve materials are located adjacent to the Circulation Desk in the Framingham and Wellesley Hills libraries. Members of the library staff are available to assist students in the research process.

Labs
Biotechnology
This laboratory complex on the Wellesley Hills campus is equipped with state-of-the-art equipment to train students in a wide range of current laboratory techniques including recombinant DNA analysis, spectrophotometry, real-time polymerase chain reaction (RT-PCR), fluorescence microscopy, enzyme-linked immunosorbent assay (ELISA) and high-performance liquid chromatography (HPLC). Students get theoretical and hands-on training through their direct involvement in independent research projects under the supervision of their instructors and mentors, preparing them to work with the region's premier biotechnology companies and to transfer to baccalaureate and graduate programs.

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, MasterCAM, and Adobe products. The CAD lab houses Rapid Prototyping Technology (uPrint/Dimension Printer) and a professional-grade plotter.

The engineering lab includes state-of-the-art instrumentation and measurement software such as Matlab and National Instruments Labview 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. Areas of study include: engineering, mechanical engineering, mechanical design, architectural design, electromechanical design, electronics and multimedia.

Computing Labs/Virtual
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 system 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. This room also supports much of the multimedia software required by our web-related and digital-imaging courses.

Early Childhood
The Early Childhood Laboratory on the Framingham campus provides students a model classroom for experiential learning. This lab is equipped with materials appropriate for early childhood education in areas such as literacy, mathematics, science, music, and the arts. Computer resources support student inquiry and use of appropriate software for young children.

Electronics
MassBay houses a fully functional electronics lab equipped with industry standard equipment and software such as Cadance OrCad and Quartus II to enable students to simulate, conduct experiments and work collaboratively on projects in circuit analysis and design, electrical and computer engineering, robotics, and supply chain electronics technology. Students use Machine Science and Arduino kits for experimentation and design. Areas of study include electrical and computer engineering and an electronics technology program.

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 is a mannequin that can be programmed to simulate hundreds of medical conditions. It exhibits all physiologic functions and responds in real-time to treatment and medication.

Paramedic and Emergency Medical Technician (EMT)
This lab on the Framingham campus contains state-of-the-art equipment and a mock ambulance training center. The lab contains 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 to provide students with the latest technology to enhance their 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 and a variety of both energized and no 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
This lab on the Framingham campus contains state-of-the-art, fully operational operating room equipment and autoclaves. It is available to surgical technology and central processing students for class and supervised practice.

ACADEMIC ACHIEVEMENT CENTER

Wellesley Hills Campus / Room 111 / 781-239-2632
Framingham Campus / Room 315A / 508-270-4213

MassBay's Academic Achievement Center promotes student retention and achievement through specialized, innovative methods of individual and small group tutoring and assessment.

The Academic Achievement Center includes Disability Resources, Testing Services, Peer Tutoring, Online Tutoring, the Reading and Writing Center, the Math and Science Center, and the Math Homework Center. The Center 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 or 2626
Framingham Campus / Room 306 / 508-270-4267 or 4286

MassBay provides equal access for students with disabilities through a wide array of support services. Academic accommodation services are available throughout the academic year. Appropriate documentation is required. Learning specialists in Disability Resources encourage students to advocate for themselves by understanding and articulating their academic needs. Learning specialists assist students and professors in exploring effective learning strategies, and they recommend appropriate accommodations for students to demonstrate their progress in the classroom. Disability Resources works cooperatively with all academic divisions and College programs to ensure that all qualified students find a supportive environment in which to learn and pursue scholastic and professional goals. Support services include, but are not limited to:

- Accommodations for placement testing. Appropriate documentation must be submitted prior to the scheduled testing date.
- Student mentors, who have learned to compensate for their own disabilities, provide support to their fellow students in a nonthreatening way.
- Reading, writing, math, and learning labs offer individual instruction.
- Readers, note-takers, scribes, and adaptive computer equipment and software for students with physical and/or learning disabilities.
- Modified and extended-time testing in an environment appropriate to a student's needs.
- Support groups, which create informal atmospheres for students to share their experiences and discuss potential means of overcoming social and academic obstacles.
- Self-advocacy groups provide structured direction and practice expressing individual learning needs, as well as effective strategies of compensation.
- Workshops and seminars on issues of disability are held for students, tutors, administration, and faculty throughout the academic year.
- Specially designated parking spaces for disabled students. Individuals needing specially designated parking should contact the MassBay Office of Public Safety Accessible restrooms and telephones are located throughout the facilities.
- TTY, ASL, interpreters, emergency lights, and other accommodations are available for the deaf and hard-of-hearing.

Testing Services

Wellesley Hills Campus / Room 212 / 781-239-2632
Framingham Campus / Room 307 / 508-270-4213

Faculty may arrange for a student who misses an exam for an approved reason to take a make-up test. Testing Services is located in the Academic Achievement Center on both campuses.

Placement Testing

In an effort to ensure a high standard of educational success for students who attend the Commonwealth's public colleges, the Massachusetts Board of Higher Education requires that all students complete a series of assessment tests in writing, reading, and mathematics ("Accuplacer" placement tests). These tests are designed to determine level of skill in these respective areas. The assessment process provides the College with information about a student's comprehension and academic skill levels. If a student scores below the necessary proficiency levels for college-level courses, he or she will be assigned to mathematics and writing courses that are specifically designed to improve skills in those areas.

All new students must complete placement testing after being accepted to MassBay and before matriculation. If a student has already taken college-level courses in English and/or mathematics, he or she should discuss whether those credits would transfer to MassBay with an advisor in the Advising Center prior to taking a placement test. If a student is a non-native English speaker overly reliant on his or her own language, or has been living in the United States for

less than 10 years, it is recommended that he or she completes the English as a Second Language (ESL) placement test. Students who have documented disabilities are encouraged to call MassBay's Disability Resources for further information regarding placement testing accommodations. Students must submit appropriate documentation prior to the scheduled testing date. If a student does not possess a high school diploma or GED certificate (and is not currently in high school), he or she will need to take the Ability to Benefit (ATB) placement test. Please contact the Admissions Office at 781-239-2500 for more information.

Placement Test Boot Camps
The Academic Achievement Center offers several "Boot Camps" to help students prepare to take the Accuplacer placement tests. These mini workshops help students refresh their skills in arithmetic, algebra, reading, and writing. Portions of these Boot Camps can be completed online.

Peer Tutoring
Wellesley Hills Campus / 781-239-2627
Framingham Campus / Room 307A / 508-270-4213
The Peer Tutoring program is a vibrant, active student organization, offering free assistance in a wide range of subjects. Peer tutors assist students in developing their academic potential and improving their coursework. Tutors are trained to engage and encourage tutees in sharing ideas and solutions, utilizing multiple tutoring strategies, and facilitating student progress. Peer tutors are students who excel in their areas of study and enjoy helping their fellow students achieve academic success. They are current students who have taken courses with many of the same professors, and they adeptly guide tutees through their courses of study.

Online Tutoring
All MassBay students can register for SMARTHINKING, free online tutoring in many different subjects, from the MassBay Blackboard site. SMARTHINKING is available 24/7.

Reading and Writing Center
Wellesley Hills Campus / Room 215 / 781-239-2624
Framingham Campus / Room 303 / 508-270-4285
The Reading and Writing Center offers individual instruction on our Wellesley Hills and Framingham campuses for student writers at every stage of the writing process--from beginning an assignment to revising a paper after an instructor has commented on it. The Reading and Writing Center is staffed by highly skilled educational practitioners who have the ability to engage with MassBay's diverse students wherever they are in their development as college students. The focus is on encouraging every student to use detailed self-assessment techniques and to set challenging but achievable academic goals. The Center contains networked computers and printers so that students may write, research, and edit in the Center. Reading/writing learning specialists offer consultations in-person and by email, print-based or online study aids and resources, and interactive presentations for students engaged in the reading, writing, and learning process.

Math and Science Center
Wellesley Hills Campus / Room 214 / 781-239-2774
Framingham Campus / Room 307A / 508-270-4211
The Math and Science Center is located on both the Framingham and Wellesley Hills campuses. It is staffed by professionals who offer a variety of individual or group instruction in science and mathematics courses. Math/science learning specialists also offer consultations for students who need general academic and learning support. The Math and Science Center offers independent self-paced learning, review, and self-testing using multimedia, online, and computerized tools, as well as alternative methods of tutoring such as email and 24/7 online tutoring. Study groups are encouraged, which provide students opportunities to work in small groups with peers to focus on specific math or science homework or subject areas.

Math Homework Center
Wellesley Hills Campus / Room 214 / 781-239-2774
The Math Homework Center offers students the opportunity to work in small, supportive groups while they complete assignments.

ACADEMIC ADVISING AND TRANSFER

Wellesley Hills Campus / Room 111 / 781-239-2632
Framingham Campus / Room 315A / 508-270-4213

Advising Center
At the Advising Center, academic counselors are available to provide students with information on educational options and develop academic plans. Staff evaluates and grants transfer credits from previous colleges. An academic counselor helps with the transition to college, assists in choosing courses that are appropriate to skill level and program requirements, and provides referrals to other offices and services on campus. Students are encouraged and expected to seek the advice and counsel of an academic advisor during their time at MassBay, and especially prior to registration for an academic semester. An academic advisor is assigned to each full-time student. This advisor may be a member of the faculty, professional staff or Advising Center staff. Part-time students are generally assigned to the Advising Center. As students progress in their program of study, an academic advisor can review their transcript with them to ensure they are taking the appropriate courses toward graduation. The Advising Centers are open to all students enrolled at the Wellesley Hills campus, the Framingham campus, and the Automotive Technology Center in Ashland.

The Advising Center offers the following services:

- Academic counseling for undeclared majors.
- Credit by examination information.
- Declaring or changing a major.
- Graduation reviews.
- Referrals to academic support services.
- Transfer advising.
- Transfer credit evaluation.

SUCCESSFUL TRANSFERRING

Students graduating from MassBay have had excellent records upon transferring to four-year colleges and universities. The following is a partial list of four-year institutions to which MassBay graduates have transferred:

Amherst College
Babson College
Becker College
Bentley College
Boston College
Boston University
Brandeis University
Bridgewater State University
Central Connecticut St. University
Clark University
Connecticut College
Cornell University
Curry College
Emerson College
Emmanuel College
Fitchburg State University
Framingham State University
Hamilton College
Howard University
Lesley University
Massachusetts College of Liberal Arts
Massachusetts College of Art and Design
Massachusetts Maritime Academy
Merrimack College
Mt. Holyoke College
New York University
Northeastern University
Purdue University
Regis College
Rivier College
Salem State University
Simmons College
Smith College
Springfield College
Stonehill College
Suffolk University
Syracuse University
UMass Amherst
UMass Boston
UMass Dartmouth
UMass Lowell
University of Miami
Wellesley College
Wentworth Institute
Westfield State University
Wheaton College
Wheelock College
Worcester State University
Worcester Polytechnic Institute

Transfer Information & Policies

Acceptance of Transfer Credit from Other Colleges

Transfer of course credits from other colleges or universities will be permitted if such credits were earned at a regionally accredited institution and are equivalent to MassBay's courses. Prior to MassBay's acceptance of transfer credits, students must be accepted into a program of study. In addition, students must submit official transcripts provided by the registrars of all schools, colleges, or universities attended. Students must have earned at least a "C" in the course or courses for which they are requesting transfer credit (some restricted program coursework must be a C+ or higher. Please refer to Admission into Restricted Programs). A preliminary evaluation of course credits to be transferred to the College may be made by an academic advisor at the time of application. Please be aware that this evaluation is preliminary only, and acceptance of transfer credit is subject to review when students are formally accepted to their chosen program. Credit that is accepted according to general College policy is not necessarily acceptable for specific programs of study. This is particularly true in instances where program transfer limits are in effect, such as the Health sciences programs. A maximum of one-half of the total credits within the degree or certificate program may be earned by transfer credit. The College reserves the right to refuse recognition for courses that were taken more than ten years prior to the date students apply for transfer. Transferred science and computer science courses must have been taken within the last five years.

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 drop transcripts off 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.

Policies Regarding Transfer of Courses

- MassBay only accepts transfer credit from regionally accredited colleges or universities, and the American Council on Education.
- Credits may be transferred in only if they apply to a student's current major on record.
- Students must have earned a grad of "C" or better in the course(s) for which they are requesting transfer credit. Please note: transfer credits are not calculated into the MassBay GPA.
- MassBay will not accept Pass/Fail coursework for transfer credit unless the official transcript clearly indicates that a Pass grade is equivalent to a C or higher.
- A maximum of one-half of the total credits within the degree or certificate program may be earned by transfer credit.
- Transferred Science and Computer Science courses must have been taken within the last five (5) years.
- Foreign documents must be translated and evaluated by a credible agency, such as the Center for Educational Documentation (http://www.cedevaluations.com).
- Credit that is accepted according to general college policy is not necessarily acceptable for specific programs of study. This is particularly true in instances where program transfer limits and/or minimum grade requirements are in effect, such as the Health sciences programs.
- The College reserves the right to refuse recognition for courses that were taken more than ten years prior to the date that students apply for transfer.

- Coursework must be represented in credit hours (clock hours will not be converted to MassBay credit hours).

Transfer Advising
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 campus. 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 navigate 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
  - o MassTransfer
  - o MassTransfer ATA (Alternative Transfer Agreements)
  - o 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 the 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
EN101 and EN102
(6 credits)

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

Humanities & Fine Arts
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).
(9 credits)

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

Mathematics
MA100-level math or higher
(MAC100 & MAC131 not eligible)
(3 credits)

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 (UMass at Amherst and UMass at Lowell provide 100% tuition waiver)

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.

Credit by Examination
MassBay students have the opportunity to earn credit through examinations administered periodically throughout the academic year. MassBay accepts credits for students who score at appropriate competency levels in the following examinations:

Advanced placement courses (AP)
Contact the Advising Center for qualifying scores and transfer credit information.

College level examination program (CLEP)
Through CLEP examinations the College awards academic credit for over 20 courses.

Challenge examinations
Challenge examinations for CS 100 Computers and Technology and CT 100 Critical Thinking are offered for students who believe they possess the skills covered by these courses. Students must complete and submit a Challenge Examination request form, pay the appropriate fee, and schedule a date to take the exam. Students may not take a Challenge Examination if they are currently enrolled in the course.

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 sixteen (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.

Grading System and Grade Point Average

QUALITATIVE LETTER GRADE	APPROX. % EQUIVALENT	HONOR POINTS PER CREDIT HOUR
A	94-100	4.0
A-	90-93	3.7
B+	87-89	3.3
B	83-86	3.0
B-	80-82	2.7
C+	77-79	2.3
C	73-76	2.0
C-	70-72	1.7
D+	67-69	1.3
D	63-66	1.0
F	Failing	0.0

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 in the Registrar's Office or on the Registrar's page of the MassBay website. Students who withdraw from a class will receive a grade of "W" on their transcript, which is not counted in the calculation of GPA. 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 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. 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 qualitative 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 on the Registrar's page of the MassBay website. Students may obtain an unofficial transcript (a copy of the student's academic record without the College seal and signature of the Registrar), online, through the PeopleSoft Student Center.

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 qualitative letter grade carries an honor point value. These grades represent various 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. In other words: Class Credits x Points = Total Points Earned. Total Points Earned/ Total College-Level Credits Attempted = GPA. The GPA affects a student's academic progress with regard to graduation, academic honors, probation, and dismissal.

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, NC, AU, S, U, T.

Designations of W, WC , WR and NC are used for administrative reporting. They 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 tenth week of classes (second week for summer classes or fourth week for eight-week courses) in any semester, a student may officially withdraw from a course without academic penalty. The notation of "W" will be made on a student's permanent record, indicating official course withdrawal.

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, the notation of "WR" will be made on a student's permanent record for that course, indicating administrative withdrawal.

NC (No Credit): An internal non-punitive designation assigned by a faculty member if a student has abandoned a course but not officially withdrawn. An NC designation may impact a student's scholarships, veteran's benefits, financial aid status, international student visas, athletics participation eligibility and similar situations, therefore it is necessary to establish the student's last known date of attendance in the class. An "I" (Incomplete) grade that has not been replaced by a standard grade ("A-F") becomes an "NC" should a student fail to make up the required work within the allotted time. This designation is issued at the discretion of the faculty member.

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

I (Incomplete): A temporary grade assigned to a student if he or she fails to complete the requirements of a course. An "I" grade may result from one of two causes: failure to take a final examination, or failure to complete all the required assignments. If a student receives an "I," he or she should contact their 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 received to complete all course requirements. The grade of "I" automatically becomes an "NC" (No Credit) 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 in a pass/ fail course.

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

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

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 fails to be present for a final examination, he or she should contact the instructor of the class as soon as possible to request and arrange for a makeup exam. Decisions regarding whether a make-up examination is allowable, and the circumstances under which it may be given, rest with the instructor.

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 or her from the course by notifying the Registrar with the student's last known date of attendance. This action will result

GRADUATION REQUIREMENTS

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, required by the particular academic program. At least half of the program coursework must be taken at MassBay.
3. Demonstrated academic competence in writing, reading, mathematics, computer literacy, technological literacy, critical thinking, global and ethnic understanding, and civic literacy (See Graduation Competencies).
4. An overall cumulative Grade Point Average (GPA) of 2.000 or better.
5. A cumulative GPA of 2.000 or better in the major field of study or as defined in the curriculum.
6. Completion of the College's exit survey.
7. Fulfillment of all College obligations, including financial, as well as completion of all exit forms by students receiving financial aid.

Course requirements for graduation are specified in this catalog under your program of study.

in the recording of the appropriate designation for course abandonment on 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. 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 student center. 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 the end of each semester, MassBay reviews the academic performance of all students. 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
Students who are 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 are recognized as members of the Dean's List. To be eligible for the Dean's List, students must be full-time and enrolled in least 12 credits of college-level courses. Only college-level course credits and grades are used in computing the term GPA for the Dean's List. If a student has any incompletes for the semester, even if he or she eventually completes them, he or she will not be eligible for Dean's List consideration. Dean's List eligibility is not retroactive.

Active Military Duty
Students who are called to active United States 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 United States 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. Verification shall be provided by furnishing the Dean of Students, the Registrar, or the Veterans' Counselor with a copy of the Order to Active Duty within one week (7 days) of receipt of 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 appropriate 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 Institutional Planning, Research & Assessment.

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 higher, 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:

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

To reapply to the College, submit an application for admission to the Office of Admissions.

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. Students who have been academically dismissed may be readmitted to the College a maximum of two (2) times.

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

Graduation Honors
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.

Graduation Competencies
Prior to graduation, all associate degree candidates must demonstrate academic competence in the following areas:

Written and oral communication
Graduates will explain, persuade, advocate, and argue effectively when engaged with a variety of audiences.
Quantitative skills
Graduates will use a variety of mathematical tools and quantitative reasoning to solve problems and analyze complex challenges.
Technological/ computer/ information science facility
Graduates will understand and use appropriately a variety of technological tools.
Knowledge about the natural world
Graduates will use scientific knowledge and methodology to test, validate, and update their knowledge about the natural world.
Knowledge about diverse cultures
Graduates will apply knowledge about world regions and their histories, philosophical traditions, religions, artistic and cultural legacies, and economic and political forces in engaging others.
Critical thinking and informed decision-making
Graduates will engage in ethical reasoning, integrative/systems thinking, and creative thinking to analyze and solve problems from multiple perspectives.
Personal, social and civic responsibility
Graduates will take responsibility for their actions, self-assess, self-advocate, collaborate, and develop community and civic awareness.

Civic Literacy
Civic literacy contributes to an understanding of the role of public policy as well as the consequences to society of an individual's choice of action or inaction. Students must be able to demonstrate understanding of the structure and operation of government at the local, state, and federal levels as well as how an individual may act as a catalyst for societal change. Students must also understand the ways in which citizen participation contributes to the preservation of a democratic system of government.

Computer Literacy
Students must demonstrate an understanding of computer literacy in one of three ways:

- By successfully completing one of the following courses: Computers and Technology; Microcomputer Applications for Business; or Introduction to Computer Science.
- By taking the Challenge Examination. Challenge Examination information may be obtained at the Advising Center.
- By transferring college-level computer science credits, provided the course(s) included hands-on laboratory applications (including word processing, spreadsheets, and database management).

Critical Thinking
Students must demonstrate the ability to be competent critical thinkers, and the ability to analyze, interpret, synthesize and assess what is learned both in and out of the classroom and to apply this knowledge in various situations. The College offers courses in critical thinking. Students may also meet this competency by passing the Critical Thinking Challenge Exam.

Global and Ethnic Understanding
Students must demonstrate an understanding of the interdependence of the countries of the world and its people, and an awareness of and appreciation for the issues of a multicultural world.

Mathematics
Students must demonstrate competence in college-level mathematics either by receiving an appropriate score on the College's placement test or by successfully completing a college-level mathematics course (100-level or above) appropriate for their program. Students may also satisfy the competency by passing either of the College-approved CLEP subject examinations, College Algebra and Calculus.

Technological Literacy
Students must have a general understanding of current scientific and technological topics and their impact on society. Students can meet this competency by successfully completing one of the following courses: Computers and Technology; Microcomputer Applications for Business; Introduction to Computer Science; or other approved courses. Students may also meet this competency by taking the Challenge Examination. Challenge Examination information may be obtained at the Advising Center.

Writing
Students must demonstrate competence in writing by successful completion of Freshman English I and Freshman English II or through successful completion of the College-approved CLEP subject examination, Freshman College Composition.

Additional Degrees / Second Associate Degree
Students who complete an associate degree or certificate may petition to receive an additional associate degree or certificate. Students must complete a minimum of 15 credit hours at MassBay in the second degree or certificate program, as well as all requirements appropriate to both degree programs. If a student is receiving an associate degree, no concurrent certificate in the same discipline will be granted. Where concentrations are offered under an associate degree, only one degree will be awarded. Transfer credit granted toward the first degree may be re-evaluated for applicability against the requirements for the second degree.

PROGRAMS OF STUDY

While every program has a set of required courses, students will also have the opportunity to choose some elective courses. Students are encouraged to work with an advisor throughout their time at MassBay to design a specific course of study and to plan for further college study or employment.

All College programs of study listed in this catalog are subject to change in accordance with College requirements. Advisors provide students with current curriculum program sheets upon registration. These sheets detail each College program offering and include a listing of required courses and choices of elective courses for each degree and certificate program.

A curriculum sheet outlines the courses required to complete an associate degree or certificate in a given program. Curriculum sheets list, in the preferred sequence, required courses and elective options necessary to complete the program.

Please note, some prerequisite or preparatory courses in mathematics and/or English may not be eligible for some programs at MassBay. Students should meet with their academic advisor when planning their academic pursuits. Some courses are only offered in either the fall or spring semester, so students are advised to seek guidance from their academic advisor throughout their time at MassBay.

A prerequisite is a course, condition, or a test that is needed prior to taking a course or a program.

An example of a course prerequisite:
Biology 101 (BI 101) is a prerequisite for Anatomy and Physiology I (BI 115). This means students must take BI 101 BEFORE they can take BI 115.

An example of a program prerequisite:
EMT Certification is a prerequisite for the Paramedicine program. This means students must complete the EMT Certification BEFORE they will be admitted to the Paramedicine program.

PROGRAMS OF STUDY

HEALTH SCIENCES

Associate in Science
Nursing – Day Option
Nursing – Evening Option
Nursing – LPN to RN – Transition Option
Radiologic Technology – Day Option
Radiologic Technology – Flex Option

Certificate Programs
Central Processing Technology
Central Services & Material Management
Emergency Medical Technician
Maxillofacial Assistant
Medical Coding
Medical Office Administrative Assistant
Paramedicine – Day Option
Paramedicine – Evening Option
Phlebotomy
Practical Nursing – Day Option
Practical Nursing – Evening Option
Surgical Technology – Day Option
Surgical Technology – Evening Option

HUMANITIES

Associate in Arts
General Studies
Liberal Arts
Liberal Arts: Communication

Certificate
Liberal Arts: Communication

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

Associate in Science
Biotechnology
Biotechnology: Forensic DNA Science
Biotechnology: Marine Biotechnology
Computer Information Systems
Computer Science
Electrical and Computer Engineering
Electronics Technology
Engineering
Engineering Design
Environmental Sciences & Safety
General Studies
General Studies: Bioinformatics
General Studies: Lab Animal Care
General Studies: Mathematics (Associate Degree of Arts)
Information Systems Technology & Management
Life Sciences
Mechanical Engineering

Certificate
Computer-Aided Design (CAD)
Information Technology
Technology Support
Web Designer
Web Developer
Web Master

SOCIAL SCIENCES AND PROFESSIONAL STUDIES

Associate in Arts
Liberal Arts: Community Health Option
Liberal Arts: Early Childhood Education
Liberal Arts: Elementary Education
Liberal Arts: Global Studies
Liberal Arts: Human Services
Liberal Arts: Psychology/Sociology/Anthropology

Associate in Science
Accounting
Business Administration
Criminal Justice
General Business
Early Childhood Education
General Business: Hospitality Management
Paralegal Studies

Certificate
Accounting
Business: Information Technology
Early Childhood Education
Early Childhood Education: Infant-Toddler Teacher
General Business: Hospitality Management
Interior Design
Liberal Arts: Community Health
Liberal Arts: Human Services
Management
Paralegal Studies

TRANSPORTATION AND ENERGY

Associate in Science
Automotive Technology: BMW
Automotive Technology: Chrysler
Automotive Technology: General Motors
Automotive Technology: Toyota/Lexus

Certificate
Automotive Technology: Toyota/Lexus
Automotive Technology: Technical Services Educational Program (TSEP) Undercarriage Repair
Automotive Technology: TSEP Drive Systems
Automotive Technology: TSEP Electrical/Engine Performance/HVAC

HEALTH SCIENCES

Nursing – Day Option

Associate in Science


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 HEALTH SCIENCES

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 curriculum is designed to be completed over four semesters, although some students may choose to complete some non-nursing courses prior to beginning the nursing sequence.

The theoretical and clinical components of nursing courses must be taken concurrently and sequentially. Graduates are eligible to take the National Council Licensure Examination for Registered Nurses.

The Associate in Science Degree in Nursing is accredited by the National League for Nursing Accrediting Commission and approved by the Massachusetts Board of Registration in Nursing.

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

ADMISSIONS REQUIREMENTS

Students seeking admission to the Associate Degree Nursing Program (ADN) will be individually evaluated on the basis of Grade Point Average (GPA) and total number of college-level credits completed at MassBay. Priority for admission is given to current MassBay students. Applicants must also meet the following additional criteria for acceptance into the nursing program:

- 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 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. Refer to the Competitive Programs Admissions Requirements.
- Completion of HL 111 Essentials of Nutrition and PS 101 Introduction to Psychology with a C or higher.
- HESI Admission (A2) exam score of 75 or better in both Science Composite (Biology, A&P, Chemistry) and Overall Composite (all subjects combined). Consideration will be given to students whose scores are better than 60 with a preference given to students who score 75 or better in both areas (composite and science) and those who have a score of 750 or higher in the Critical Thinking portion of HESI Admission (A2) exam. Student may take the HESI exam for a total of 4 times. There must be a 6 month period between each exam. HESI exams are only good for one year, and then the exam must be retaken.
- Completion of BI 115 Anatomy and Physiology I, BI 116 Anatomy and Physiology II and BI 123 Fundamental 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. Students cannot have multiple attempts to achieve a C+ or higher in any science course within the required 5 year period. Students can repeat a science course only once.

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.

Proof of CPR certification is required on or before the first day of the first semester of the first year and must be submitted to the Division of Health Sciences (DHS) compliance coordinator. 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. Students may enroll in a Health Care Provider course through the Office of Corporate & Community Education.

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 that will prevent the individual from registering for any courses. Forms/ information must be submitted to DHS compliance coordinator. See the DHS student hand book for more information. If students do not submit forms in a timely fashion they will be withdrawn from the program.

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).

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts.

See next page for curriculum sheet.

AY '12-'13

Associate Degree Nursing Program Day Curriculum Sheet

Program Requirements to be completed prior to matriculation into the AD nursing program (must meet 5 year restriction, if required; students must obtain a grade of C+ in all sciences and a C in EN 101, HL 111, and PS 101 to be considered for acceptance into the nursing program; see other admission requirements):

COURSE	COURSE TITLE	CREDITS
*BI 115	Anatomy and Physiology I w/ Lab	4
BI 116	Anatomy and Physiology II w/ Lab	4
*BI 123	Fundamentals of Microbiology w/ Lab	4
EN 101	Freshman English I	3
HL 111	Essentials of Nutrition	3
PS 101	Introduction to Psychology	3
	Subtotal for Program Requirements	**21**

*Bio 101 required

COURSE	COURSE TITLE	CREDITS
First Year	*Semester I*	
NU 130	Foundations for Nursing Practice	2
HL 110	Health Assessment and Skills	1
HL 125	Pharmacology for Nurses: A Pathophysiology Approach	4
PS 118	Life Span Psychology	3
NU 135	Psychosocial Nursing and Care of the Older Adult I	2
NU 136	Psychosocial Nursing and Care of the Older Adult I Practicum	1
	credits:	**13**
First Year	*Semester II*	
NU 160	Nursing Care of the Adult I	4
NU 161	Nursing Care of the Adult I Practicum	4
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
CT 100	Critical Thinking	3
	credits:	**17**
Second Year	*Semester I*	
NU 225	Nursing Care of the Adult II	3
NU 226	Nursing Care of the Adult II Practicum	2
NU 235	Nursing Care of the Developing Family	3
NU 236	Nursing Care of the Developing Family Practicum	2
	Humanities Elective	3
	credits:	**13**
Second Year	*Semester II*	
NU 260	Nursing Care of the Adult III with Complex Issues	4
NU 261	Nursing Care of the Adult III with Complex Issues (Practicum)	4
NU 270	Psychosocial Nursing and Care of the Older Adult II	2
NU 275	Nursing Capstone	3
	credits:	**13**
	Total Program Credits	**77**

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

AY '12-'13

Nursing – Evening Option

Associate in Science

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 HEALTH SCIENCES

This program is designed to meet the educational needs of students pursuing a career in nursing who wish to attend college part-time during the evening. The curriculum is designed to be completed over six semester and two summers although some students may choose to complete some non-nursing courses prior to beginning the nursing sequence.

The theoretical and clinical components of nursing course must be taken concurrently and sequentially. Graduates are eligible to take the National Council Licensure Examination for Registered Nurses.

The Associate in Science Degree in Nursing is accredited by the National League for Nursing Accrediting Commission and approved by the Massachusetts Board of Registration in Nursing.

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

ADMISSIONS REQUIREMENTS

Students seeking admission to the Associate Degree Nursing Program (ADN) will be individually evaluated on the basis of Grade Point Average (GPA) and total number of college-level credits completed at MassBay. Priority for admission is given to current MassBay students. Applicants must also meet the following additional criteria for acceptance into the nursing program:

- 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 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. Refer to the Competitive Programs Admissions Requirements.
- Completion of HL 111 Essentials of Nutrition and PS 101 Introduction to Psychology with a C or higher.
- HESI Admission (A2) exam score of 75 or better in both Science Composite (Biology, A&P, Chemistry) and Overall Composite (all subjects combined). Consideration will be given to students whose scores are better than 60 with a preference given to students who score 75 or better in both areas (composite and science) and those who have a score of 750 or higher in the Critical Thinking portion of HESI Admission (A2) exam. Student may take the HESI exam for a total of 4 times. There must be a 6 month period between each exam. HESI exams are only good for one year, and then the exam must be retaken.
- Completion of BI 115 Anatomy and Physiology I, BI 116 Anatomy and Physiology II and BI 123 Fundamental 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. Students cannot have multiple attempts to achieve a C+ or higher in any science course within the required 5 year period. Students can repeat a science course only once.

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.

Proof of CPR certification is required on or before the first day of the first semester of the first year and must be submitted to the Division of Health Sciences (DHS) compliance coordinator. 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. Students may enroll in a Health Care Provider course through the Office of Corporate & Community Education.

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 that will prevent the individual from registering for any courses. Forms/ information must be submitted to DHS compliance coordinator. See the DHS student hand book for more information. If students do not submit forms in a timely fashion they will be withdrawn from the program.

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).

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts.

See next page for curriculum sheet.

AY '12-'13

Associate Degree Nursing Program Part-Time Evening Curriculum Sheet

Program Requirements to be completed prior to matriculation into the AD nursing program (must meet 5 year restriction, if required; students must obtain a grade of C+ in all sciences and a C in EN 101, HL 111, and PS 101 to be considered for acceptance into the nursing program; see other admission requirements):

COURSE	COURSE TITLE	CREDITS
*BI 115	Anatomy and Physiology I w/ Lab	4
BI 116	Anatomy and Physiology II w/ Lab	4
*BI 123	Fundamentals of Microbiology w/ Lab	4
EN 10 1	Freshman English I	3
HL 111	Essentials of Nutrition	3
PS 101	Introduction to Psychology	3
	Subtotal for Program Requirements	**21**

*Bio 101 required

COURSE	COURSE TITLE	CREDITS
First Year	*Semester I (Fall)*	
NU 130	Foundations for Nursing Practice	2
HL 125	Pharmacology for Nurses: A Pathophysiology Approach	4
CT 100	Critical Thinking	3
	credits:	**9**
First Year	*Semester II (Spring)*	
HL 110	Health Assessment and Skills	1
NU 135	Psychosocial Nursing and Care of the older Adult I	2
NU 136	Psychosocial Nursing and Care of the Older Adult I Practicum	1
PS 118	Life Span Psychology	3
	credits:	**7**
First Year	*Semester III (Summer)*	
NU 160	Nursing Care of the Adult I	4
NU 161	Nursing Care of the Adult I Practicum	4
	credits:	**8**
Second Year	*Semester I (Fall)*	
NU 225	Nursing Care of the Adult II	3
NU 226	Nursing Care of the Adult II Practicum	2
	credits:	**5**
COURSE	**COURSE TITLE**	**CREDITS**
Second Year	*Semester II (Spring)*	
NU 235	Nursing Care of the Developing Family	3
NU 236	Nursing Care of the Developing Family Practicum	2
EN 102	Freshman English II	3
	credits:	**8**
Second Year	*Semester III (Summer)*	
NU 270	Psychosocial Nursing and Care of the Older Adult II	2
CS 100	Computers and Technology	3
	credits:	**5**
Third Year	*Semester I (Fall)*	
NU 260	Nursing Care of the Adult III with Complex Issues	4
NU 261	Nursing Care of the Adult III with Complex Issues Practicum	4
	credits:	**8**
Third Year	*Semester II (Spring)*	
NU 275	Nursing Capstone	3
	Humanities Elective	3
	credits:	**6**
	Total Program Credits	**77**

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

AY '12-'13

Nursing – LPN-RN Option

Associate in Science

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 HEALTH SCIENCES

This program option is designed to meet the educational needs of LPNs who wish to pursue a career as a registered nurse and who wish to attend college part-time. The curriculum is designed to be completed over five semesters and one summer.

The theoretical and clinical components of nursing courses must be taken concurrently and sequentially. Graduates are eligible to take the National Council Licensure Examination for Registered Nurses.

The Associate in Science Degree in Nursing is accredited by the National League for Nursing Accrediting Commission and approved by the Massachusetts Board of Registration in Nursing.

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

ADMISSION REQUIREMENTS

Students seeking admission to the Associate Degree Nursing Program (ADN) LPN option will be individually evaluated on the basis of Grade Point Average (GPA) and total number of college-level credits completed at MassBay. Priority for admission is given to current MassBay students. Applicants must also meet the following additional criteria for acceptance into the nursing program:

- Completion of Freshman English I (EN 101) with a C or better. (Program requirement)
- 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 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.
- Completion of HL 111 Essentials of Nutrition and PS 101 Introduction to Psychology with a C or higher.
- HESI Admission (A2) exam score of 75 or better in both Science Composite (Biology, A&P, Chemistry) and Overall Composite (all subjects combined). Consideration will be given to students whose scores are better than 60 with a preference given to students who score 75 or higher in both areas (composite and science) and those who have a score of 750 or higher in the Critical Thinking portion of the HESI Admission (A2) exam. Students may take the HESI exam for a total of 4 times. There must be a 6 month period between each exam. HESI exams are only good for one year, and then the exam must be retaken.
- Completion of BI 115 Anatomy and Physiology; BI 116 Anatomy and Physiology II and BI 123 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. Students cannot have multiple attempts to achieve a C+ or higher in any science course within the required 5 year period. Students can repeat a science course only once.
- LPN (MA) license in good standing.
- Current practice within the past 5 years as an LPN in a health care setting. A minimum of one year of practice as an LPN is required.

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.

Proof of CPR certification is required on or before the first day of the first semester of the first year and must be submitted to the Division of Health Sciences (DHS) compliance coordinator. 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. Students may enroll in Health Care Provider course through the Office of Corporate & Community Education.

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 that will prevent the individual from registering for any courses. Forms/ information must be submitted to DHS compliance coordinator. See the DHS student hand book for more information. If students do not submit forms in a timely fashion they will be withdrawn from the program.

PROGRAM FOOTNOTES

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

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 of completion of a 100-level math course (not MAC).

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts.

See next page for curriculum sheet.

AY '12-'13

Associate Degree Nursing Program
LPN-RN Part-time Evening Curriculum Sheet

Program Requirements to be completed prior to matriculation into the LPN-RN Option nursing program (must meet 5 year restriction, if required; students must obtain a grade of C+ in all sciences and a C in EN 101, HL 111, and PS 101 to be considered for acceptance into the nursing program; see other admission requirements).

COURSE	COURSE TITLE	CREDITS
*BI 115	Anatomy and Physiology I w/ Lab	4
BI 116	Anatomy and Physiology II w/ Lab	4
*BI 123	Fundamentals of Microbiology w/ Lab	4
EN 101	Freshman English I	3
HL 111	Essentials of Nutrition	3
PS 101	Introduction to Psychology	3
	Subtotal for Program Requirements	**21**

*Bio 101 required

COURSE	COURSE TITLE	CREDITS
First Year	*Semester I (Fall)*	
NU 140	Bridge Course	5
EN 102	Freshman English II	3
	credits:	**8**
First Year	*Semester II (Spring)*	
HL 125	Pharmacology for Nurses: A Pathphysiology Approach	4
PS 118	Life Span Psychology	3
	credits:	**7**
First Year	*Semester III (Summer)*	
NU 235	Nursing Care of the Developing Family	3
NU 236	Nursing Care of the Developing Family Practicum	2
CT 100	Critical Thinking	3
	credits:	**8**
Second Year	*Semester I (Fall)*	
NU 270	Psychosocial Nursing and Care of the Older Adult II	2
CS 100	Computers and Technology	3
	credits:	**5**
Second Year	*Semester II (Spring)*	
NU 260	Nursing Care of the Adult III with Complex Health Problems	4
NU 261	Nursing Care of the Adult III with Complex Health Problems Practicum	4
	credits:	**8**
Second Year	*Semester III (Summer)*	
NU 275	Nursing Capstone	3
	Humanities Elective	3
	credits:	**6**
	Total Program Credits	**76/77**

Upon successful completion the Bridge Course with a C or better students will receive 14 – 19 advanced nursing credits for the nursing courses found in the chart below. Students may only take the Bridge Course once. Failure of the Bridge Course will require students to apply for admission into either the day or evening option Associate Degree Program.

COURSE	COURSE TITLE	CREDITS
NU 130	Foundations for Nursing Practice	2
HL 110	Health Assessment and Skills	1
NU 135	Psychosocial Nursing and Care of the Older Adult I	2
NU 136	Psychosocial Nursing and Care of the Older Adult I Practicum	1
NU 160	Nursing Care of the Adult I	4
NU 161	Nursing Care of Adult I Practicum	4
NU 225	Nursing Care of the Adult II	3
NU 226	Nursing Care of Adult II Practicum	2
	Total Advanced Nursing Credits	**14 /19**

A grade of C (73%) or higher is required to pass all nursing and HL courses.

AY '12-'13

Radiologic Technology

Associate in Science

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 HEALTH SCIENCES

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.

Upon completion, the Associate in Science Degree in Radiologic Technology is awarded.

ADMISSION REQUIREMENTS

Students seeking admission to the Radiologic 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:

- MassBay Placement into Freshman English I (EN 101) or completion of College Writing (EN 100) 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. Refer to the Competitive Programs Admissions Requirements.

Admission to the Radiologic Technology program is competitive. Once the selected students have met the minimum requirements of GPA, admission is based 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 is given to those applicants having the highest point rating (core GPA) of the core science classes.

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. (Individuals who have been convicted of a felony or misdemeanor crime, or with a pending criminal case, must meet eligibility requirements of the Massachusetts State Licensing examination.)

Proof of CPR certification is required on or before the first day of the first semester and must be submitted to the Health Sciences Division. 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. Students may enroll in a Health Care Provider course through the Office of Corporate & Community Education.

PROGRAM FOOTNOTES

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
BI 115*	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
First Year	*Semester 2*	
BI 116	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
First Year	*Summer*	
RT 123	Clinical Education III	6
	credits:	6
Second Year	*Semester 1*	
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
Second Year	*Semester 2*	
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**

*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 '12-'13

Radiologic Technology – Flex Option

Associate in Science

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 HEALTH SCIENCES

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.

Upon completion, the Associate in Science Degree in Radiologic Technology is awarded.

ADMISSION REQUIREMENTS

Students seeking admission to the Radiologic 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:

- MassBay Placement into Freshman English I (EN 101) or completion of College Writing (EN 100) 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. Refer to the Competitive Programs Admissions Requirements.

Admission to the Radiologic Technology program is competitive. Once the selected students have met the minimum requirements of GPA, admission is based a core GPA point ranking system. Though core science 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 is given to those applicants having the highest point rating (core GPA) of the core science classes.

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. (Individuals who have been convicted of a felony or misdemeanor crime, or with a pending criminal case, must meet eligibility requirements of the Massachusetts State Licensing examination.)

Proof of CPR certification is required on or before the first day of the first semester and must be submitted to the Health Sciences Division. 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. Students may enroll in a Health Care Provider course through the Office of Corporate & Community Education.

PROGRAM FOOTNOTES

A grade of C or higher is required in all Radiologic Technology (RT) and science courses.
Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, 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 a 100-level math course (not MAC).

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

COURSE	COURSE TITLE	CREDITS
First Year	*Spring Semester*	
BI 115*	Anatomy and Physiology I	4
RT 131	Radiographic Physics I	4
	credits:	8
First Year	*Summer Session*	
BI 116	Anatomy and Physiology II	4
RT 213	Radiation Biology & Protection	2
	credits:	6
Second Year	*Fall Semester*	
RT 101	Radiographic Positioning I	3
RT 111	Radiographic Technique I	3
	credits:	6
Second Year	*Semester 4 (Spring)*	
RT 102	Radiographic Positioning II	3
RT 112	Radiographic Technique II	3
	credits:	6
Second Year	*Summer Session*	
RT 203	Radiographic Positioning III	3
RT 214	Radiographic Technique III	2
	credits:	5

* * The following courses must also be completed by the student or satisfied by transfer 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

Third Year	*Semester 6 (Fall)*	
RT 121	Clinical Education I	3
RT 221	Clinical Education IV	4
	credits:	7
Third Year	*Semester 7 (Spring)*	
RT 122	Clinical Education II	3
RT 222	Clinical Education V	4
	credits:	7
Third Year	*Summer Session*	
RT 123	Clinical Education III	6
RT 216	Medical AND Surgical Diseases	3
RT 217	Advanced Radiographic Technology	3
	credits:	12
	Total Credits:	78

AY '12-'13

Central Processing Technology

Certificate

DIVISION OF HEALTH SCIENCES

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. 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 (IAHCSMM), whose primary role is to provide education and certification to Central Service and Material Management professionals.

Upon successful completion, the Certificate in Central Processing Technology is awarded.

COURSE	COURSE TITLE	CREDITS
CY 101	Principles of Central Processing Technology	4
	credits:	4
	Total Credits:	**4**

ADMISSION REQUIREMENTS

High school graduate or a GED.

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 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 that will prevent the individual from registering for any courses. Forms/information must be submitted to the DHS compliance coordinator. Refer to the DHS Student Handbook for additional information.

A grade of C or higher is required in the Principles of Central Processing Technology course.

AY '12-'13

Central Services & Material Management

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 HEALTH SCIENCES

The goal of this program is to prepare graduates to function as directors for Central Service, technical advisors in healthcare, quality assurance, sales and marketing representative's specialists, but not limited to health care products and equipment.

Graduates are eligible for the International Association of Healthcare Central Services Material Management (IAHCSMM) certifying examination and the Certification in Health Care Material Management Concepts (CHMMC).

Upon successful completion, the Certificate in Central Service and Material Management is awarded.

COURSE	COURSE TITLE	CREDITS
Semester 1		
BI 101	General Biology I w/ Lab	4
MM 101	Principles and Practice I	3
	credits:	7
Semester 2		
MM 102	Principles and Practice II	6
CS 104	Microcomputer Applications/Business	3
	credits:	9
Semester 3		
MM 103	Principles and Practice III	6
MAC 100	Business Math	3
EN 100*	College Writing	4
	credits:	13
	Total Credits:	**28/29**

ADMISSION REQUIREMENTS

Completion of the MassBay Central Processing Technology program or national certification by the IAHCSMM.

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 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 that will prevent the individual from registering for any courses. Forms/information must be submitted to the DHS compliance coordinator. Refer to the DHS Student Handbook for additional information.

PROGRAM FOOTNOTES

A grade of C or higher is required in Central Services (MM) courses.

*EN 101 may be substituted for this requirement.

AY '12-'13

Emergency Medical Technician

Certificate

COURSE	COURSE TITLE	CREDITS
EM 101	Emergency Medical Technician	6
	credits:	6
	Total Credits:	**6**

DIVISION OF HEALTH SCIENCES

This course provides students with theory, demonstration, and laboratory experience in the following areas of the National Standard Training Curriculum for the Basic EMT-B: anatomy and physiology of body systems, patient assessment, CPR (mandatory), oxygen therapy, ventilation, control of bleeding, management of shock, care of wounds and fractures, medical emergencies, pediatrics, geriatrics, childbirth, environmental emergencies, communications, psychological emergencies, triage, stabilization, and transportation.

The EMT Program is accredited by the Department of Public Health: Office of Emergency Management System.

Upon successful completion, the Certificate in Emergency Medical Technician is awarded.

ADMISSION REQUIREMENTS

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 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.

PROGRAM FOOTNOTES

A grade of C+ (77%) is required to pass the EMT course.

Students must be 18 years of age at the time of the Commonwealth of Massachusetts OEMS exam.

AY '12-'13

Maxillofacial Assistant

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 HEALTH SCIENCES

The Maxillofacial Assistant Program is designed to prepare students for career opportunities in a specialized area of Otorhinolaryngologic Surgery. The content of the program includes extended theory and clinical hours to provide the training and education to meet required industry safety standards, meet national recommended standards, and provide patients with technicians who are properly trained. Graduates from this program will not only be able to work in a dental office, but a hospital operating room as well.

Upon successful completion, the Certificate in Maxillofacial Assistant is awarded.

ADMISSION REQUIREMENTS

Applicants seeking admission to Health Profession programs are considered on an individual basis. Student seeking admission to the Maxillofacial Assistant 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 prerequisite for the program. Minimum eligibility for admission to this program includes:

- High school diploma, GED, AS degree or higher.
- Evidence provided of a background in the medical or dental fields i.e., nursing (RN, PN), dental assistant, dental hygienists, surgical technology, or physician.
- MassBay Placement into Introductory Algebra (MA 095) or completion of Basic Math Studies (MA 090) with a grade of C or higher.
- MassBay placement into College Writing (EN100) or completion of Intro to Language (EN 090) with a grade of C or higher.
- Successful completion of Reading Assessment Test with a score of 72 or higher.

Program Requirements for Clinical Practice:
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.

Proof of CPR certification is required on or before the first day of the first semester of the second year and must be submitted to the Health, Human Services, and Education office. 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.

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.

PROGRAM FOOTNOTES
A grade of C is required for all Maxillofacial Assistant (MX) courses.

COURSE	COURSE TITLE	CREDITS
Semester 1		
MX 101	Principles & Practice of Maxillofacial I w/ Lab	6
EN 101	Freshman English I	3
	credits:	9
Semester 2		
MX 102	Principles & Practice of Maxillofacial II	3
MX 103	Clinical Practicum for Maxillofacial Surgery	4
	credits:	7
	Total Credits:	**16**

AY '12-'13

Medical Coding

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 HEALTH SCIENCES

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.

PROGRAM FOOTNOTES

A grade of C or higher is required in all Medical Coding (HL, MR and MO) courses.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
HL 103	Medical Terminology	3
MO 120	Medical Office Insurance and Billing	4
BI 113	Essentials of Anatomy and Physiology w/ Lab	3
	credits:	10
First Year	*Semester 2*	
EN 101	Freshman English I	3
MR 120	Pathophysiology for Medical Coding	3
MR 206	Coding: Current Procedural Terminology (CPT)	4
	credits:	10
First Year	*Semester 3 (Summer)*	
MR 207	HIPAA Standards and Ethics for Medical Coders	3
MR 203	Coding: International Classification of Diseases (ICD-CM)	4
	credits:	7
	Total Credits:	**27**

AY '12-'13

Medical Office Administrative Assistant

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 HEALTH SCIENCES

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.

Upon successful completion, the Certificate in Medical Office Administrative Assistant is awarded.

PROGRAM FOOTNOTES

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

*EN 101 or higher may be substituted for this requirement.

COURSE	COURSE TITLE	CREDITS
Semester 1		
HL 103	Medical Terminology	3
MO 101	Medical Office Procedures I	5
EN 100*	College Writing	4
	credits:	12
Semester 2		
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**

AY '12-'13

Paramedicine–Day Option

Certificate

DIVISION OF HEALTH SCIENCES

The Paramedicine program prepares students to become members of the health care team and function as paramedics in a variety of different settings. The philosophy and structure of this program are parallel to those of the 1998 National Standard Training Curriculum for the Paramedic. This program provides students with a working knowledge of the concepts and skills requisite to caring for patients with acute and critical illness with the respect to all body systems. Students will learn how to recognize signs and symptoms that pertain to the infant, child, adolescent, adult, and geriatric age groups. Students practice current techniques to care for all patients with acute medical problems as well as trauma situations. The curriculum combines didactic, laboratory, and clinical experience as well as a field internship to provide students with the skills required to prepare for certification and practice.

MassBay's Paramedicine Program is accredited by the Department of Public Health: Office of Emergency Management System.

Upon successful completion, the Certificate in Paramedicine is awarded.

ADMISSION REQUIREMENTS

Applicants seeking admission to health profession programs will be evaluated on an individual basis. Students seeking admission to the Paramedicine 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:

- 18 years of age at time of the Commonwealth of Massachusetts OEMS examination.
- Currently certified EMT in Massachusetts; current CPR certification.
- MassBay Placement into College Writing (EN 100) or completion of Intro to Language (EN 090).
- 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. Refer to the Competitive Programs Admissions Requirements.

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 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
First Year	*Semester 1*	
BI 113*	Essentials of Anatomy and Physiology w/ Lab	3
PM 101	Foundations of Paramedicine	4
PM 102	General Pharmacology for the Paramedic	2
PM 103	Trends for the Paramedic	1
PM 104	Cardiology	5
PM 105	Medical Emergencies	3
	credits:	18
First Year	*Semester 2*	
PM 110	Special Care Aspects Paramedic	4
PM 111	Advanced Cardiac Life Support Provider	1
PM 112	Pediatric Advanced Life Support Provider	1
PM 113	Neonatal Advanced Life Support Provider	1
PM 210	Clinical I	2
PM 211	Clinical II	3
	credits:	12
First Year	*Summer*	
PM 212	Field Internship	2
	credits:	2
	Total Credits:	**32**

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.

*A combination of Anatomy and Physiology I (BI 115) and Anatomy and Physiology II (BI 116) fulfills this requirement.

AY '12-'13

Paramedicine– Evening Option

Certificate

DIVISION OF HEALTH SCIENCES

The Paramedicine program prepares students to become members of the health care team and function as paramedics in a variety of different settings. The philosophy and structure of this program are parallel to those of the 1998 National Standard Training Curriculum for the Paramedic. This program provides students with a working knowledge of the concepts and skills requisite to caring for patients with acute and critical illness with the respect to all body systems. Students will learn how to recognize signs and symptoms that pertain to the infant, child, adolescent, adult, and geriatric age groups. Students practice current techniques to care for all patients with acute medical problems as well as trauma situations. The curriculum combines didactic, laboratory, and clinical experience as well as a field internship to provide students with the skills required to prepare for certification and practice.

MassBay's Paramedicine Program is accredited by the Department of Public Health: Office of Emergency Management System.

Upon successful completion, the Certificate in Paramedicine is awarded.

ADMISSION REQUIREMENTS

Applicants seeking admission to health profession programs will be evaluated on an individual basis. Students seeking admission to the Paramedicine 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:

- 18 years of age at time of the Commonwealth of Massachusetts OEMS examination
- Currently certified EMT in Massachusetts; current CPR certification.
- MassBay Placement into College Writing (EN 100) or completion of Intro to Language (EN 090).
- 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. Refer to the Competitive Programs Admissions Requirements.

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 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
First Year	*Semester 1*	
BI 113*	Essentials of Anatomy and Physiology w/ Lab	3
PM 101	Foundations of Paramedicine	4
PM 102	General Pharmacology for the Paramedic	2
PM 103	Trends for the Paramedic	1
	credits:	10
First Year	*Summer*	
PM 104	Cardiology	5
PM 105	Medical Emergencies	3
PM 111	Advanced Cardiac Life Support Provider	1
	credits:	9
First Year	*Semester 2*	
PM 110	Special Care Aspects Paramedic	4
PM 112	Pediatric Advanced Life Support Provider	1
PM 113	Neonatal Advanced Life Support Provider	1
PM 210	Clinical I	2
	or	
PM 211	Clinical II	3
	credits:	8/9
Second Year	*Semester 1*	
PM 210	Clinical I	2
	or	
PM 211	Clinical II	3
PM 212	Field Internship	2
	credits:	4/5
	Total Credits:	**31/33**

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.

*A combination of Anatomy and Physiology I (BI 115) and Anatomy and Physiology II (BI 116) fulfills this requirement.

AY '12-'13

Phlebotomy

Certificate

DIVISION OF HEALTH SCIENCES

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 computer applications; basic preanalytical 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 clinical practicum takes place Monday through Friday, typically between the hours of 9:00 am and 5:00 pm. The program is completed in one semester.

Upon successful completion, the Certificate in Phlebotomy is awarded.

COURSE	COURSE TITLE	CREDITS
PB 100	Principles & Methods of Phlebotomy	3
PB 105	Clinical Practicum Phlebotomy	4
	credits:	7
	Total Credits:	**7**

ADMISSION REQUIREMENTS

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.

Proof of CPR certification is required on or before the first day of the first semester and must be submitted to the Health Sciences Division. 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. Students may enroll in a Health Care Provider course through the Office of Corporate & Community Education.

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 DHS compliance coordinator. Refer to the DHS Student Handbook for additional information.

PROGRAM FOOTNOTES

A grade of C or higher is required in all Phlebotomy (PB) courses. The clinical is completed with a pass/fail grade.

AY '12-'13

Practical Nursing– Day Option

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 HEALTH SCIENCES

The Practical Nursing 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 extended care facilities, hospitals, clinics, and offices. The day option of the Practical Nursing Program is conducted over a 40-week period beginning in the fall semester and continuing through June. Classes, labs, and clinicals are scheduled full-time during the day.

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.

Upon successful completion, the Certificate in Practical Nursing is awarded.

ADMISSION REQUIREMENTS

Applicants seeking admission to Health Profession programs are considered on an individual basis. Students seeking admission to the Practical Nursing 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:

- MassBay Placement into Freshman English I (EN 101) or completion of College Writing (EN 100) 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. Refer to the Competitive Programs Admissions Requirements.

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.

Proof of CPR certification is required on or before the first day of the first semester and must be submitted to the Division of Health Sciences. 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. Students may enroll in a Health Care Provider course through the Office of Corporate & Community Education.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
BI 113*	Essentials of Anatomy and Physiology w/ Lab	3
BI 118	Elements of Microbiology	1
HL 111	Essentials of Nutrition	3
PN 102	Foundations of Practical Nursing	10
PN 105	Issues & Trends in Practical Nursing I	1
PN 107	Principles of Pharmacology I	2
	credits:	20
	Intercession	
PN 108	Nursing Process Intercession	2
	credits:	2
First Year	*Semester 2*	
PS 118	Life Span Psychology	3
PN 106	Issues & Trends in Practical Nursing II	1
PN 110	Principles of Pharmacology II	2
PN 120	Nursing Care of the Adult and Aged	14
	credits:	20
	Summer	
PN 130	Care of the Family	7
	credits:	7
	Total Credits:	**49**

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.

PROGRAM FOOTNOTES

*A combination of Anatomy and Physiology I (BI 115) and Anatomy and Physiology II (BI 116) fulfills this requirement.
A grade of C (73%) is required for all practical nursing (PN) & science courses.

AY '12-'13

Practical Nursing–Evening Option

Certificate

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

DIVISION OF HEALTH SCIENCES

The Practical Nursing 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 extended care facilities, hospitals, clinics, and offices. The evening option curriculum is spread over two academic years and two summer sessions. Classes are admitted in the fall semester. Some courses are offered over two semesters. Classes and clinical experience are scheduled on various evenings typically between 4 p.m. and 11:30 p.m. The theoretical, skills, lab, and clinical components of nursing courses must be taken concurrently and sequentially.

The Practical Nursing Program has been approved by the Board of Registration in Nursing in Massachusetts. Graduates are eligible to take the National Council Licensure Exam for Practical Nurses.

Upon successful completion, the Certificate in Practical Nursing is awarded.

ADMISSION REQUIREMENTS

Applicants seeking admission to Health Profession programs are considered on an individual basis. Students seeking admission to the Practical Nursing 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:

- MassBay Placement into Freshman English I (EN 101) or completion of College Writing (EN 100) 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. Refer to the Competitive Programs Admissions Requirements.

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.

Proof of CPR certification is required on or before the first day of the first semester and must be submitted to the Division of Health Sciences. 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. Students may enroll in a Health Care Provider course through the Office of Corporate & Community Education.

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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
BI 113*	Essentials of Anatomy and Physiology w/ Lab	3
BI 118	Elements of Microbiology	1
HL 111	Essentials of Nutrition	3
PN 105	Issues & Trends in Practical Nursing I	1
PN 107	Principles of Pharmacology I	2
	credits:	10
First Year	*Semester 2*	
PN 102	Foundations of Practical Nursing	10
	credits:	10
First Year	*Summer*	
PN 108	Nursing Process Intercession	2
PS 118	Life Span Psychology	3
	credits:	5
Second Year	*Semester 1*	
PN 106	Issues & Trends in Practical Nursing II	1
PN 110	Principles of Pharmacology II	2
PN 120	Nursing Care of the Adult and Aged	14
	credits:	17
Second Year	*Semester 2*	
PN 130	Care of the Family	7
	credits:	7
	Total Credits:	**49**

PROGRAM FOOTNOTES

*A combination of Anatomy and Physiology I (BI 115) and Anatomy and Physiology II (BI 116) fulfills this requirement.

A grade of C or higher is required for all Practical Nursing (PN) and science courses

AY '12-'13

Surgical Technology

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 HEALTH SCIENCES

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. Program graduates are eligible to sit for the A.S.T. Certifying Examination, which is approved by the A.S.T. Advisory Board.

The Surgical Technology Program is accredited by the Accreditation Review Committee on Education in Surgical Technology.

Upon successful completion, the Certificate in Surgical Technology is awarded.

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:

- MassBay Placement into College Writing (EN 100) or completion of Intro to Language (EN 090).
- 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. Refer to the Competitive Programs Admissions Requirements.

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.

Proof of CPR certification is required on or before the first day of the first semester and must be submitted to the Division of Health Sciences. 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. Students may enroll in a Health Care Provider course through the Office of Corporate & Community Education.

PROGRAM FOOTNOTES

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230) 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.

COURSE	COURSE TITLE	CREDITS
Semester 1		
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
Semester 2		
BI 123	Fundamentals of Microbiology w/ Lab	4
SX 120	Principles of Surgical Technology II	8
	credits:	12
Semester 3		
SX 130	Principles of Surgical Technology III	7
	Social Science Elective	3
	credits:	10
	Total Credits:	**37**

* A combination of Anatomy & Physiology I (BI 115) and Anatomy & Physiology II (BI 116) fulfills this requirement.

AY '12-'13

HUMANITIES

General Studies

Associate in Arts

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 HUMANITIES

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 203 American History to 1877 & HS 204 American History Since 1870

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 115 Anatomy and Physiology I & BI 116 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, Communications, 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), Mathematics (not MAC), Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, 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 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. Students should use course equivalencies for program electives. For more information, visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
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
First Year	*Semester 2*	
EN 102	Freshman English II	3
	History Sequence	3
	Program Elective	3
	Program Elective	3
	Math/Science Elective	3/4
	credits:	15/16
Second Year	*Semester 1*	
	Literature Sequence	3
	Laboratory Science Sequence	4
	Program Elective	3
	Program Elective	3
	Program Elective	3
	credits:	16
Second Year	*Semester 2*	
	Literature Sequence	3
	Laboratory Science Sequence	4
	Social Science Elective	3
	Humanities Elective	3
	Program Elective	3
	Program Elective	3
	credits:	19
	Total Credits:	**65/66**

AY '12-'13

Liberal Arts

Associate in Arts

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 HUMANITIES

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 203 American History to 1877 & HS 204 American History Since 1870

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 115 Anatomy and Physiology I & BI 116 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math/Science Electives: Biology, Chemistry, Contemporary Nutrition (NS 101), Environmental Science, Integrated Science, Mathematics (not MAC), Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

Program Electives: Any college-level course within the Humanities, Social Sciences, or Mathematics and Science areas.

Free Electives: Any college-level course 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.

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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
	History Sequence	3
	Laboratory Science Sequence	4
	Program Elective	3
	credits:	19
First Year	*Semester 2*	
EN 102	Freshman English II	3
	History Sequence	3
	Laboratory Science Sequence	4
	Program Elective	3
	Program Elective	3
	credits:	16
Second Year	*Semester 1*	
	Humanities Elective	3
	Literature Sequence	3
	Math/Science Elective	3/4
	Program Elective	3
	Free Elective	3
	credits:	15/16
Second Year	*Semester 2*	
	Literature Sequence	3
	Social Science Elective	3
	Program Elective	3
	Program Elective	3
	Free Elective	3
	credits:	15
	Total Credits:	**65/66**

AY '12-'13

Liberal Arts: Communication

Associate in Arts

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 HUMANITIES

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 203 American History to 1877 & HS 204 American History Since 1870

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 115 Anatomy and Physiology I & BI 116 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 (NS 101), Environmental Science, Integrated Science, Mathematics (not MAC), Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

Program Electives: CO 105 Journalism I, CO 106 Global Journalism, CO 201 Fundamentals of Public Relations, CO 210 Communications Internship, MK 103 Principles of Marketing, MK 213 Principles of Sales, MK 215 Principles of Advertising, PO 115 Photography I, CO 103 Intercultural Communication, CO 107 Broadcast Journalism, CO 200 Principles of Persuasion

Free Electives: Any college-level course 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.

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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
CO 100	Introduction to Communication	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
SF 131	Oral Communication	3
	History Sequence	3
	Social Science Elective	3
	credits:	18
First Year	*Semester 2*	
CO 101	Introduction to Mass Media	3
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
	History Sequence	3
	Math/Science Elective	3/4
	credits:	15/16
Second Year	*Semester 1*	
	Program Elective	3
	Program Elective	3
	Program Elective	3
	Literature Sequence	3
	Laboratory Science Sequence	4
	credits:	16
Second Year	*Semester 2*	
	Program Elective	3
	Program Elective	3
	Literature Sequence	3
	Laboratory Science Sequence	4
	Free Elective	3
	credits:	16
	Total Credits:	**65/66**

AY '12-'13

Liberal Arts: Communication

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 HUMANITIES

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 enrolled in the Liberal Arts MassTransfer Certificate program or 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 Communications 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
SF 131	Oral Communication	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	Total Credits:	24

AY '12-'13

SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

Biotechnology

Associate in Science


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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

A grade of C or higher is required for all Biotechnology (BT) courses.

*Pre-Calculus Mathematics (MA 104) may substitute.

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
First Year	*Semester 1*	
BI 110	Principles of Biology I	4
BT 101	Introduction to Biotechnology and Laboratory	2
CH 110	Principles of Chemistry I	4
EN 101	Freshman English I	3
MA 102 *	College Algebra	3
	credits:	16
First Year	*Semester 2*	
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
First Year	Summer	
CT 100	Critical Thinking	3
	Social Science Elective	3
	credits:	6
Second Year	*Semester 1*	
BI 210	Molecular Biology	4
BT 211	Independent Research: Protein Purification/Nucleic Acid Analysis	3
CH 201	Organic Chemistry I	4
	Humanities Elective	3
	credits:	14
Second Year	*Semester 2*	
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
Second Year	*Summer*	
BT 240	Research Internships	4
	Total Credits:	**72**

AY '12-'13

Biotechnology: Forensic DNA Science

Associate in Science

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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), DNA Law (LA 241), Psychology, Sociology

A grade of C or higher is required for all Biotechnology (BT) courses.

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
First Year	*Semester 1*	
BI 110	Principles of Biology I w/ Lab	4
BT 101	Introduction to Biotechnology and Laboratory Rotation I	2
CH 110	Principles of Chemistry I w/ Lab	4
EN 101	Freshman English I	3
MA 102*	College Algebra	3
	credits:	16
First Year	*Semester 2*	
BI 120	Principles of Biology II w/ Lab	4
	or	
BI 240	Forensic Microbiology w/ Lab	4
BT 107	Forensic Rotation 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
First Year	*Summer*	
CT 100	Critical Thinking	3
EN 102	Freshman English II	3
	credits:	6
Second Year	*Semester 1*	
BI 210	Molecular Biology w/ Lab	4
BT 205	Forensic DNA Science II	3
CH 201	Organic Chemistry I w/ Lab	4
CJ 217	Criminal Evidence	3
	Humanities/ Social Science Elective	3
	credits:	17
Second Year	*Semester 2*	
BT 215	Forensic DNA Science III	2
CH 202	Organic Chemistry II w/ Lab	4
CH 210	Biochemistry I	4
	Humanities / Social Science Elective	3
	credits:	13
Second Year	*Summer*	
BT 241	Forensic Internship	4
	Total Credits:	**73**

*Pre-Calculus Mathematics (MA 104) may be substituted.

AY '12-'13

Biotechnology: Marine Biotechnology

Associate in Science

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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society, (LA 230), Psychology, Sociology

*Pre-Calculus Mathematics (MA 104) may be substituted.

A grade of C or higher is required for all Biotechnology (BT) courses.

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
First Year	*Semester 1*	
BI 110	Principles of Biology I	4
BT 101	Introduction to Biotechnology and Laboratory	2
CH 110	Principles of Chemistry I	4
EN 101	Freshman English I	3
MA 102*	College Algebra	3
	credits:	16
First Year	*Semester 2*	
BI 120	Principles of Biology II	4
BT 108	Marine Rotation I	3
CH 120	Principles of Chemistry II	4
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
	credits:	17
First Year	*Summer 1*	
CT 100	Critical Thinking	3
	Social Science Elective	3
	credits:	6
Second Year	*Semester 1*	
BI 210	Molecular Biology	4
BT 206	Marine Rotation II	3
CH 201	Organic Chemistry I	4
	Humanities Elective	3
	credits:	14
Second Year	*Semester 2*	
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
Second Year	*Summer 2*	
BT 240	Research Internships	4
	Total Credits:	**72**

AY '12-'13

Computer Information Systems

Associate in Science

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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society, (LA 230), 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

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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
CS 120	Programming I	4
CS 160	Applications Software Strategies	4
EN 102	Freshman English II	3
MA 105	Intro to Statistics	3
	Humanities Elective	3
	credits:	17
Second Year	*Semester 1*	
AC 101	Financial Accounting I	4
CS 200	Programming II	4
CS 213	Database Management Systems	4
CS 242	Computer Networks	4
	credits:	16
Second Year	*Semester 2*	
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**

AY '12-'13

Computer Science

Associate in Science

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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

Program Electives: CS 141 Linux System Management, CS 213 Data Management Systems I, CS 241 Web Site Development, CS 242 Computer Networks

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
First Year	*Semester 1*	
CS 120	Programming I	4
CS 205	Introduction to Computation	4
EN 101	Freshman English I	3
MA 200	Calculus I	4
	credits:	15
First Year	*Semester 2*	
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
First Year	*Semester 1 or 2*	
CT 100	Critical Thinking	3
	Social Science Elective	3
	credits:	6
Second Year	*Semester 1*	
CS 208	Data Structures	4
CS 212	Systems Programming with "C "	4
PY 103	Engineering Physics I	4
	Humanities Elective	3
	credits:	15
Second Year	*Semester 2*	
CS 225	Software Design	3
MA 210	Introduction to Linear Algebra	4
PY 104	Engineering Physics II	4
	Program Elective	4
	credits:	15
Second Year	*Semester 1 or 2*	
	Humanities Elective	3
	or	
	Social Science Elective	3
	Total Credits:	**69**

AY '12-'13

Electrical & Computer Engineering

Associate in Science

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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
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
Second Year	*Semester 2*	
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**

AY '12-'13

Electronics Technology

Associate in Science

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 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

Math/Science Electives: Biology, Chemistry, Environmental Science, Contemporary Nutrition (NS 101), Integrated Sciences, Mathematics (not MAC), Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
First Year	*Summer*	
EL 125	Internship	4
	credits:	4
Second Year	*Semester 1*	
EL 151	Electronics I	4
SF 131	Oral Communication	3
	Math/Science Elective	3/4
	Social Science Elective	3
	credits:	13/14
Second Year	*Semester 2*	
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**

AY '12-'13

Engineering
Associate in Science

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 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

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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communications, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law & Society (LA 230), Psychology, Sociology

PROGRAM FOOTNOTE

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.

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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
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
Second Year	*Semester 2*	
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**

AY '12-'13

Engineering Design

Associate in Science

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 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®, Pro/ENGINEER®, 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law & Society (LA 230), 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, SB 101 Intro to Mass Building Codes, and/or courses in Biology, Computer Science, (except CS 100), Chemistry, Electronics, Engineering, Environmental Science, Mathematics, Mechanical Engineering, Physics

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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
MN 121	Mechanical Detailing	4
	Humanities Elective	3
	Program Elective	4
	Social Science Elective	3
	credits:	14
Second Year	*Semester 2*	
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**

AY '12-'13

Environmental Sciences & Safety

Associate in Science

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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math Electives: Any MA 100 mathematics course or higher, except mathematics courses with a MAC prefix.

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

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
First Year	*Semester 1*	
BI 110	Principles of Biology I w/ Lab	4
CH 110	Principles of Chemistry I	4
EN 101	Freshman English I	3
EV 110	Principles of Environmental Sciences & Safety	4
	Math Elective	3/4
	credits:	18/19
First Year	*Semester 2*	
BI 120	Principles of Biology II	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
Second Year	*Semester 1*	
CH 211	Analytical Chemistry w/ Lab	4
CT 100	Critical Thinking	3
EV 210	Environmental Microbiology	4
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	14
Second Year	*Semester 2*	
EV 220	Environmental Organization Issues & Analysis	3
EV 240	Environmental Toxicology	4
EV 242	Environmental Sciences Directed Research Study	4
	Humanities Elective	3
	Social Science Elective	3
	credits:	17
	Total Credits:	**67/68**

AY '12-'13

General Studies

Associate in Science

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 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 115 Anatomy and Physiology I & BI 116 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, Communications, Film, Foreign Language, Humanities, Music, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math/Science Electives: Astronomy, Biology, Chemistry, Contemporary Nutrition (NS 101) Environmental Science, Integrated Science, Mathematics (not MAC), Meteorology, Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, 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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
	Math/Science Elective	3/4
	Social Science Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	credits:	15/16
Second Year	*Semester 2*	
	Humanities Elective	3
	Social Science Elective	3
	Program Elective	3
	Program Elective	3
	Program Elective	3
	credits:	15
	Total Credits:	**65/66**

AY '12-'13

General Studies: Bioinformatics

Associate in Science

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 SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

Bioinformatics is an interdisciplinary science that includes calculus, biological sciences-based courses complemented by computer science and programming courses. Graduates of the program are very versatile and knowledgeable in acquiring scientific results, computational approaches, and applying such information.

The Bioinformatics program prepares students for 21st century science and beyond. Graduates are prepared to enter the rapidly growing field of bioinformatics as technicians in biotechnology companies, the pharmaceutical sector, research facilities and academic institutions. Courses are designed to accommodate students seeking to enter the workforce or transfer to four-year institutions upon completion of their degree. This program involves traditional teaching methods and research-based courses that enhance students' academic experience.

Upon successful completion, the Associate in Science Degree in General Studies with a concentration in Bioinformatics is awarded.

PROGRAM FOOTNOTES

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 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
MA 200	Calculus I	4
CS 205	Introduction to Computation	4
	credits:	19
First Year	*Semester II*	
BI 170	Principles of Bioinformatics I w/ Lab	4
EN 102	Freshman English II	3
BI 120	Principles of Biology II w/ Lab	4
CS 120	Programming I	4
CT 100	Critical Thinking	3
	credits:	18
Second Year	***Semester I***	
BI 171	Principles of Bioinformatics II w/ Lab	4
CS 200	Programming II	4
BI 260	Computational Biology w/ Lab	4
	Humanities Elective	3
	credits:	15
Second Year	*Semester II*	
CS 208	Data Structures	4
BI 270	Directed Research/ Internship	4
	Social Science Elective	3
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	14
	Total Credits:	**66**

AY '12-'13

General Studies: Lab Animal Care

Associate in Science

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 SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

This program teaches students techniques and training required to care for animals used in all aspects of biomedical and biological research. It offers scientific lessons and hands-on experience in the field of Lab Animal Care through academic and research-based study. Courses are taught in our state-of-the-art laboratories, and in off-campus veterinary clinics that further enhance students' experience.

The Massachusetts Society for Medical Research estimates biomedical and biological research to be a $3.6 billion a year industry. Graduates of this program are prepared to enter this growing field as technicians in Lab Animal Care, supporting scientists and other specialists that use animals in their research facility.

Upon successful completion, the Associate in Science Degree in General Studies with a concentration in Lab Animal Care is awarded.

PROGRAM FOOTNOTES

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Music, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 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
MA 105	Intro to Statistics	3
CT 100	Critical Thinking	3
	credits:	17
First Year	*Semester II*	
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
	Social Science Elective	3
	credits:	17
Second Year	*Semester I*	
EV 215	Lab Animal Science & Care I w/ Lab	4
EV 210	Environmental Microbiology	4
EV 235	Animal Nutrition	3
	Humanities Elective	3
	Humanities Elective	3
	or	
	Social Science Elective	3
	credits:	17
Second Year	*Semester II*	
BI 220	Immunology w/ Lab	4
EV 216	Lab Animal Science & Care II w/ Lab	4
EV 240	Environmental Toxicology	4
EV 242	Environmental Sciences Directed Research Study	4
	credits:	16
	Total Credits:	**67**

AY '12-'13

General Studies: Mathematics

Associate in Arts

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 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 203 American History to 1877 & HS 204 American History Since 1870

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 115 Anatomy and Physiology I & BI 116 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 & L1 202 World Literature II
LI 203 American Literature I & L1204 American Literature II, or
LI 205 British Literature I & L1 206 British Literature II, or

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

Program Elective: Any college-level courses offered at the College.

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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
MA 201	Calculus II	4
	Laboratory Science Sequence	3
	Literature Sequence	4
	Program Elective	3
	Program Elective	3
	credits:	17
Second Year	*Semester 2*	
MA 202	Calculus III	4
	Laboratory Science Sequence	3
	Literature Sequence	4
	Humanities Elective	3
	Social Science Elective	3
	credits:	17
	Total Credits:	**66**

AY '12-'13

Information Systems Technology & Management

Associate in Science

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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

Program Electives: CS 176 Web Design, CS 140 Interactive Multimedia, CS 241 Web Site Development, CS 116 Fundamentals of Cyber Security, CS 126 Digital Imaging, MG 101 Principles of Management, MN 140 Project Management

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
First Year	*Semester 1*	
CS 104	Microcomputer Applications/ Business	3
CS 110	Introduction to Computer Science	4
CS 205	Introduction to Computation	4
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
	credits:	17
First Year	*Semester 2*	
CS 120	Programming I	4
CS 160	Application Software Strategies	4
EN 102	Freshman English II	3
MA 105	Intro to Statistics	3
	credits:	14
Second Year	*Semester 1*	
AC 101	Financial Accounting I	4
CS 213	Database Management Systems I	4
CS 230	Information Systems Administration and Management	4
CS 242	Computer Networks	4
CS 280	Computer Science Internship	1
	credits:	17
Second Year	*Semester 2*	
CS 235	Information Systems Analysis and Design	4
EC 201	Principles of Macroeconomics	3
	Humanities Elective	3
	Humanities/ Social Science Elective	3
	Program Elective	3/4
	credits:	16/17
	Total Credits:	**64/65**

AY '12-'13

Information Systems Technology & Management: Technology

Associate in Science

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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, 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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
CS 213	Database Management Systems I	4
CS 242	Computer Networks	4
MA 105	Introduction to Statistics	3
	Program Elective	3/4
	credits:	14/15
Second Year	*Semester 2*	
	Social Science Elective	3
	Humanities Elective	3
	Humanities Elective	3
	OR	
	Social Science Elective	3
	Program Elective	3
	Program Elective	4
	credits:	16
Summer		
CS 280	Computer Science Internship	1
	Total Credits:	**60/62**

AY '12-'13

Life Sciences

Associate in Science

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 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
Advanced Lab Science Electives: BI 123 Fundamentals of Microbiology, BI 210 Molecular Biology, BI 220 Immunology

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

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
First Year	*Semester 1*	
BI 110	Principles of Biology I w/ Lab	4
CH 110	Principles of Chemistry I w/ Lab	4
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
MA 104	Pre-Calculus Mathematics	4
	credits:	18
First Year	*Semester 2*	
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
	Social Science Elective	3
	credits:	17
Second Year	*Semester 1*	
BI 115	Anatomy and Physiology I w/ Lab	4
CH 201	Organic Chemistry I w/ Lab	4
PY 101	College Physics I	4
	Humanities Elective	3
	credits:	15
Second Year	*Semester 2*	
BI 116	Anatomy & Physiology II w/ Lab	4
CH 202	Organic Chemistry II w/ Lab	4
PY 102	College Physics II w/ Lab	4
	Humanities Elective	3
	or	
	Social Science Elective	3
	Advanced Laboratory Science Elective	4
	credits:	19
	Total Credits:	**69**

AY '12-'13

Mechanical Engineering

Associate in Science

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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Oral Communication, Sign Language, Theater Arts

Social Science Electives: Anthropology, Geography, History, Economics, Government, Law & Society (LA 230), Psychology, Sociology

PROGRAM FOOTNOTE

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.

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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
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
Second Year	*Semester 2*	
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**

AY '12-'13

Computer-Aided Design (CAD)

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 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

COURSE ID	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**

AY '12-'13

Information Technology

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 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.

COURSE	COURSE TITLE	CREDITS
CS 104	Microcomputer Applications/ Business	3
CS 110	Introduction to Computer Science	4
CS 120	Programming I	4
CS 160	Application Software Strategies	4
CS 213	Database Management Systems I	4
CS 230	Information Systems Administration and Management	4
	or	
CS 235	Information Systems Analysis and Design	4
CS 242	Computer Networks	4
	credits:	27
	Total Credits:	**27**

AY '12-'13

Technology 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 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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
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
First Year	*Semester 2*	
CS 116	Fundamentals of Cyber Security	3
CS 242	Computer Networks	4
	Program Elective	3/4
CS 280	Computer Science Internship	1
	credits:	11/12
	Total Credits:	24/25

AY '12-'13

Web Designer

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 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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
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 126	Digital Imaging	3
CS 140	Interactive Media	3
	credits:	13
First Year	*Semester 2*	
CS 120	Programming I	4
CS 176	Web Design	4
CS 242	Computer Networks	4
MK 214	E-Commerce	3
	credits:	15
	Total Credits:	**28**

AY '12-'13

Web Developer

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 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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
CS 176	Web Design	4
CS 213	Database Management Systems I	4
	Program Elective	3
	credits:	11
First Year	*Semester 2*	
CS 241	Web Site Development	4
CS 242	Computer Networks	4
MN 140	Project Management	4
	credits:	12
	Total Credits:	**23**

PROGRAM FOOTNOTES

Program Electives:
CS 116 Fundamentals of Cyber Security, CS 126 Digital Imaging, CS 140 Interactive Multimedia, MK 214 E-Commerce

AY '12-'13

Web Master

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 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

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
CS 107	Introduction to the Internet	1
CS 126	Digital Imaging	3
CS 176	Web Design	4
CS 140	Interactive Media	3
MN 140	Project Management	4
	credits:	15
First Year	*Semester 2*	
CS 242	Computer Networks	4
CS 246	Web Server Administration	3
MK 214	E-Commerce	3
	Program Elective	3
	credits:	13
	Total Credits:	**28**

AY '12-'13

SOCIAL SCIENCES AND PROFESSIONAL STUDIES

Liberal Arts:
Community Health Option

Associate in Arts

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 SOCIAL SCIENCES & PROFESSIONAL STUDIES

The Community Health Option combines courses in social sciences with courses, seminars, and field work in the community health field. In addition to acquiring the necessary professional skills such as interviewing, report writing, behavior modification, and human relations, students gain a broad background in the liberal arts. Upon completion, students are prepared for entry level or other positions related to their professional experience in health centers and social agencies.

Upon successful completion, the Associate in Arts Degree in Liberal Arts with a concentration in Community Health 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 203 American History to 1877 & HS 204 American History since 1870

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 115 Anatomy and Physiology I & BI 116 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts
Math/Science Electives: Biology, Chemistry, Contemporary Nutrition (NS 101) Environmental Science, Integrated Science, Mathematics (not MAC), 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 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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
CX 101*	Introduction to Community Health	4
EN 101	Freshman English I	3
SO 203	Ethnic Studies	3
PS 118	Life Span Psychology	3
	History Sequence	3
	credits:	16
First Year	*Semester 2*	
CS 100	Computers and Technology	3
EN 102	Freshman English II	3
CT 100	Critical Thinking	3
SO 120	Disabilities: Diagnosis and Interventions	3
CX 104	Promoting Health in the Community	3
	History Sequence	3
	credits:	18
Second Year	*Semester 1*	
PS 241	Group Process	3
SO 101	Introduction to Sociology	3
	Literature Sequence	3
	Humanities Elective	3
	Laboratory Science Sequence	4
	credits:	16
Second Year	*Semester 2*	
CX 201	Practicum/Seminar for Community Health Majors	6
	Literature Sequence	3
	Laboratory Science Sequence	4
	Math/Science Elective	3/4
	credits:	16/17
	Total Credits:	**66/67**

*Course to be taken first semester.

AY '12-'13

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 www.massbay.edu/uploadedFiles/online.pdf.
Check current course availability at www.massbay.edu/courses

DIVISION OF SOCIAL SCIENCES & 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) 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 203 American History to 1877 & HS 204 American History Since 1870

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society, (LA 230), Psychology, Sociology

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

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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
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
Second Year	*Semester 2*	
ED 230 / ED 240	Practicum and Seminar in Early Childhood	6
MA 119	Elements of Math II	3
	History Sequence	3
	Humanities Elective	3
	credits:	15
	Total Credits:	**62**

AY '12-'13

Liberal Arts: Elementary Education

Associate in Arts

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 SOCIAL SCIENCES & 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 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 elementary 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 Elementary 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 203 American History to 1877 & HS 204 American History Since 1870

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

Free Electives: Any college-level course offered at the College.

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

This program qualifies for MassTransfer with select State University and University of Massachusetts institutions. For more information please visit www.mass.edu/masstransfer.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
EN 101	Freshman English I	3
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
ED 115	Education in American Society	4
SC 102	Integrated Science I	4
	credits:	17
First Year	*Semester 2*	
EN 102	Freshman English II	3
PS 222	Child Development	3
LI 104	Children's Literature	3
SC 103	Integrated Science II	4
	Social Science Elective	3
	credits:	16
Second Year	*Semester 1*	
ED 203	Early Childhood Curriculum	3
SO 120	Disabilities: Diagnosis and Interventions	3
MA 109	Elements of Mathematics I	3
	History Sequence	3
	Humanities Elective	3
	credits:	15
Second Year	*Semester 2*	
ED 230 / ED 240	Practicum and Seminar in Early Childhood Ed	6
MA 119	Elements of Mathematics II	3
	History Sequence	3
	Humanities Elective	3
	credits:	15
	Total Credits:	**63**

AY '12-'13

Liberal Arts: Global Studies

Associate in Arts

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 SOCIAL SCIENCES & PROFESSIONAL STUDIES

The Global Studies concentration provides students with the opportunity to deepen their understanding of the problems and forces shaping today's changing world. A cluster of liberal arts courses explore contemporary trends and the historical, social, and economic factors that shape them. In addition, students gain a broad background in the skills of the liberal arts: writing, speaking, critical thinking, and problem solving. The concentration provides a solid background for students interested in transferring to four-year institutions in a variety of majors and for their futures living and working in an increasingly global society.

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

PROGRAM FOOTNOTES

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

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 115 Anatomy and Physiology I & BI 116 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/Science Electives: Biology, Chemistry, Contemporary Nutrition (NS101), Environmental Science, Integrated Science, Mathematics (not MAC), Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

Program Electives: Foreign Language, Global Journalism (CO 106), Myth, Magic & Mystery (HU 110), World Religions (HU105), World Traditions (HU 120), Ethnic Studies (SO 203)

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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
GG 103	Introduction to Geography	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
HS 103	World Civilization I	3
CS 100	Computers and Technology	3
	Math/Science Elective	3/4
	credits:	18/19
First Year	*Semester 2*	
GG 105	World Regional Geography	3
EN 102	Freshman English II	3
GV 210	Contemporary Global Issues	3
HS 104	World Civilization II	3
	Program Elective	3
	credits:	15
Second Year	*Semester 1*	
AN 203	Introduction to Cultural Anthropology	3
EC 201	Principles of Macroeconomics	3
LI 201	World Literature I	3
	Laboratory Science Sequence	4
	Humanities Elective	3
	credits:	16
Second Year	*Semester 2*	
LI 202	World Literature II	3
	Program Elective	3
	Social Science Elective	3
	Social Science Elective	3
	Laboratory Science Sequence	4
	credits:	16
	Total Credits:	**65/66**

AY '12-'13

Liberal Arts: Human Services

Associate in Arts

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 SOCIAL SCIENCES & 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 203 American History to 1877 & HS 204 American History Since 1870

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 115 Anatomy and Physiology I & BI 116 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, Mathematics (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 Ethnic Studies, SO 222 Aging and Society, SO 224 Sociology of Developmental Disabilities, other courses with permission of the Program Coordinator.

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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
PS 118	Life Span Psychology	3
SO 120	Disabilities: Diagnosis and Interventions	3
SO 221	Drugs, People, and Problems	3
	Literature Sequence	3
	Laboratory Science Sequence	4
	credits:	16
Second Year	*Semester 2*	
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.

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.

AY '12-'13

Liberal Arts: Psychology/Sociology/ Anthropology

Associate in Arts

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 SOCIAL SCIENCES & PROFESSIONAL STUDIES

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, sociology, and anthropology, 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, Sociology, and Anthropology 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 203 American History to 1877 & HS 204 American History Since 1870

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 115 Anatomy and Physiology I & BI 116 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math/Science Electives: Biology, Chemistry, Contemporary Nutrition (NS101), Environmental Science, Integrated Science, Mathematics (not MAC), Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

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.

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

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
CS 100	Computers and Technology	3
CT 100	Critical Thinking	3
EN 101	Freshman English I	3
	History Sequence	3
	Laboratory Science Sequence	4
	credits:	16
First Year	*Semester 2*	
AN 203	Introduction to Cultural Anthropology	3
EN 102	Freshman English II	3
PS 101	Introduction to Psychology	3
	History Sequence	3
	Laboratory Science Sequence	4
	credits:	16
Second Year	*Semester 1*	
PH 102	Philosophy: Ethics	3
	Literature Sequence	3
	Math/Science Elective	3/4
	Social Science Elective	3
	Program Elective	3
	Program Elective	3
	credits:	18/19
Second Year	*Semester 2*	
SO 101	Introduction to Sociology	3
	Literature Sequence	3
	Humanities Elective	3
	Program Elective	3
	Program Elective	3
	credits:	15
	Total Credits:	**65/66**

AY '12-'13

Accounting

Associate in Science

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 SOCIAL SCIENCES & 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math Electives: Any MA 100 mathematics course or higher, except mathematics courses with MAC prefix.

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

Social Science Electives: Anthropology, Geography, History, Economics, Government, Law and Society (LA 230), Psychology, Sociology

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

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
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
	Math Elective	3/4
	credits:	19/20
First Year	*Semester 2*	
AC 102	Financial Accounting II	4
EN 102	Freshman English II	3
MK 103	Principles of Marketing	3
	Economics Elective	3
	Humanities Elective	3
	credits:	16
Second Year	*Semester 1*	
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
Second Year	*Semester 2*	
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:	**69/71**

AY '12-'13

Business Administration

Associate in Science

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 SOCIAL SCIENCES & 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 203 American History to 1877 & HS 204 American History Since 1870

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, Communications, 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, Law and Society (LA 230), Psychology, Sociology

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

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
AC 206	Managerial Accounting	4
EC 201	Principles of Macroeconomics	3
	Literature Sequence	3
	Science Elective	4
	Social Science Elective	3
	credits:	17
Second Year	*Semester 2*	
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**

AY '12-'13

Criminal Justice

Associate in Science

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 SOCIAL SCIENCES & 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 law enforcement, corrections, private security, and related fields, as well as to provide you with academic preparation for study 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 230 Law and Society, PH 102 Philosophy: Ethics, PS 223 Psychology of Criminal Behavior, PS 240 Abnormal Psychology, SO 221 Drugs, People, and Problems

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math/Science Electives: Biology, Chemistry, Contemporary Nutrition (NS101), Environmental Science, Integrated Science, Mathematics (not MAC), Physics

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

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
First Year	*Semester 1*	
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
SF 131	Oral Communication	3
	Social Science Elective	3
	credits:	18
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
CJ 221	Introduction to Criminology	3
CJ 241	Juvenile Offenders	3
MAC 100	Business Math	3
SO 101	Introduction to Sociology	3
	Humanities Elective	3
	credits:	15
Second Year	*Semester 2*	
PS 101	Introduction to Psychology	3
	Social Science Elective	3
	Math/Science Elective	3/4
	Criminal Justice Elective	3
	Criminal Justice Elective	3
	credits:	15/16
	Total Credits:	**63/64**

AY '12-'13

General Business

Associate in Science

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 SOCIAL SCIENCES & 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math Electives: Any MA100 mathematics course or higher, except mathematics courses with a MAC prefix.

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

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society (LA 230), Psychology, Sociology

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

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
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
Second Year	*Semester 2*	
	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**

AY '12-'13

Early Childhood Education

Associate in Science

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 SOCIAL SCIENCES & 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 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Social Science Electives: Anthropology, Economics, Geography, Government, History, Law and Society, (LA 230), Psychology, Sociology

Free Elective: Any college-level course offered at the College.

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

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
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
Second Year	*Semester 2*	
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**

AY '12-'13

General Business: Hospitality Management

Associate in Science

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 SOCIAL SCIENCES & PROFESSIONAL STUDIES

Gain an overview of the exciting hospitality industry though 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 131 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 E0Commerce.

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

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math/Science Elective: Biology, Chemistry, Environmental Science, Mathematics (not MAC 101), Physics, Integrated Science, Contemporary Nutrition (NS 101)

Math Electives: Any 100-level Mathematics course (MAC is acceptable)

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
First Year	*Semester 1*	
CS 104	Microcomputer Applications for Business	3
CT 100	Critical Thinking	2
EN 101	Freshman English I	3
HM 101	Introduction to Hospitality	3
MK 103	Principles of Marketing	3
	credits:	14
First Year	*Semester 2*	
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
	Business Elective	3
	Math Elective	3
	credits:	15
Second Year	*Semester 1*	
AC 101	Financial Accounting I	4
HM 201	Food & Beverage Management	3
SF 131	Oral Communication	3
	Math/Science Elective	3/4
	Business Elective	3
	credits:	16/17
Second Year	*Semester 2*	
AC 102	Financial Accounting II	4
BU 250	Service Industry Internship	4
MG 101	Principles of Management	3
	Economics Elective	3
	Humanities Elective	3
	credits:	17
	Total Credits:	**62/63**

AY '12-'13

Paralegal Studies

Associate in Science

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 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.

PROGRAM FOOTNOTES

Humanities Electives: Art, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Sign Language, Theater Arts

Math/Science Electives: Biology, Chemistry, Environmental Science, Integrated Science, Mathematics (not MAC), Physics

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

Social Science Electives: may be satisfied by taking Law and Society (LA 230), or any Anthropology, Geography, Government, History, Psychology, or Sociology course

Program Electives: CS 116 Fundamentals of Cyber Security, LA 228 Criminal Law and Procedures, PA 203 Real Estate for Paralegals, 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
First Year	*Semester 1*	
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
First Year	*Semester 2*	
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
Second Year	*Semester 1*	
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
Second Year	*Semester 2*	
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

AY '12-'13

Accounting

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 SOCIAL SCIENCES & PROFESSIONAL STUDIES

This certificate program will prepare students for careers that provide technical assistance to the professional accountant such as classifying, recording, and summarizing business events.

Upon successful completion, the Certificate in Accounting is awarded.

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
CS 104	Microcomputer Applications/ Business	3
OA 201	Business Communication	3
	credits:	29
	Total Credits:	**29**

* Fall semester offering only.
** Spring semester offering only.

AY '12-'13

Business: Information Technology

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 SOCIAL SCIENCES & PROFESSIONAL STUDIES

The Business Information Technology Certificate integrates aspects of the business and computer science curricula. This certificate provides students with the technical knowledge needed to use and apply information technology in a business setting.

Upon successful completion, the Certificate in Business Information Technology is awarded.

PROGRAM FOOTNOTES

Business Electives: AC 206 Managerial Accounting, MG 101 Principles of Management, MK 103 Principles of Marketing

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

Program Electives: CS 126 Digital Imaging, CS 140 Interactive Multimedia.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
AC 101	Financial Accounting I	4
CS 104	Microcomputer Applications/ Business	3
	Economics Elective	3
	Program Elective	3
	credits:	13
First Year	*Semester 2*	
AC 102	Financial Accounting II	4
CS 176	Web Design	4
CS 230	Information Systems Administration and Management	4
	Business Elective	3/4
	credits:	15/16
	Total Credits:	**28/29**

AY '12-'13

Early Childhood Education

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 SOCIAL SCIENCES & 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

Lead Teacher Certification may be earned by completing a second semester of Practicum/Seminar in Early Childhood Education.

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

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

*Course to be taken first semester.

AY '12-'13

Early Childhood Education: Infant-Toddler Teacher

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 SOCIAL SCIENCES & 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.

Students choosing to pursue teacher licensure programs at the bachelor's degree level should complete the Liberal Arts: Early Childhood Education (for pre-K to grade 2) or Liberal Arts: Elementary Education (grades 1-6) program at MassBay.

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

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

*Course to be taken first semester.

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.

AY '12-'13

General Business: Hospitality Management

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 SOCIAL SCIENCES & PROFESSIONAL STUDIES

This program allows you to add a business component to your current skills in the hospitality industry. 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.

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.

COURSE	COURSE TITLE	CREDITS
BU 250	Service Industry Internship	4
CS 104	Microcomputer Applications for Business	3
GG 103	Introduction to Geography	3
	or	
GG 105	World Regional Geography	3
HM 101	Introduction to Hospitality	3
HM 102	Front Office Management	3
HM 201	Food & Beverage Management	3
MG 101	Principles of Management	3
	credits:	22
	Total Credits:	22

AY '12-'13

Interior Design

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 SOCIAL SCIENCES & 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.

COURSE	COURSE TITLE	CREDITS
1st Year	*Semester 1*	
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
1st Year	*Semester 2*	
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**

AY '12-'13

Liberal Arts: Community Health

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 SOCIAL SCIENCES & PROFESSIONAL STUDIES

This certificate program meets the needs of those who are looking to enter the community health field, upgrade skills in a current community health position, and/or are interested in pursuing further studies in community health. Upon completion, students are prepared for entry-level positions in community health centers hospitals, and social agencies dealing with public and community health issues.

This program combines coursework in the social sciences with community health courses. Students gain knowledge of the field and develop professional skills such as communication, report writing, behavior modification, and human relations. The 150-hour field experience and weekly seminar will complement the coursework.

Upon successful completion, the Certificate in Liberal Arts with a concentration in Community Health 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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
CX 101*	Introduction to Community Health	4
PS 118	Life Span Psychology	3
SO 101	Introduction to Sociology	3
	credits:	10
First Year	*Semester 2*	
PS 241	Group Process	3
CX 104	Promoting Health in the Community	3
SO 203	Ethnic Studies	3
	credits:	9
Second Year	*Semester 1*	
CX 201	Practicum/Seminar for Community Health Majors	6
	credits:	6
	Total Credits:	**25**

*Course to be taken first semester.

AY '12-'13

Liberal Arts: Human Services

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 SOCIAL SCIENCES & 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.

COURSE	COURSE TITLE	CREDITS
First Year	*Semester 1*	
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, People, and Problems	3
	credits:	13
First Year	*Semester 2*	
PS 118	Life Span Psychology	3
PS 241	Group Process	3
SW 201	Practicum/Seminar	6
	credits:	12
	Total Credits:	**25**

AY '12-'13

Management

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 SOCIAL SCIENCES & PROFESSIONAL STUDIES

This program is an ideal introduction to the fields of marketing, management, and finance. The program is designed for students who have a technical or liberal arts education/vocation and are looking to add a business component to their training.

Upon successful completion, the Certificate in Management is awarded.

COURSE	COURSE TITLE	CREDITS
CS 104	Microcomputer Applications for Business	3
MG 101	Principles of Management	3
MG 204	Human Resource Management	3
MK 103	Principles of Marketing	3
	Business Elective	3
	Business Elective	3
	credits:	18
	Total Credits:	**18**

PROGRAM FOOTNOTES

Business Electives: AC 101Financial Accounting I, AC 102 Financial Accounting II, AC 201 Intermediate Accounting I, AC 202 Intermediate Accounting II, AC 206 Managerial Accounting, AC 207 Introduction to Taxation, BF 131 Principles of Finance, BF 232 Personal Finance, BU 100 Introduction to Business, BU 201 Global Business, BU 250 Service Industry Internship, 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 E-Commerce.

AY '12-'13

Paralegal Studies

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 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.

PROGRAM FOOTNOTES

Program Electives: PA 203 Real Estate for Paralegal, PA 205 Family Law for Paralegal, LA 230 Law and Society, LA 228 Criminal Law and Procedures, PA 251 Paralegal Internship**, CS 104 Microcomputer Applications/ Business, CS 116 Fundamentals of Cyber Security

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

*Course must be taken first semester

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

AY '12-'13

TRANSPORTATION & ENERGY

Automotive Technology BMW

Associate in Science

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 TRANSPORTATION & ENERGY

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:

- MassBay placement into College Writing EN 100 or completion of Intro to Language EN 090.
- 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Oral Communication, Sign Language, Theater Arts

Social Science Electives: Anthropology, Geography, History, Economics, Government, Psychology, Sociology, Law & Society (LA 230)

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
SF 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**

AY '12-'13

Automotive Technology Chrysler

Associate in Science

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 TRANSPORTATION & ENERGY

The MOPAR College Automotive program (MCAP) is designed to provide the technical competence and professional level of the incoming dealership technician. The MCAP program involves academic as well as automotive lecture/ laboratory instruction focusing on Chrysler products at the MassBay Auto Technology Center. Students are also required to work at a Chrysler dealership as part of the cooperative education phase of their training. The MCAP program is a collaborative effort between MassBay Community College and Chrysler. The College retains academic and administrative responsibility for MCAP and is certified by the National Automotive Technicians Education Foundation Inc. (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:

- MassBay placement into College Writing EN 100 or completion of Intro to Language EN 090.
- 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Oral Communication, Sign Language, Theater Arts

Social Science Electives: Anthropology, Geography, History, Economics, Government, Psychology, Sociology, Law and Society (LA 230)

COURSE	COURSE TITLE	CREDITS
Semester 1	*12 weeks academic study* *12 weeks cooperative education*	
AY 100	Fundamentals of Auto Technology	5
AY 110	Automotive Electricity	4
CT 100	Critical Thinking	3
SF 131	Oral Communication	3
AY 115	Cooperative Education I	3
MAC 101	Technical Math	3
	credits:	21
Semester 2	*12 weeks academic study*	
AY 120	Automotive Electronics	3
AY 140	Automotive Brake Systems	3
AY 170	Electronic Fuel and Engine Controls	4
CS 100	Computers and Technology	3
EN 101	Freshman English I	3
	credits:	16
Semester 3	*8 weeks academic study* *7 weeks cooperative education*	
AY 125	Cooperative Education II	3
AY 221	Heating, A/C & Climate Control Systems	3
AY 230	Engine Performance	5
PS 260	Psychology in Business and Industry	3
	Social Science Elective	3
	credits:	17
Semester 4	*12 weeks academic study* *12 weeks cooperative education*	
AY 215	Cooperative Education III	3
AY 245	Engine Diagnosis and Repair	4
AY 253	Automatic Transmissions, Manual Transmission, and Drive Systems	6
AY 270	Steering & Suspension Systems	3
EN 102	Freshman English II	3
	Humanities Elective	3
	credits:	22
Semester 5	*12 weeks cooperative education*	
AY 225	Cooperative Education IV	3
	credits:	3
	Total Credits:	**79**

AY '12-'13

Automotive Technology General Motors

Associate in Science

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 TRANSPORTATION & ENERGY

The General Motors Automotive Service Education Program (ASEP) 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 General Motors (GM) products at the MassBay Automotive Technology Center. Students are also required to work at a GM dealership as part of 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 Inc. (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:

- MassBay placement into College Writing EN 100 or completion of Into to Language EN 090.
- 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Oral Communication, Sign Language, Theater Arts.

Social Science Electives: Anthropology, Geography, History, Economics, Government, Psychology, Sociology, Law & Society (LA 230).

COURSE	COURSE TITLE	CREDITS
Semester 1	*12 weeks academic study* *12 weeks cooperative study*	
AS 100	Automotive Fundamentals	5
AS 106	Automotive Brakes Systems	3
CT 100	Critical Thinking	3
MAC 101	Technical Mathematics	3
SF 131	Oral Communication	3
AS 110	Cooperative Education I	3
	credits:	20
Semester 2	*12 weeks academic study*	
AS 108	Automotive Ignition & Fuel Systems	3
AS 105	Heating & Air Conditioning Theory	3
AS 102	Automotive Electrical Fundamentals	4
CS 100	Computers & Technology	3
EN 101	Freshman English I	3
	credits:	16
Semester 3	*8 weeks academic study* *7 weeks cooperative education*	
AS 111	Cooperative Education II	3
AS 206	Advanced Engine Performance	5
AS 204	Automotive Suspension Systems	3
PS 260	Psychology in Business & Industry	3
	Social Science Elective	3
	credits:	17
Semester 4	*12 weeks academic study* *12 weeks cooperative study*	
AS 209	Cooperative Education III	3
AS 213	Manual/Automatic Trans. & Drive Systems	6
AS 208	Advanced Automotive Electronics	3
AS 216	Automotive Engine Diagnosis & Repair	4
EN 102	Freshman English II	3
	Humanities Elective	3
	credits:	22
Semester 5	*12 weeks cooperative study*	
AS 210	Cooperative Education IV	3
	Total Credits:	**78**

AY '12-'13

Automotive Technology Toyota/Lexus

Associate in Science

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 TRANSPORTATION & ENERGY

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:

- MassBay placement into College Writing EN 100 or completion of Intro to Language EN 090
- 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, Communications, Film, Foreign Language, Humanities, Literature, Music, Oral Communication, Philosophy, Photography, Oral Communication, Sign Language, Theater Arts

Social Science Electives: Anthropology, Geography, History, Economics, Government, Psychology, Sociology, Law and Society (LA 230)

COURSE	COURSE TITLE	CREDITS
Semester 1	*Fall*	
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
Semester 2	*Spring*	
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
Semester 3	*Summer*	
AT 120	Cooperative Education I	3
	credits:	3
Semester 4	*Fall*	
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
Semester 5	*Spring*	
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**

AY '12-'13

Automotive Technology TSEP: Undercarriage Repair

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 TRANSPORTATION & ENERGY

The Technical Service Education Program is designed to provide the technical competence and professionalism needed to become a TSEP technician. The program involves academic as well as automotive lecture/ laboratory instruction focusing on state-of-the art products at the MassBay Automotive Technology Center. Students are required to work at a participating repair facility as part of the cooperative education phase of their training. The College has the academic and administrative responsibility for the program.

Upon completion, the Certificate in Automotive Service Technology is awarded.

ADMISSION REQUIREMENTS

Minimum eligibility for admission to this program includes:

- MassBay placement into College Writing EN 100 or completion of Intro to Language EN 090
- 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)

COURSE	COURSE TITLE	CREDITS
Certificate I	***Undercarriage Repair***	
AI 100*	Automotive Fundamentals	1
AI 106	Automotive Brake Systems	3
AI 204	Auto Suspension Systems	3
AI 121	Cooperative Education I	2
MAC 101*	Technical Math	3
SF 131*	Oral Communication	3
EN 100*	College Writing	4
	Total Credits:	**19**

***These courses only have to be taken once.**

AY '12-'13

Automotive Technology TSEP: Drive Systems

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 TRANSPORTATION & ENERGY

The Technical Service Education Program is designed to provide the technical competence and professionalism needed to become a TSEP technician. The program involves academic as well as automotive lecture/ laboratory instruction focusing on state-of-the art products at the MassBay Automotive Technology Center. Students are required to work at a participating repair facility as part of the cooperative education phase of their training. The College has the academic and administrative responsibility for the program.

Upon completion, the Certificate in Automotive Service Technology is awarded.

ADMISSION REQUIREMENTS

Minimum eligibility for admission to this program includes:

- MassBay placement into College Writing EN 100 or completion of Intro to Language EN 090.
- 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).

COURSE	COURSE TITLE	CREDITS
Certificate II	***Drive Systems***	
AI 100*	Automotive Fundamentals	1
AI 103	Automotive Engine Diagnosis and Repairs	5
AI 202	Manual Transmission & Drive Lines	3
AI 203	Automotive Transmission	3
AL 122	Cooperative Education II	2
MAC 101*	Technical Math	3
SF 131*	Oral Communication	3
EN 100*	College Writing	4
	Total Credits:	**24**

***These courses only have to be taken once.**

AY '12-'13

Automotive Technology TSEP: Electrical/ Engine Performance/ HVAC

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 TRANSPORTATION & ENERGY

The Technical Service Education Program is designed to provide the technical competence and professionalism needed to become a TSEP technician. The program involves academic as well as automotive lecture/ laboratory instruction focusing on state-of-the art products at the MassBay Automotive Technology Center. Students are required to work at a participating repair facility as part of the cooperative education phase of their training. The College has the academic and administrative responsibility for the program.

Upon completion, the Certificate in Automotive Service Technology is awarded.

ADMISSION REQUIREMENTS

Minimum eligibility for admission to this program includes:

- MassBay placement into College Writing EN 100 or completion of Intro to Language EN 090.
- 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).

COURSE	COURSE TITLE	CREDITS
Certificate III	***Electrical/ Engine Performance/ HVAC***	
AI 100*	Automotive Fundamentals	1
AI 102	Automotive Electrical Fundamentals	5
AI 105	Heating and Air-Conditioning Theory	3
AI 200	Engine Performance	5
AL 123	Cooperative Education III	2
MAC 101*	Technical Math	3
SF 131*	Oral Communication	3
EN 100*	College Writing	4
	Total Credits:	**26**

***These courses only have to be taken once.**

AY '12-'13

ACCOUNTING (AC)

AC 101 4 Credits

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.

AC 102 4 Credits

FINANCIAL ACCOUNTING II

This course forms the second half of a two-part course 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

AC 120 1 Credit

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

AC 201 4 Credits

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

AC 202 4 Credits

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

AC 206 4 Credits

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 organization's 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

AC 207 3 Credits

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

ANTHROPOLOGY (AN)

AN 203 3 Credits

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.

ART (AR)

AR 100 3 Credits

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.

AR 101 3 Credits

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.

AR 102 3 Credits

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.

AR 110 3 Credits

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 mâché, 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.

AR 121 3 Credits

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.

AR 122 3 Credits

DRAWING II

A focus on the imaginative and sensitive communication of ideas through skillful drawing. Consideration is given to expressive interpretation of the human figure, landscape, objects, and abstract concepts. Particular emphasis is placed upon drawing from the figure. An extensive project is required along with an end course portfolio. Drawing II includes discussion of drawing concepts, and related vocabulary, art criticism, and art history. Students will explore different drawing techniques and mediums. Drawing II builds on the vocabulary, skills, and concepts learned in Art Fundamentals, Drawing I, and Watercolors I. Students will purchase their own art supplies. Students will participate in weekly class critiques. Student must have the permission of the instructor and taken Art Fundamentals, Drawing I, and Watercolors I. 3 Credits.

AR 200 3 Credits
WATERCOLORS I
This course is an upper level art course. The course will cover the 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. The student will acquire critical skills to evaluate paintings. The student will participate in weekly class critiques. Students will purchase their own art supplies. Students may be asked to exhibit their artwork on campus.
Prerequisites: AR100 (Art Fundamentals), AR101 (History and Appreciation of Art I), and AR121 (Drawing I)

AUTOMOTIVE: BMW (AB)

AB 100 5 Credits
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 4 Credits
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 5 Credits
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.
Prerequisites: AB100, AB102 Lecture: 2 Credits. Lab 3 Credits.
Total: 120 hours. 5 Credits

AB 105 3 Credits
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

AB 106 3 Credits
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

AB 200 5 Credits
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.
Prerequisites: AB103, AB121 Lecture: 1 credit. Lab 3 Credits.
Total: 105 hours. 5 Credits

AB 201 4 Credits
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. Prerequisite: AB200 Lecture: 2 Credits. Lab 2 Credits. Total: 90 hours. 4 Credits

AB 202 4 Credits
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. Pre-requisite: AB 121

AB 203 4 Credits

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. Pre-requisites: AB121

AB 204 4 Credits

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.
Prerequisites: AB200, AB205 Lecture: 2 Credits. Lab 2 Credits. Total: 90 hours. 4 Credits

AB 205 6 Credits

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.
Prerequisite: AB121 Lecture: 1 credit. Lab 3 Credits. Total: 105 hours. 6 Credits

AB 208 3 Credits

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

AUTOMOTIVE: CHRYSLER (AY)

AY 100 5 Credits

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

AY 110 4 Credits

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

AY 120 3 Credits

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.
Prerequisite: AY115 Lecture: 1 credit. Lab: 2 Credits. Total: 75 hours. 3 Credits

AY 140 3 Credits

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.
Prerequisite: AY115 Lecture: 1 credit. Lab: 2 Credits. Total: 75 hours. 3 Credits

AY 170 4 Credits

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.
Prerequisites: AY110, AY115, AY120 Lecture: 1 credit. Lab: 3 Credits. Total: 105 hours. 4 Credits

AY 221 3 Credits

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 or R-134-A and R-12 systems and recovery and recycling procedures will be covered.
Prerequisites: AY120, AY125 Lecture: 1 credit. Lab: 2 Credits. Total: 75 hours. 3 Credits

AY 230 ENGINE PERFORMANCE 5 Credits
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.
Prerequisites: AY110, AY120, AY125, AY170 Lecture: 2 Credits. Lab: 3 Credits. Total: 120 hours. 5 Credits

AY 245 4 Credits
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. Prerequisite: AY215 Lecture: 2 Credits. Lab: 2 Credits. Total: 90 hours. 4 Credits

AY 253 6 Credits
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.
Lecture: 3 Credits. Lab: 3 Credits. Total: 135 hours. 6 Credits
Prerequisite: AY215

AY 270 3 Credits
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. Prerequisite: AY215
Lecture: 1 credit. Lab: 2 Credits. Total: 75 hours. 3 Credits

AUTOMOTIVE: GENERAL MOTORS (AS)

AS 100 5 Credits
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 4 Credits
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.
Prerequisite: AS110 Lecture: 1 credit. Lab: 3 Credits.
Total: 105 hours. 4 Credits

AS 105 3 Credits
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 3 Credits
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. Prerequisite: AS100 Lecture: 1 credit. Lab: 2 Credits. Total: 75 hours. 3 Credits

AS 108 3 Credits
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.
Prerequisite: AS110 Lecture: 1 credit. Lab: 2 Credits.
Total: 75 hours. 3 Credits

AS 204 3 Credits
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.
Prerequisite: AS111 Lecture: 1 credit. Lab: 2 Credits.
Total: 75 hours. 3 Credits

AS 206 5 Credits
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. Prerequisite: AS111 Lecture: 2 Credits. Lab: 3 Credits. Total: 120 hours. 5 Credits

AS 208 3 Credits

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.
Prerequisite: AS209 Lecture: 1 credit. Lab: 2 Credits.
Total: 75 hours. 3 Credits

AS 213 6 Credits

AUTOMATIC/MANUALTRANSMISSIONS & 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. Prerequisite: AS209 Lecture: 3 Credits. Lab: 3 Credits. Total: 135 hours. 6 Credits

AS 216 4 Credits

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. Prerequisite: AS209 Lecture: 2 Credits. Lab: 2 Credits. Total: 90 hours. 4 Credits

AUTOMOTIVE: TOYOTA/LEXUS (AT)

AT 101 4 Credits

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

AT 102 4 Credits

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 5 Credits

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.

AT 105 3 Credits

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.

AT 106 3 Credits

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.

AT 109 1 Credit

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 credit

AT 113 4 Credits

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.
Prerequisites: AT101, AT102 Lecture: 2 Credits. Lab: 2 Credits.
Total: 90 hours. 4 Credits

AT 114 4 Credits

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. Prerequisites: AT101, AT102 Lecture: 2 Credits. Lab: 2 Credits. Total: 90 hours. 4 Credits

AT 116 3 Credits

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. Prerequisites: AT101, AT102 Lecture: 1 credit. Lab: 2 Credits. Total: 60 hours. 3 Credits

AT 200 5 Credits

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.

AT 201 4 Credits

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.

AT 204 4 Credits

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.

AT 205 6 Credits

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. Prerequisite: AT120 Lecture: 3 Credits. Lab: 3 Credits. Total: 135 hours. 6 Credits

AT 207 5 Credits

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. Prerequisites: AT102, AT120 Lecture: 2 Credits. Lab: 3 Credits. Total: 120 hours. 5 Credits

AT 208 3 Credits

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 3 Credits

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. Prerequisites: AT102, AT207 Lecture: 1 credit. Lab: 2 Credits. Total: 75 hours. 3 Credits

AT 212 3 Credits
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.
Prerequisites: AT102, AT208 Lecture: 1 credit. Lab: 2 Credits. Total: 75 hours. 3 Credits

AT 213 1 Credit
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.
Prerequisite: AT102, T120 Lecture: 1 credit. Lab: 2 Credits. Total: 75 hours. 3 Credits

AUTOMOTIVE: TSEP (AI)

AI 100 1 Credit
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: 30 hours. 1 credit

AI 102 5 Credits
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 5 Credits
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 3 Credits
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 3 Credits
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 200 5 Credits
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 3 Credits
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 3 Credits
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 3 Credits
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

BUSINESS (BF & BU & OA)

BF 203 4 Credits
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. Pre-requisite: AC102

BF 232 3 Credits
PERSONAL FINANCE
Basic concepts and tools individuals use in conducting their financial affairs. 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

BU 100 3 Credits
INTRODUCTION TO BUSINESS
Introduction to the basic business functions of 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 integrated and interact 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, its 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.

BU **201** **3 Credits**
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.

BU 901 3 Credits
BUSINESS INTERNSHIP
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.

OA 201 3 Credits
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.

BIOLOGY (BI)

BI 101 4 Credits
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

BI 102 4 Credits
GENERAL BIOLOGY II w/LAB
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 five kingdoms-Monera, Protista, Fungi, Plants and Animals. 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

BI 105 3 Credits
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.

BI 106 3 Credits
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

BI 110 4 Credits
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.

BI 113 3 Credits
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.

BI 115 4 Credits
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

BI 116 4 Credits
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 115

BI 118 1 Credit
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.

BI 120 4 Credits
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

BI 123 4 Credits
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

BI 131 3 Credits
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.

BI 141 3 Credits
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.

BI 170 4 Credits
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 tolls, 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.

BI 171 4 Credits
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.

BI 210 4 Credits
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

BI 220 4 Credits
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 (hypersensivity, autoimmuity,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.

BI 240 4 Credits
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. Pre-Requisite: BI110, CH110. 4 Credits: 3 hours lecture and 3 hours Lab

BIOTECHNOLOGY (BT)

BT 101 2 Credits
INTRODUCTION TO BIOTECHNOLOGY
AND LABORATORY ROTATION I
In this hands-on laboratory course students are introduced to the scientific method and key biotechnology methodologies 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 protein and nucleic acid analysis of cellular proteins using the electrophoresis based methodologies: Western-, Northern-, and Southern-blot hybridization analysis. Students will also be introduced to mammalian cell culture. Lab: 6 hours per week. Prerequisites/Co-requisites: CH 110, BI 110

BT 107 3 Credits

FORENSIC ROTATION I

In this hands-on laboratory course students learn DNA typing and allele frequency analysis through the most commonly used methodologies for human identification in criminal cases involving DNA evidence including: Co-Filer™ and Pro-Filer Plus™, Ident-Filer™ and other allelic analysis methods. Students will develop and refine their DNA analysis skills by their direct involvement in actual criminal- and/ or cold-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. Prerequisites: CH 110, BI 110, BT 101

BT 108 3 Credits

MARINE ROTATION I

This course familiarizes the student with the fundamentals of marine boating, in particular as it relates to field research and qualifies them for certification in most states that require boating education before operating a watercraft. Subjects include: boat handling under normal conditions, adverse conditions and emergencies; research diving, underwater transect deployment and use: types of boats and boating terminology; required and recommended boat equipment; boating regulations and navigation rules; lines and knots; charts and aids to navigation; piloting techniques; and marine radiotelephone usage. Lab: 6 hours per week. Prerequisites: CH 110, BI 110, BT 101

BT 201 3 Credits

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

BT 205 3 Credits

FORENSIC DNA SCIENCE 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. 2 Credits. Prerequisites: CH 120, BI 110, BT 107, BT 201.

BT 206 2 Credits

MARINE ROTATION II

This courses teaches the student basic marine navigation and emphasizes the basics of coastal and inland navigation. The course also embraces GPS as a primary navigation and research tool while covering enough of traditional techniques (such as "bearings" and "dead-reckoning") so the student will be able to find his/her way even if their GPS fails. The course includes many in-class exercises and one open-water skills exercise, developing the student's navigational proficiency through hands-on practice and learning. Lab: 6 hours per week. Prerequisites: CH 120, BI 120, BT 108

BT 211 2 Credits

INDEPENDENT RESEARCH:
PROTEIN PURIFICATION/NUCLEIC ACID ANALYSIS

In this hands-on laboratory course students learn the isolation, purification and characterization of cellular proteins from kilogram to nano gram scales. Emphasis will be placed on training the student in protein characterization: peptide mapping, amino acid analysis, ultrafiltration, low and medium pressure and high performance liquid chromatography (HPLC), gel filtration, ion exchange, reverse phase and affinity chromatography. Lab: 6 hours per week. Prerequisites: CH 110, BI 110, BT 101 Lecture: 3 hours.

CENTRAL SERVICES & MATERIAL MANAGEMENT (MM)

MM 101 3 credits

PRINCIPLES AND PRACTICE

This course introduces central service and materials management concepts. It emphasizes the basics of microbiology and asepsis principles and practice. Course content also includes human relation skills, professionals development, safety and risk management, national certification regulations and recommendations.
Prerequisite: BI 101, certification in Central Processing Technology.

MM 102 **6 credits**
PRINCIPLES AND PRACTICE II
This course is a continuation of MM 101 and includes financial planning, marketing strategies, program development, and social and economic changes that affect central services and material management. Clinical instruction focuses on central services, material management and purchasing skills. Clinical rotation provides the opportunity to integrate course concepts and skills.
Prerequisite: MM 101.

MM 103 **6 credits**
PRINCIPLES AND PRACTICE III
This course applies the technological techniques and principles presented in MM 102. It focuses on operational processes and techniques, asset management, technology assessment, and technology acquisition. The course explores regulations and their impact on hospital equipment, supplies, and customer satisfaction**.**
Prerequisite: MM 102. Co-requisite: MAC 100, WR 100, WR 100L.

CHEMISTRY (CH)

CH 101 **4 Credits**
COLLEGE CHEMISTRY I w/LAB
Part one of a two-semester 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. Basic math skills, including introductory algebra, are suggested for success in this course. 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. Lecture: 3 hours per week. Lab: 3 hours per week.

CH 102 **4 Credits**
COLLEGE CHEMISTRY II w/LAB
Part two of a two-semester course on the facts and principles of chemistry at the introductory level. The course has a mandatory lab that complements the lecture. Basic math skills, including introductory algebra, are suggested for success in this course. Topics include reemphasis 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. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisite: CH 101 or the equivalent

CH 110 **4 Credits**
PRINCIPLES OF CHEMISTRY I w/LAB
Part one of a two-semester 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. Math skills of at least the college competency level are required. 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. Lecture: 3 hours per week. Lab: 3 hours per week. Co-requisite: MA 102 or higher

CH 120 **4 Credits**
PRINCIPLES OF CHEMISTRY II w/LAB
Part two of a two-semester course on the facts and principles of chemistry at the general chemistry level. The course has a mandatory lab that complements the lecture. 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 it applications; acid-base chemistry; buffers; redox and electrochemistry; descriptive chemistry. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisites: MA 102 or higher

CH 140 **4 Credits**
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.

CH 201 4 Credits
ORGANIC CHEMISTRY I w/LAB
Part one 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. 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. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisites: CH 120 or the equivalent, MA 102 or higher

CH 202 4 Credits
ORGANIC CHEMISTRY II w/LAB
Part two 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. 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. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisite: CH 201 or the equivalent, MA 102 or higher

CH 210 4 Credits
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 Kreb's 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

CH 211 4 Credits
ANALYTICAL CHEMISTRY w/LAB
This course will cover the major theories of classical analytical chemistry such as equilibrium, solubility, complexion formation, redox systems, acid-base and buffered systems, as well as the organic and inorganic reactions pertinent to common analytical procedures. These theories are used in various analytical methods such as titrations, precipitation, gravimetric methods, complex formation and color metric methods. The course will also examine statistical methods of evaluation and errors in chemical analysis. Chemical analysis in a modern laboratory is often conducted with instrumentation. A survey of the different types of instruments and their applications is conducted. Methods included are spectroscopic methods (UV-VIS, IR, NMR, MS, AA, etc.); chromatographic methods (GC, HPLC, etc.) and other methods (electron microscopy, particle analysis, electrophoresis, polarographic and other electrochemical methods, and radiochemical methods). These instrumental methods are studied with an emphasis on how problems are solved. Many industrial processes and environmental site monitoring devices use the same principles as the modern analytical instruments in the chemical laboratories. These field equipment and process control devices are reviewed in this course. Lecture: 3 hours per week. Lab: 3 hours per week. Prerequisite: CH 120

CHINESE (CHI)

CHI 101 3 Credits
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 hands 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.

COMMUNICATION (CO)

CO 100 3 Credits
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.

CO 101 INTRODUCTION TO MASS MEDIA 3 Credits
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.

CO 103 3 Credits
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.

CO 105 3 Credits
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

CO 106 3 Credits
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

CO 107 3 Credits
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. Prerequisite: CO105 Journalism I, or permission of the instructor.

CO 200 3 Credits
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.

CO 201 3 Credits
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.

CO 210 3 Credits
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. Prerequisite: CO105. 3 Credits.

COMMUNITY HEALTH (CX)

CX 101 4 Credits
INTRODUCTION TO COMMUNITY HEALTH
Provides an historical prospective and current overview of the Community Health Field: legislature, issues and trends, and the role of the Community Health Worker are explored through lectures, discussions, field trips, research, and journals.

CX 104 3 Credits
PROMOTING HEALTH IN THE COMMUNITY
This course examines illness, chronic disease, communicable disease, and mental health, as they relate to the community members, from infancy through elders. The course is designed for community health care workers and others interested in the promotion of healthy lifestyles to reduce risk factors associated with human morbidity and mortality.
Lecture: 3 hours per week. 3 Credits

CX 201 6 Credits
PRACTICUM/SEMINAR
FOR COMMUNITY HEALTH MAJORS
A professionally supervised field work experience in a community health setting coupled with weekly class meetings to discussion of field experience, ethical issues, and current trends in community health. Scheduled conferences are also required. Prerequisites: CX101, CX104, PS241, SO203. Field Experience: 10 hours/week (150hrs). Lecture: 1 hour per week, 6 credits

COMPUTER SCIENCE (CS)

CS 100 3 Credits
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. Lecture/Labs: 3 hours per week 3 credits

CS 104 3 Credits
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

CS 105 3 Credits
MICROCOMPUTER APPLICATIONS
A second course designed for students with experience in using microcomputer applications software in the areas of word processing, 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

CS 107 1 Credit
INTRODUCTION TO THE INTERNET
This course presents the basics of using the Internet. It includes the history and development of the Internet. The course discusses and demonstrates various parts of the Internet, including the World Wide Web, electronic mail, telnet, and file transfer protocol. It emphasizes utilizing the available search engines effectively. The pros and cons of various search engines and indices are discussed and demonstrated, as well as the use of Boolean operators to conduct an effective search. Other topics covered include Internet etiquette, protection against computer viruses, newsgroups, uploading and downloading information, e-copyright, encryption and data security, and choosing an Internet provider. Lecture: 5 3-hour weeks. Open Lab.

CS 108 1 Credit
WEB PAGE DEVELOPMENT I
This course presents the basics of Web page design and development. It covers basic HTML tags. Specific areas covered include headings, rule lines, lists, applying color, creating tables, hyperlinks, backgrounds, text formatting, and importing graphics so that students can create a home page. Professional web development tools are demonstrated. Lecture: 5 3-hour weeks. Open Lab. Prerequisite: CS 107 or permission of the instructor

CS 109 1 Credit
WEB PAGE DEVELOPMENT II
A continuation of CS 108. Topics include creating forms as well as an introduction to Java Script. It also introduces GIF animation, AVI files, and PDF format. The course provides tips on publishing and publicizing a website. Lecture: 5 3-hour weeks. Open Lab. Pre-requisite: CS 108 or permission of the instructor

CS 110 4 Credits
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.

CS 116 3 Credits
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.

CS 118 3 Credits
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.

CS 120 4 Credits
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.

CS 126 3 Credits
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 class work, it requires independent computer lab time. Each student presents and defends an end-of-term project. Lecture: 3 hours per week. Open Lab.

CS 130 4 Credits
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.

CS 140 3 Credits
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.

CS 141 3 Credits
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.

CS 145 4 Credits
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.

CS 160 4 Credits
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

CS 176 4 Credits
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.

CS 200 PROGRAMMING II 4 Credits
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.

CS 205 4 Credits
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

CS 208 4 Credits
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

CS 209 4 Credits
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.

CS 211 4 Credits
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.

CS 212 4 Credits
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

CS 213 4 Credits
DATABASE MANAGEMENT SYSTEMS I
The course covers characteristics of database management systems, including design and implementation techniques. Students will 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

CS 214 4 Credits
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

CS 225 3 Credits
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.

CS 230 4 Credits
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 Instructor's permission

CS 235 4 Credits
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

CS 241 4 Credits
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. Lecture: 3 hours per week. Laboratory: 2 hours per week.

CS 242 4 Credits
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. Prerequisite: CS 120 Programming 1 or instructor's permission.

CS 246 3 Credits
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 mySQL 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.

CRIMINAL JUSTICE (CJ)

CJ 101 3 Credits
INTRODUCTION TO CRIMINAL JUSTICE
Introduction to the history, development, and philosophy of criminal justice. Includes constitutional limitations on criminal justice, agencies of criminal justice, and process of criminal justice. Lecture: 3 hours per week.

CJ 131 3 Credits
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.

CJ 141 3 Credits
INTRODUCTION TO CORRECTIONS
Overview and critical analysis of contemporary correctional theory and practice. Controversial issues in contemporary corrections, including prisoner rights, victimization, the death penalty, and unions. Lecture: 3 hours per week.

CJ 151 3 Credits
INTRODUCTION TO LAW ENFORCEMENT
Line activities of law enforcement agencies with emphasis on the patrol function and the prevention of crime; includes traffic, investigative, juvenile, vice, and other specialized operational units. Lecture: 3 hours per week.

CJ 209 3 Credits
ORGANIZATION AND MANAGEMENT OF POLICE
Personnel management, records and reports, public relations, budgets, and administrative procedures employed by police departments. A general review of the police department's relationship to other municipal functions. Lecture: 3 hours per week.

CJ 215 3 Credits
CRIMINAL INVESTIGATION
Elements of crime with emphasis on police duties, identification of persons and property, interview and interrogation, as well as case construction and presentation.

CJ 217 3 Credits
CRIMINAL EVIDENCE
An introduction to the basic criminal law of Massachusetts rules of evidence. Includes hearsay rules and exceptions, corpus delicti, real evidence, circumstantial evidence, and privilege. Lecture: 3 hours per week.

CJ 221 3 Credits
INTRODUCTION TO CRIMINOLOGY
Criminal and delinquent behavior in the United States, including the variations, ramifications, and measures of preventative control and treatment. Crime and delinquency as social problems and study of methods that bring about more expedient correction and control. Lecture: 3 hours per week.

CJ 241 3 Credits
JUVENILE OFFENDERS
Introduction to the causes of delinquency with concern for delinquency control, detention, and legal confinement. The juvenile court system in the United States and Massachusetts as well as the protective services of metropolitan Boston are discussed. Lecture: 3 hours per week.

CRITICAL THINKING (CT)

CT 100 3 credits
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. Lecture: 3 hours per week.

ECONOMICS (EC)

EC 104 3 Credits
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.

EC 201 3 Credits
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.

EC 202 3 Credits
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.

EC 205 3 Credits
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

EDUCATION (ED)

ED 108 3 Credits
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.

ED 112 3 Credits
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.

ED 115 4 Credits
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.

ED 170 3 Credits
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.

ED 203 3 Credits
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

ED 211 1 Credit
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.

ED 212 3 Credits
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. Prerequisite: PS 222. This course is designed for Education majors. It is recommended that students completed at least one other Education course in addition to the prerequisite.

ED 223 3 Credits
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.

ED 228
BEHAVIOR MANAGEMENT 3 Credits
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.

ED 230/240 6 Credits
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 special needs program. 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 competences 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

ELECTRICAL ENGINEERING (EE)

EE 110 4 Credits
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

EE 115 4 Credits
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, B;s2SPICE). Prerequisite: EE110.

EE 120 4 Credits
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 Quinne-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.

EE 125 4 Credits
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 (B;s2LOGIC, CUPL). Lecture: 3 hours per week. Laboratory: 2 hours per week. Prerequisite EE 120

EE 150 4 Credits
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

EE 231 4 Credits
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.

ELECTRONICS (EL)

EL 101 4 Credits
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. Prerequisite: MA103 or equivalent.

EL 102 4 Credits
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.

EL 125 4 Credits
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.

EL 151 4 Credits
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.

EL 152 4 Credits
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. Prerequisite: EL151.

EL 220 4 Credits
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 an 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.

EMERGENCY MEDICAL TECHNICIAN (EM)

EM 101 6 credits
EMERGENCY MEDICAL TECHNICIAN
This course provides the student with theory, demonstration, and laboratory experience in the following area's of the National Standard Training Curriculum for the EMT-B: anatomy and physiology of body systems, patient assessment, CPR (mandatory), oxygen therapy, ventilation, control of bleeding, management of shock, care of wounds and fractures, medical emergencies, pediatrics, geriatrics, childbirth, environmental emergencies, communications, psychological emergencies, triage, stabilization and transportation. Persons who successfully complete all course requirements are eligible to take the state certification examination for the Emergency Medical Technician. Students must be at least 18 years of age to take the certification exam. Lecture: 4 hours per week. Lab: 4 hours per week. Prerequisite: High School Diploma

ENGLISH (EN)

EN 90 6 Credits
INTRODUCTION TO LANGUAGE *
Combines instruction in all stages of the writing process with lab-based reading practice. Required of some students based on College placement tests. Does not replace any degree requirement or elective. Outcomes: fluency, focus, familiarity with standards for college-level reading and writing, analysis of personal strategies for most effective writing process. Lecture and Lab: 6 hours per week.

EN 100 4 Credits
COLLEGE WRITING w/LAB *
Introduction to the process of writing in an academic setting, including practice in critical reading and research, invention strategies, focus, development, audience awareness, and editing. Activities include lecture, small group discussions, instruction in word processing and online research, collaborative peer review, and self-assessment. Students produce a minimum of 4 essays utilizing multiple sources. Essays are analyzed in draft stages, leading to a portfolio that demonstrates college-level ability in reading and writing. Student performance in class work and exit portfolio determines placement into EN 101 or EN 102. Lecture, discussion, and writing lab: 4 hours per week. Prerequisite: Placement through our entrance or exit placement process

EN 101 3 Credits
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. Lecture: 3 hours per week. Prerequisite: College-level writing proficiency as determined by College placement test and sample.

EN 102 3 Credits
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. Lecture: 3 hours per week. Prerequisite: EN 101

EN 202 3 Credits
ADVANCED WRITING
Assists the student in completing in-depth writing projects including research papers and longer essays. Emphasis on argumentation, critical reading/writing, and editing skills. Writing topics and projects may be chosen from across the disciplines and may be tailored to students' academic majors. May fulfill one of the following: a humanities elective, a free elective, or, (with permission of the instructor) the EN 102 requirement.

ENGLISH AS A SECOND LANGUAGE (ES)

ES 86 6 Credits
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.

ES 87 6 Credits
COLLEGE ESL II *
Designed for intermediate level students. Focuses on development of abilities in reading, writing, speaking, and listening in an integrated approach. Classroom discussion of readings 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.

ES 88 3 Credits
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.

ES 89 3 Credits
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.

ES 91 3 Credits
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.

ES 93 3 Credits
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.

ES 98 3 Credits
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. Lecture: 3 hours per week. 3 Credits Prerequisite: Placement into ES100 or higher.

ES 100 6 Credits
COLLEGE ESL III *
Designed for high-intermediate level students. Focuses on development of abilities in academic reading, writing, speaking, and listening through an integrated approach. Readings and classroom discussion 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.

ES 150 6 Credits
COLLEGE ESL IV *
Designed for advanced level students. Focuses on 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.

ENVIRONMENTAL SCIENCES & SAFETY (EV)

EV 103 4 Credits
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.

EV 104 4 Credits
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.

EV 105 2 Credits
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.

EV 106 2 Credits
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

EV 110 4 Credits
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.

EV 120 3 Credits
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.

EV 130 3 Credits
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.

EV 201 4 Credits
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

EV 210 4 Credits
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

EV 215 4 Credits
LAB ANIMAL SCIENCE & CARE I w/LAB
This course is designed to introduce students to lab animal science and care. The course covers animal classification, anatomy & physiology differences, reproductive physiology, genetics, nutrition and care. Upon completion of this course students should be able to identify different species of animals and identify the external and internal anatomy of selected animals. Students will be able to determine necessary nutrient requirements for lab animals and identify signs that determine the level of health for an animal. Lecture 3 hours per week. Lab 3 hours per week. 4 Credits. Pre-requisites: BI 120 & CH 120.

EV 216 4 Credits
LAB ANIMAL SCIENCE & CARE II w/LAB
This course is a follow-up course for EV 215 designed to build on the information students obtained in EV 215. This course covers animal management and care for lab animals that includes appropriate facilities as related to particular species of lab animals or livestock. The course also covers preventative health requirements and characteristics of a healthy and unhealthy animal. Students determine environmental concerns and discuss care procedures for lab animals. Other topics that are covered include sanitation, disease prevention, clinical health, research procedures, animal research, data collection, analysis and interpretation. The course also includes animal welfare and ethics in lab animal care and research. Lecture 3 hours per week. Lab 3 hours per week. 4 Credits. Pre-requisites: EV 215 & EV 210.

EV 220 3 Credits
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.

EV 235 3 Credits
ANIMAL NUTRITION
This course deals with the biochemical categories of nutrients such as carbohydrates, proteins, lipids, vitamins, minerals and water. Students would develop an understanding of the importance of these nutrients and the effect of their deficiencies has on the animal's health. This course would cover diseases and conditions caused by such deficiencies. This course would also cover the nutritional needs of various types of animals such as swine, beef cattle, poultry, horses, primates, mice and others. Students would develop an understanding of the principles of nutrition and their application to diet formulation and feeding practices for livestock and other animal species. The course would also cover the digestive process and pathways for nutrients and the enzymes systems involved in that. Lecture 3 hours per week. 3 Credits. Prerequisites: CH 110 & BI 120.

EV 240 4 Credits
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. Lecture: 3 hours per week. Laboratory: 3 hours per week. Prerequisites: EV110 and EV210.

EV 242 4 Credits
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 would present their finding in national scientific conferences. Each student should spend at least 160 hours that include lab work sample collection and practice in the preparation of oral and written reports. Prerequisite: EV 210

EV 270 4 Credits
INTERNSHIP FOR ENVIRONMENTAL PROGRAM
Internship in this program places students at a work place in New England for an environmentally related work experience. This course is different from EV 240 in that the content of the student's work is totally related to the function and business of the commercial, academic or government institution where the internship is conducted. Each student enters the internship with an individualized plan, approved by the program coordinator. Specific benchmarks and outcomes must be identified. Eligibility for internship is determined by successful completion of all course requirements or with approval of the program coordinator and division chairperson. Successful completion of the internship is necessary to fulfill the requirements of the associate in science degree in Environmental Science and Technology.

FRENCH (FR)

101 3 Credits
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.

FR 102 3 Credits
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.

GEOGRAPHY (GG)

GG 101 3 Credits
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.

GG 103 3 Credits
INTRODUCTION TO GEOGRAPHY
An introduction to the holistic discipline of geography, this course presents 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, the realities of the geography of our own eastern Massachusetts location, and the dynamic nature of the geography of world locations. Lecture: 3 hours per week.

GG 105 3 Credits
WORLD REGIONAL GEOGRAPHY
A geographic analysis of selected world regions considering both physical and human elements. Regions are studied in terms of their landform, oceanographic, and atmospheric influences. Regions are also investigated in terms of population distribution and economic, political, social, and cultural forms.

GOVERNMENT (GV)

GV 102 3 Credits
CONTEMPORARY POLITICAL THEORY
An analysis of modern political thought. Emphasis on socialism, communism, and fascism as well as the liberal, democratic tradition and New Left Theories.

GV 201 3 Credits
AMERICAN GOVERNMENT
Study of the Constitutions of the United States and of Massachusetts. Examines the American Congress and Presidency, the workings of big government, civil rights, and civil liberties. Lecture: 3 hours per week.

GV 203 3 Credits
UNITED STATES CONSTITUTIONAL HISTORY
This course will examine the economic, social, political as well as legal circumstances surrounding the controversies of the ``great causes" that help to form and refine our ``living constitution." Specific areas that will be addressed include: the relationship of commercial growth to legal change, the rise of the legal profession and consequent changes in legal education, and the handling of certain key issues at the state level.

GV 230 3 Credits
CIVIL RIGHTS AND CIVIL LIBERTIES
This course analyzes the politics of civil rights and civil liberties in the U.S., focusing on the twentieth century. 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, civil rights and affirmative action? How, for example, does government determine whether the right to an abortion should be restricted or whether affirmative action constitutes reverse discrimination? What are the political and social consequences of these governmental decisions and actions?

HEALTH SCIENCES (HL)

HL 103 3 Credits
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.

HL 110 1 Credit
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.

HL 111 3 Credits
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.

HL 125 4 Credits
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

HINDI (HI)

HI 101 4 Credits
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.

HI 102 4 Credits
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.

HISTORY (HS)

HS 101 3 Credits
WESTERN CIVILIZATION I
Examines European thought, institutions, and social and political development from the Renaissance through 1815. Lecture: 3 hours per week.

HS 102 3 Credits
WESTERN CIVILIZATION II
Examines European thought, institutions, and social and political developments from 1815 to the present.

HS 103 3 Credits
WORLD CIVILIZATION I
Compares Russia, China, and the West through themes of ancient heritage, colonialism, nationalism, revolution, independence, westernization, and modernization. Lecture: 3 hours per week.

HS 104 3 Credits
WORLD CIVILIZATION II
Compares Africa, the Middle East, and the West through themes of ancient heritage, colonialism, nationalism, revolution, independence, westernization, and modernization.

HS 115 3 Credits
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.

HS 203 3 Credits
AMERICAN HISTORY TO 1877
Survey of American history from 1753 through Reconstruction. Emphases include: Massachusetts and Federal constitutions, the emergence of political parties, the role of government, the Jacksonian Age, slavery, and the Civil War and Reconstruction. Lecture: 3 hours per week.

HS 204 3 Credits
AMERICAN HISTORY SINCE 1870
Survey continues with emphases on: attempts to deal with growing industrialization, urbanization, and immigration, expansion of the role of government as seen in the New Deal, the Great Society, and the Cold War, as well as contemporary issues. Lecture: 3 hours per week.

HOSPITALITY MANAGEMENT (HM)

HM 101 3 Credits
INTRODUCTION OF 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.

HM 102 3 Credits
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.

HM 122 3 Credits
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.

HM 201 3 Credits
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.

HUMANITIES (HU)

HU 103 3 Credits
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.

HU 104 3 Credits
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 surrealistic art. Lecture: 3 hours per week.

HU 105 3 Credits
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.

HU 106 3 Credits
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.

HU 107 3 Credits
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.

HU 110 3 Credits
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.

HU 120 3 Credits
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.

HU 203 3 Credits
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

HUMAN SERVICES (SW)

SW 101 4 Credits
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, and 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.

INTERIOR DESIGN (IN)

IN 101 3 Credits
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.

IN 102 3 Credits
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.

IN 103 3 Credits
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.

IN 104 3 Credits
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.

IN 201 3 Credits
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.

IN 202 3 Credits
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.

IN 205 3 Credits
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.

ITALIAN (IT)

IT 101 3 Credits
BEGINNING ITALIAN
Instruction on the basic skills of understanding, speaking, reading, and writing Italian. Basic pronunciation skills, limited put 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.

IT 102 3 Credits
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.

LAW (LA)

LA 221 3 Credits
PRINCIPLES OF BUSINESS LAW I
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.

LA 222 3 Credits
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.

LA 227 3 Credits
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

LA 228 3 Credits
CRIMINAL LAW AND PROCEDURES
Introduction to the concepts of criminal mentality and responsibility, the definition of various crimes, and the elements necessary to constitute same. Includes pretrial, arraignment, and trial procedures, defenses available to those accused of crime, jurisdiction of courts and court presentation. Lecture: 3 hours per week.

LA 230 3 Credits
LAW AND SOCIETY
This course introduces students to the institutions and participants of the American legal system. Students examine courts and procedures, civil and criminal law, constitutional law, and public policy. Also, students read and analyze case law and statutes, play simulations, and participate in in-class activities. Lecture, activities, and simulations. Lecture: 3 hours per week.

LA 241 3 Credits
DNA LAW
This course examines the Fourth Amendment concepts of unreasonable search and seizer 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.

LA 242 3 Credits
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.

LA 250 3 Credits
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.

LEARNING COMMUNITY – CRIMINAL JUSTICE (LCC)

LCC 100 7 Credits
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.

LITERATURE (LI)

LI 104 3 Credits
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.

LI 201 3 Credits
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).

LI 202 3 Credits
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)

LI 203 3 Credits
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. Lecture: 3 hours per week. Prerequisites: EN 101 (Completion of EN 102 also recommended)

LI 204 3 Credits
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).

LI 205 3 Credits
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. Lecture: 3 hours per week. Prerequisites: EN 101 (Completion of EN 102 also recommended)

LI 206 3 Credits
BRITISH LITERATURE II
A continuation of LI 205 considering authors from the Romantic, Victorian, and Modern periods of British Literature.

LI 207 3 Credits
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.

LI 208 3 Credits
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.

LI 209 3 Credits
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: 3 hours per week.

LI 230 3 Credits
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)

LI 231 3 Credits
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

LIBERAL STUDIES (LS)

LS 175 SPECIAL TOPICS IN LIBERAL STUDIES 3 Credits
In-depth study of specialized topics in the humanities and social sciences. Topics change from semester to semester according to need and interest. May be taken for one, two, or three Credits. Three modules offered; each five weeks in length. Past modules have included literary visions of America as seen in the writings of Illa Cather, Walt Whitman, William Faulkner, and studies in Latin American Literature. Lecture: 3 hours per week for 5 weeks.

MANAGEMENT (MG)

MG 101 3 Credits
PRINCIPLES OF MANAGEMENT
Integrates traditional and behavioral approaches to management. Managerial functions of planning, organizing, staffing, leading, and controlling. 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.

MG 102 3 Credits
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.

MG 204 3 Credits
HUMAN RESOURCE MANAGEMENT
Personnel processes involved in manpower planning, personnel recruitment, employee selection, orientation, and placement. 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

MG 219 3 Credits
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.

MARKETING (MK)

MK 103 3 Credits
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.

MK 213 3 Credits
PRINCIPLES OF SALES
An aid for 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

MK 214 3 Credits
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.

MK 215 3 Credits
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

MK 220 3 Credits
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 that 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).

MATHEMATICS (MA)

MA 001 3 Credits
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.

MA 90 3 Credits
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.

MA 95 3 Credits
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.

MA 98 3 Credits
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.

MA 102 3 Credits
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. Lecture: 3 hours per week. Prerequisite: MA 098 or higher

MA 103T 1 Credit
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. Lecture: 1 hour per week. Prerequisite/Co-requisite: MA102 College Algebra be taken previously or concurrently

MA 104 4 Credits
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

MA 105 3 Credits
INTRO 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. Lecture: 3 hours per week. Prerequisite: MA 098 or higher.

MA 106 3 Credits
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 098 or higher

MA 109 3 Credits
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.

MA 111 3 Credits
BUSINESS MATHEMATICS
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.

MA 119 3 Credits
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.

MA 131 3 Credits
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.

MA 142 3 Credits
SP TPCS MATH - ELEMENTS OF MATH I
This course provides a comprehensive, conceptually based study of the mathematics of the natural and whole number systems. Topics studied include patterns and problems solving, decimal and non-decimal numeric systems, algorithms for arithmetic operations, geometric shapes and their properties, systems of measurement and introductory statistics and probability. Inquiry-based instruction, problem solving strategies and project work are emphasized. This course is required for Early Childhood Education and Elementary Education majors

MA 143 3 Credits
SP TPCS MATH - ELEMENTS OF MATH II
This course provides a comprehensive, conceptually based study of the rational and real number system, fundamental concepts of number theory and plane and solid geometry and measurement. Topics include problems of ratios, percentages and proportions, concepts of divisibility and mathematical proof. Inquiry-based instruction, problem solving skills, project work and the appropriate use of technology including calculators and computers are emphasized. This course is required for Early Childhood Education and Elementary Education majors.

MA 200 4 Credits
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.

MA 201 4 Credits
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. Lecture: 4 hours per week. Prerequisite: MA 200

MA 202 4 Credits

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. Lecture: 4 hours per week. Prerequisite: MA 201

MA 210 4 Credits
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.

MA 211 4 Credits
DIFFERENTIAL EQUATIONS
An introduction to the theory and applications of elementary differential equations and boundary value problems. Intended for engineering and the physical sciences. Designed to parallel An introduction to the theory and applications of elementary differential equations and boundary value problems. Intended for engineering and the physical sciences. Designed to parallel a course in Differential Equations at a four-year college or university. Lecture: 4 hours per week. Prerequisite: MA202 or equivalent.

MAC 100 3 Credits
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

MAC 101 3 Credits
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.

MAXILLOFACIAL (MN)

MX 101 6 Credits
PRINCIPLES & PRACTICE OF MAXILLOFACIAL I w/LAB
This course consists of lecture presentations that will provide an introduction to the field of Otorhinolaryngologic Surgery. Emphasis is on microbiology and principles of asepsis, decontamination, disinfection and sterilization, patient preparation and vital signs monitoring, anatomy and physiology relative to maxillofacial and oral surgeries, medical and surgical terminology, instrumentation, dental surgical equipment, and surgical site preparation. Emphasis also includes the psychosocial needs of the patients, legal, moral and ethical behavior. Total Credits 6.

MX 102 3 Credits
PRINCIPLES & PRACTICE OF MAXILLOFACIAL II
This course will continue to present the fundamental principles in the specialized area of Otorhinolaryngologic Surgery. Emphasis will be: anesthesia and anesthetic agents, auto transfusion blood products, and replacement, safe transfer and positioning of patients, specialized instrumentation and power equipment; and medical-dental coding and clinical. Total Credits 3.

MX 103 4 Credits
CLINICAL PRACTICUM FOR MAXILLOFACIAL SURGERY
Students will be placed in the clinical environment of the dental office and operating room surgical practice. Clinical experience will total 120 hours; 60 hours of dental office practice and 60 hours of operating room practice. Clinical education integrates theory and laboratory skills in a setting where maxillofacial surgery is performed. Students are expected to perform with increased autonomy when assisting with maxillofacial surgery. While in assigned clinical environments of the dental office and operating room surgical practice, students will have their supervised clinical experience. Emphasis in clinical is on integrating theory and laboratory skills to demonstrate proficiency and safety in their surgical care of the patients. Students are expected to perform with increased autonomy when assisting with maxillofacial surgery. Total credits 4.

MECHANICAL ENGINEERING (MN)

MN 101 4 Credits
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.

MN 115 3 Credits
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

MN 118 3 Credits
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

MN 121 4 Credits
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

MN 125 4 Credits
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

MN 130 4 Credits
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.

MN 135 4 Credits
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/ Creo 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: 3 hours per week. 4 credits. Prerequisite: MN 130 or permission of instructor

MN 140 4 Credits
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.

MN 141 4 Credits
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.

MN 150 4 Credits
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.

MN 155 4 Credits
PRINTED CIRCUIT DESIGN II
Continuation of MN 150 with emphasis on projects. Lecture: 3 hours per week. Laboratory: 2 hours per week. Prerequisites: MN130 and MN150.

MN 203 3 Credits
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

MN 204 3 Credits
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

MN 210 4 Credits
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.

MN 220 4 Credits
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.

MN 222 3 Credits
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.

MN 230 2 Credits
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.

MN 241 4 Credits
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: 3 hours per week. Lab: 2 hours per week 4 credits.
Prerequisite: MN 141 or permission of instructor.

MN 250 4 Credits
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. Prerequisites: MN121 or MN135.

MN 251 4 Credits
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. Prerequisites: MN121 or MN135.

MN 261 4 Credits
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.

MN 271 4 Credits
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 MN241.

MN 272 4 Credits
DESIGN 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.

MEDICAL CODING (MR)

MR 120 3 Credits
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 4; Lecture: 4 hours per week. Pre-Requisite: BI 113 Essentials of Anatomy and Physiology; HL 103 Medical Terminology
Co Requisite: EN 101 Freshman English I

MR 203 4 Credits
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

MR 206 4 Credits
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.

MR 207 3 Credits
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)

MEDICAL OFFICE ADMINISTRATIVE ASSISTANT (MO)

MO 101 5 Credits
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.

MO 110 5 Credits
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

MO 120 4 Credits
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.

MUSIC (MU)

MU 102 3 Credits
INTRODUCTION TO MUSIC THEORY
Study of the basic principles of music theory and development of fundamental skills of music reading. Students are introduced to the keyboard and learn beginning techniques of piano playing. Prior instrumental study or experience not required. For beginners only. Lecture: 3 hours per week.

NURSING (NU)

NU 130 2 Credits
FOUNDATIONS FOR NURSING PRACTICE
This course introduces students to the foundations of professional practice. Students are exposed to the historical context from which the art and science of nursing has evolved into contemporary practice. The National League for Nursing values and the MassBay AD curriculum core competencies are presented in order to promote understanding of key practice issues and the goals of this program. Students are introduced to the foundations of integrated reasoning and nursing process. Total course Credits 2, theory 2 hours a week, total course contact hours 30.

NU 135 2 Credits
PSYCHOSOCIAL NURSING AND CARE OF THE OLDER ADULT I
This course introduces students to basic aspects of psychosocial nursing and the care of the older adults. Concepts of stress and coping, social functioning, grief and loss, cognition and health/wellness are presented in the context of the holistic needs and perceptions of older adults. Course content will explore issues commonly encountered in healthcare and nursing practice with the older adult including elder abuse, depression, malnutrition, social isolation and lack of access to care. Normal physiological and psychological changes associated with aging are differentiated from maladaptive responses. Evidence-based strategies for prevention, assessment and collaborative management of common problems are introduced. 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. Total course Credits 2, theory 2 hours a week for a 15-week semester, total course contact hours 30. Prerequisites: BI 115, BI116, EN 101, BI 123, HL111, and PS 101. Co-requisites: NU 130, NU 125, NU 136, and PS 118.

NU 140 5 Credits
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

NU 160 4 Credits
NURSING CARE OF THE ADULT I
This course expands on previously acquired nursing knowledge and integrated reasoning through focus the care of adult patients with common acute and chronic health patterns. Select biophysical concepts provide the foundation for understanding principles of nursing and collaborative practice. Course content is organized around core competencies. Exemplars of commonly encountered disease processes are used to reinforce pattern recognition and diagnostic reasoning in the health setting. 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. Total course Credits 4, theory 4 hours per week, total course contact hours 60.

NU 225 3 Credits
NURSING CARE OF THE ADULT II
In this second adult medical surgical nursing course, emphasis shifts from the nursing care of adults with discrete clinical problems to those requiring knowledge of more complex, interrelated biophysical concepts. Students will apply integrated reasoning to analyze multifaceted patient and systemic variables encountered in practice. Learning activities reinforce evidence-based rationales that support nursing care in the acute care setting. Core competencies of the AD nursing program are used to organize didactic concepts. 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. Total course Credits 3, theory 6 hours per week, total course contact hours 45.

NU 235 3 Credits
NURSING CARE OF THE DEVELOPING FAMILY
This course builds on previously acquired knowledge by focusing on the nursing care of childbearing families from birth through adolescence. Content emphasizes the role of the nurse and other health team members in meeting the physiological, developmental and social needs of children and families with select common pediatric and reproductive health needs. Didactic content is organized around core competencies. 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. Total course credit 3, theory 6 hours per week, total course contact hours 45.

NU 260 4 Credits
NURSING CARE OF THE ADULT III WITH COMPLEX ISSUES
This final medical surgical course is intended to assist students to synthesize the complexities of acute care nursing practice with emphasis on adults with critical care and emergency health problems. Students will analyze multifaceted biophysical concepts while integrating knowledge of the systems and processes required to effectively manage both individual and group assignments. Didactic content reinforces independent learning and accountability for the incorporation of the core competencies identified and reinforced throughout this program. 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. Total course Credits 4, theory 4 hours per week, total contact hours 60.

NU 270 2 Credits
PSYCHOSOCIAL NURSING AND CARE OF THE OLDER ADULTS II
This course builds on previously acquired knowledge and skills through focus on the specialized needs of psychiatric and geriatric adult patients in medical surgical settings. Course content emphasizes complex, acute pathophysiology and co-morbid psychiatric issues that present special challenges for nursing and healthcare and teams. Biological, environmental and psychological factors contributing to mental illness and serious functional decline are explored. The trajectory of mental illness over the lifespan is examined. Evidence-based nursing and collaborative interventions that retain the dignity and safety of patients and families are identified. Didactic content reinforces independent learning and accountability for the incorporation of the core competencies identified and reinforced throughout this program. 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. Total course Credits 2, theory 2 hours per week in a 15 week semester, total contact hours 30.

NU 275 3 Credits
NURSING CAPSTONE
This final course is intended to facilitate synthesis of core end of program learning outcomes or core competencies through analysis of the complex practice issues encountered by today's nurse. Topics focus on leadership, continuing education, research analysis and utilization, advanced ethical issues, professional and workplace issues, healthcare initiatives, informatics, barriers to patient-centered care and the future of nursing. Integrated reasoning skills are expanded by participating in simulated disasters and/or catastrophic events that require advanced nursing and interdisciplinary intervention. A variety of independent and collaborative peer activities are intended to elicit the responsibility and self-directed learning required to successfully transition to practice. Total course Credits 3, theory 3 hours per week, total contact hours 45.

NUTRITION (NS)

NS 101 3 credits
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.

PARALEGAL (PA)

PA 100 3 Credits
INTRODUCTION TO PARALEGAL STUDIES
This course examines the varied utilizations of the Paralegal's role in today's well-managed law office with a discussion of applicable ethical considerations and provides an introduction to substantive areas of law. Lecture: 3 hours per week.

PA 104 3 Credits
LITIGATION FOR PARALEGALS
Examination of the legal institution of 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.

PA 201 3 Credits
LEGAL RESEARCH AND WRITING
A practical "hands-on" 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 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.

PA 202 3 Credits
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, legal memorandum, and the court brief. Lecture: 3 hours per week. Prerequisite: PA201

PA 203 3 Credits
REAL ESTATE FOR PARALEGAL
Summary of substantive law related to real estate property, including fee interest, estates, and tenancies. Emphasis on real estate transactions, purchases and sales documentation, title examination, and contract preparation. Limited exploration of objectives and evaluation of real estate investment strategy. Lecture: 3 hours per week.

PA 205 3 Credits
FAMILY LAW FOR PARALEGAL
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.

PARAMEDICINE (PM)

PM 101 4 Credits
FOUNDATIONS OF PARAMEDICINE
This course provides the student with theory, demonstration and experiential laboratory in the following areas contained in the National Standard Training Curriculum for the Paramedic; PM communications; rescue techniques; major incident response; patient assessment and management; introduction to respiratory systems; airway and ventilation; pathophysiology of shock and management of burns. Lecture: 2 hours per week. Lab: 4 hours per week.

PM 102 2 Credits
GENERAL PHARMACOLOGY FOR THE PARAMEDIC
This course provides the student with theory and demonstration in general principals of pharmacology. The student will also learn computation and conversion of dosage problems and demonstrate proficiency in the administration of pharmacologic agents. Lecture: 2 hours per week.

PM 103 1 Credit
TRENDS FOR THE PARAMEDIC
This course provides the student with instruction in the following areas contained in the National Standard Training Curriculum for the Paramedic, roles and responsibilities, PM systems, medical legal considerations and medical terminology. Lecture: 1 hour per week.

PM 104 5 Credits
CARDIOLOGY
This course provides students with theory, demonstration and experiential laboratory in the following areas contained in the National Standard Training Curriculum for the Paramedic, anatomy, physiology and electrophysiology of the cardiovascular system. Students will explore pathophysiology of patients with AMI, angina, central and peripheral vascular insufficiencies, dysrhythmia and 12 lead electrocardiogram interpretation. Lecture: 3 hours per week.
Lab: 4 hours per week.

PM 105 3 Credits
MEDICAL EMERGENCIES
This course provides the student with instruction in the following areas contained in the National Standard Training Curriculum for the Paramedic: pathophysiology and management of respiratory, endocrine and nervous systems, toxicology, alcoholism, the acute abdomen, infectious diseases and environmental emergencies. Lecture: 3 hours per week.

PM 110 4 Credits
SPECIAL CARE ASPECTS PARAMEDIC
This course provides the student with theory, demonstration and experiential laboratory in the following areas contained in the National Standard Training Curriculum for the Paramedic: trauma, pediatrics, neonatology, obstetrics, gynecology, gerontology and psychology. Lecture: 3 hours per week. Lab: 2 hours per week. Prerequisite: All first semester paramedic courses and BI 113

PM 111 1 Credit
ADVANCED CARDIAC LIFE SUPPORT PROVIDER
This course provides the student with theory, demonstration and experiential laboratory in advanced cardiac life support. This course is taught in accordance with the standards set by the American Heart Association. Upon successful completion of the course, the student will be certified as an Advanced Cardiac Life Support Provider through the American Heart Association. Lecture/Lab: 6 hours per week for 2 weeks. Prerequisite: PM 101, PM 102, PM 104 & PM 105.

PM 112 1 Credit
PEDIATRIC ADVANCED LIFE SUPPORT PROVIDER
This course provides the student with theory, demonstration and experiential laboratory in pediatric advanced life support. It is taught in accordance with the standards set by the American Heart Association. Upon successful completion of the course, the student will be certified as a Pediatric Advanced Life Support Provider through the American Heart Association. Lecture/Lab: 6 hours per week for 2 weeks. Prerequisite: PM 101, PM 102, PM 104 & PM 105.

PM 113 1 Credit
NEONATAL ADVANCED LIFE SUPPORT PROVIDER
This accelerated course provides the student with theory, demonstration and experiential laboratory in the following areas of neonatal life support; physiology of a newborn; causes of arrest in the newborn; steps to resuscitate neonates, including end tracheal intubations and resuscitation medications. Lecture/Lab: 6 hours per week for 2 weeks. Prerequisites: PM 101, PM 102, PM 104 & PM 105

PHILOSOPHY (PH)

PH 101 3 Credits
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.

PH 102 3 Credits
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.

PH 103 3 Credits
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.

PH 106 3 Credits
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.

PH 110 3 Credits
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.

PHLEBOTOMY (PB)

PB 100 3 Credits
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: 2 hours per week. Lab: 2 hours per week.

PB 105 4 Credits
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

PHOTOGRAPHY (PO)

PO 115 3 Credits
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.

PO 120 3 Credits
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

PO 125 3 Credits
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.

PO 126 3 Credits
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.

PHYSICS (PY)

PY 101 4 Credits
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.

PY 102 4 Credits
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

PY 103 4 Credits
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

PY 104 4 Credits
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.

PRACTICAL NURSING (PN)

PN 102 10 Credits
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: 75 hours per semester. Clinical: 150 hours. Pre/Co-requisites: BI 113, BI 118, HL 111, PN 105, PN 107

PN 105 1 Credit
ISSUES & TRENDS IN PRACTICAL NURSING I
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.

PN 106 1 Credit
ISSUES AND TRENDS IN PRACTICAL NURSING II
This course expands upon the content, legal, and ethical considerations discussed in Issues & Trends I. Students will be prepared to assume the role of the Practical Nurse. The course will differentiate the functions of the Licensed Practical Nurse and the Registered Nurse and identify the role of the Licensed Practical Nurse in assisting the Registered Nurse to care for the patient with complex needs. This course covers the definition of licensure, application procedures for obtaining a license, continuing education requirements, and professional responsibility to maintain currency in practice. The functions of nursing organizations and other health and welfare organizations are presented. In addition, students will explore their feelings toward issues that occur in clinical practice. Students will also examine career opportunities, resume writing, the interview process, and issues involved in continuing education endeavors. Lecture: 1 hour per week. Prerequisite: PN 105

PN 107 2 Credits
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. 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. Lecture: 2 hours per week.

PN 108 2 Credits
NURSING PROCESS INTERSESSION
This course focuses on application of the nursing process. Using the framework of basic human needs, students learn to apply the nursing process to selected patients. Application of scientific principles in the provision of patient care is accomplished in the clinical setting and seminar discussions. Individual progress in the development of the practical nurse role is achieved through writing and sharing written exemplars. Seminar: 6 hours. Clinical: 60 hours. Prerequisite: PN 102

PN 110 2 Credits
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 PN 120. Lecture: 2 hours per week. Pre-requisite: PN 107. Co-requisite: PN 120

PN 120 14 Credits
NURSING CARE OF THE ADULT AND AGED
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: 105 hours per semester. Clinical: 210 hours. Prerequisite: PN 108. Pre/Co-requisites: PN 106, PN 110, PS 118

PN 130 7 Credits
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. *Prerequisite: PN 102.*

PSYCHOLOGY (PS)

PS 101 3 Credits
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 emotions and how stress influences peoples' lives. Lecture: 3 hours per week.

PS 113 3 Credits
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.

PS 118 3 Credits
LIFE SPAN PSYCHOLOGY
Examines regularly predicted physical, psychological, and emotional changes from conception through aging. Theories and concepts of the psychology of the life span are integrated. Lecture: 3 hours per week.

PS 150 3 Credits
CAREER/LIFE PLANNING
In relation to the career choice process, theories of Cooley, Freud, Maslow, Mead and left/right brain functions will be presented. Students will be shown relevance of these theories in how one takes charge of their lives and/or careers, and how to assess their attitudes, values, skills, thinking styles, personality styles, and to develop ways of effectively communicating these to others. Lecture: 3 hours per week.

PS 222 3 Credits
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. Lecture: 3 hours per week.

PS 223 3 Credits
PSYCHOLOGY OF CRIMINAL BEHAVIOR
This course concerns the psychological roots of criminal behavior. The course begins with defining what is a crime and then gives a brief review of the criminal justice system, both juvenile and adult, and then moves on to the roots of these behaviors. How much of 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 over crowding, pollution, and noise. The course will also take a developmental look at crime that begins in childhood, continues through adolescence and finally moves into adulthood. We 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

PS 231 3 Credits
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. Lecture: 3 hours per week.

PS 240 3 Credits
ABNORMAL PSYCHOLOGY
Analyzes a spectrum of abnormalities, ranging from schizophrenia to depression. Applies a number of theoretical models to the understanding of etiology, behavioral manifestations, and treatment modalities.
Lecture: 3 hours per week.

PS 241 3 Credits
GROUP PROCESS
Students learn the techniques and skills needed to work with groups: communication skills, decision-making, development of leadership styles, and interaction patterns. Journal writing and experiential learning from small group participation are integral elements of this course. Lecture: 3 hours per week.

PS 250 3 Credits
RESEARCH METHODS
Overview of scientific research methods and steps in the research process. Analysis of qualitative and quantitative research designs, sampling strategies, and statistical techniques. Lecture: 3 hours per week.

PS 260 3 Credits
PSYCHOLOGY IN BUSINESS AND INDUSTRY
Introduction to human relation problems in business and industry. Examines personnel issues, consumer psychology, conflict supervision, communication, motivation, and cooperation in the workplace. Case studies employed. Lecture: 3 hours per week.

RADIOLOGIC TECHNOLOGY (RT)

RT 101 3 Credits
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

RT 102 3 Credits
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.

RT 111 3 Credits
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

RT 112 3 Credits
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

RT 121 3 Credits
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

RT 122 3 Credits
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

RT 123 6 Credits
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

RT 131 4 Credits
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

RT 203 3 Credits
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

RT 213 2 Credits
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

RT 214 2 Credits
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

RT 216 3 Credits
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

RT 217 3 Credits
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

RT 221 4 Credits
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

RT 222 4 Credits
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

SCIENCE (SC)

SC 102 4 Credits
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.

SC 103 4 Credits
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.

SC 170 1 Credit
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.

SC 171 1 Credit
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.

SC 172 1 Credit
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.

SIGN LANGUAGE (SL)

SL 101 3 Credits
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 a variety of communication strategies.
Lecture: 3 hours per week.

SL 102 3 Credits
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

SOCIOLOGY (SO)

SO 101 3 Credits
INTRODUCTION TO SOCIOLOGY
Introduces students to the major concepts and theoretical approaches of the field. Emphases on social organization, stratification, community, power, and social change.
Lecture: 3 hours per week.

SO 111 3 Credits
URBAN SOCIOLOGY
Examines social institutions, problems, value conflicts, and social changes unique to urban communities. Both theoretical and practical issues discussed. Lecture: 3 hours per week.

SO 113 3 Credits
MARRIAGE AND THE FAMILY
Explores/examines marriage and family as a social institution; attention to the roles of men and women and their interpersonal relationships during dating, engagement, marriage, parenthood, and later years.
Lecture: 3 hours per week.

SO 115 3 Credits
SOCIAL PROBLEMS
Examines selected problems affecting life in contemporary society. Includes the aged, crime and delinquency, drugs, and racial and minority issues. Awareness and understanding of why and how problems arise and the means for dealing with them. Lecture: 3 hours per week.

SO 120 3 Credits
DISABILITIES: DIAGNOSIS AND INTERVENTIONS
Examines the etiology and symptomology of disabilities, including physical and psychiatric disabilities, 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.

SO 203 3 Credits
ETHNIC STUDIES
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 in terms of theoretical orientations and social science constructs.
Lecture: 3 hours per week.

SO 221 3 Credits
DRUGS, PEOPLE, AND PROBLEMS
History of drugs in American culture. Social, economic, legal, medical, and political issues concerning drug use and abuse. Causes of drug use and abuse, their impact on the individual and society, views of youth, medical, and legal experts.
Lecture: 3 hours per week.

SO 222 3 Credits
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.

SPANISH (SP)

SP 101 3 Credits
BEGINNING SPANISH I
Designed to develop basic oral and written skills. Graded readings required. Lecture: 3 hours per week.

SP 102 3 Credits
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

SP 111 3 Credits
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

SP 115 3 Credits
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

SP 201 3 Credits
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.

SP 202 3 Credits
INTERMEDIATE SPANISH II
Continued emphasis on mastery of basic speaking skills, vocabulary development, idiomatic usage. Selected readings.

SPEECH/THEATER/FILM (SF)

SF 131 3 Credits
ORAL COMMUNICATION
Training and practice in principles and techniques of modern oral communication. Methods of organization and delivery and consideration of improvement of the voice, diction, and articulation. Lecture: 3 hours per week.

SF 145 3 Credits
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.

SF 146 3 Credits
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.

SF 221 3 Credits
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.

SURGICAL TECHNOLOGY (SX)

SX 110 8 Credits
PRINCIPLES OF SURGICAL TECHNOLOGY I
This course introduces the field of Surgical Technology. Emphasis is on aseptic technique and basic case preparation. Topics presented include pathophysiology, electricity and physics, robotics, history of surgical technology and legal, ethical and moral principles. Operating Room hazards, 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

SX 120 8 Credits
PRINCIPLES OF SURGICAL TECHNOLOGY II
This course is a continuation of SX 110. It covers anesthesia, surgical pharmacology, positioning, wound healing, pre-operative routines, patient care procedures, microbiology, central processing technology, and workplace and self-management. Clinical education integrates the lecture content with skills in an operating room setting, where students are expected to function with increasing autonomy in various surgical procedures. Concepts of Central Processing Technology are also presented. 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

SX 130 7 Credits
PRINCIPLES OF SURGICAL TECHNOLOGY III
This course is a continuation of SX 120. It emphasizes specialty procedures e.g., laser surgery, laparoscopic surgery, vascular, neurological and orthopedic surgery. Lecture: 3 hours per week. Clinical: 24 hours per week. Prerequisite: SX 120

WRITING (WR)

WR 102L 2 Credits
PORTFOLIO DEVELOPMENT LAB
Designed to provide feedback and support for students with complete portfolios that came within two points of passing the exit assessment conducted by the Department of English. Students work with one another and with a reading/writing specialist in small groups on reading, revision, and development of the papers they created for their original portfolio. At the end of the course, students may submit their revised portfolios for assessment. Lab: 2 hours per week.

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.

Automotive Technology Center
The Automotive Technology Center located in Ashland has become the premier technical training facility in New England. This state-of-the-art facility houses MassBay's ASE Master certified training programs for Chrysler/JEEP/Dodge Ram, General Motors, Toyota/Lexus, and BMW. The Center also provides technical training and resources for AC Delco, the Commonwealth of Massachusetts, Delphi, Hunter Engineering, Raytheon Systems Co., Sullivan Tire, and others. The Automotive Technology Center is an innovative learning environment where education meets industry.

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 and wellness room with exercise equipment. Officially opened and dedicated during the fall 2003 semester, 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 (ONE Card)

MASSBAY BUC$ ONE CARD (Student ID)

The "ONE CARD" is the official identification card of MassBay Community College issued to every student and employee. The **ONE CARD** is an essential key to campus life. In addition to being an official form of identification, it is used for many other College services; **MASSBAY BUC$** can be used to make purchases in the cafeteria, bookstore and vending machines. The **ONE CARD** is also a Minuteman Library Network card. **MASSBAY BUC$ ONE CARDS** are available to MassBay students registered for at least one credit and to College employees. The "ONE card" 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 **ONE Cards** 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 ONE Card 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 Career Center 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 Development 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 periodically throughout the academic year.

The Office of Career Development 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 International Education & Study Abroad Programs 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.

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 within 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):

1. School officials with legitimate educational interest;
2. Other schools to which a student is transferring;
3. Specified officials for audit or evaluation purposes;
4. Appropriate parties in connection with financial aid to a student;
5. Organizations conducting certain studies for or on behalf of the school;
6. Accrediting organizations;
7. To comply with a judicial order or lawfully issued subpoena;
8. Appropriate officials in cases of health and safety emergencies;
9. 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 1-800-USA-LEARN (1-800-872-5327). Individuals who use TDD may call 1-800-437-0833.

Or you may contact the following address:
Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202-8520

Confidentiality of Student Records
The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their educational records. Students' rights under this Act are as follows:

Inspection and Review
Students have the right to inspect and review their education records within 45 days of the day the College receives a request for access. Students should submit to the Registrar, Office of Student Development, or other appropriate official, a written, dated and signed request that identifies the record(s) they wish to inspect. The College official will make arrangements for access and notify a student of the time and place where the records may be inspected. If the records are not maintained by the College official to whom the request was submitted, that official shall advise a student of the correct official to whom the request should be addressed.

Challenge of Records
Students have the right to request the amendment of their education records that they believe are inaccurate or misleading. Students should write to the College official responsible for the record, clearly identify the part of the record they want changed, and specify why they feel it is inaccurate or misleading. If the College decides not to amend the record as requested by the student, the College will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

Record Disclosure
Students have the right to consent to or deny disclosures of personally identifiable information contained in education records, except to the extent that the Family Educational Rights and Privacy Act (FERPA) authorizes disclosure without consent. One exception that permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the College in an administrative, supervisory, academic, research, or support staff position (including public safety personnel and health staff); a person or company with whom the College has contracted (such as an attorney, auditor, or collection agent), a person serving on the Board of Trustees; or a student serving on an official committee such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility. Further, upon request, the College discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

Right of Complaint
Students have the right to file a complaint with the U.S. Department of Education concerning alleged failures by MassBay to comply with the requirements of the Family Educational Rights and Privacy Act (FERPA). The name and address of the office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, D.C. 20202-8520

Notice of Non-Discrimination
MassBay does not discriminate on the basis of sex, creed, color, race, sexual orientation, age, national origin, disability or veteran or marital status in all of its educational programs, activities or employment policies, as required by Title IX of the 1972 Education Amendments and other federal and state anti-discrimination laws. MassBay makes a serious effort to represent a diverse group of students, faculty and staff, and to promote a climate of acceptance for minority groups. If you have any questions about compliance with Title IX, please contact the Affirmative Action Officer at MassBay.

Crime Awareness and 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.

Policy Concerning Sexual Assault
MassBay is committed to providing an atmosphere for learning that is free from 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 thoroughly 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/or 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, faculty or staff member, 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 Massachusetts Bay Community College's Policy Concerning Sexual Harassment is available from the Office of Human Resources.

STUDENT REGULATIONS AND POLICIES

Student Code of Conduct
Students at MassBay are expected to conduct themselves with an awareness of and respect for the rights of others and of the College. During the new student orientation period and in the MassBay Student Handbook, students are informed of the College's rules and regulations and also learn of the standards of conduct expected of them at MassBay. The College's standards of conduct are designed to support MassBay's expectation that the actions of all members are guided by mutual respect. Students who engage in any form of physical or verbal abuse of MassBay students or staff, or otherwise violate the policies detailed in the MassBay Student Handbook are subject to disciplinary action, including but not limited to probation, suspension, or expulsion. Sampling of these policies is listed below. Please see the Student Handbook for more detailed information.

Academic Integrity
In accepting admission to MassBay, students also accept the responsibility for maintaining high standards of academic integrity and scholarly practice. Any willfully dishonest academic behavior such as plagiarism or cheating is subject to disciplinary action. Academic dishonesty is considered to be a serious offense against the College community. Please see the Student Handbook or more detailed information.

Cheating
Cheating includes, but is not limited to: (1) use of any unauthorized assistance in taking quizzes, tests, or examinations; (2) dependence upon aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out assignments; (3) the acquisition, without permission, of tests or other academic material belonging to a member of the College faculty or staff; (4) the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgement; (5) the unacknowledged use of materials prepared by another person or agency engaged in the selling of terms papers or academic materials; (6) taking credit for work done by another person or doing work for which another person will receive credit; (7) copying or purchasing another person's work, or arranging for others to do work under a false name.

Plagiarism
Plagiarism includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgement. It also includes the unacknowledged use of materials prepared by another person(s) or agency engaged in the selling of terms papers or other academic materials. This includes material that is obtained via computer.

Alcohol and Illicit Drugs
The use of illicit drugs, or alcoholic beverages by persons under the legal drinking age in Massachusetts is a violation of State Law and is prohibited on the College campus.
MassBay is in compliance with P.L. 101-226, the Drug-Free Schools and Communities Act, Amendments of 1989, which prohibits the unlawful possession, use, or distribution of illicit drugs and alcohol by students and employees. MassBay is also in compliance with P.L. 100-690, 102 Stat. 4181, the Drug-Free Workplace Act of 1988, which prohibits States and State Agencies from the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance in the workplace.

Hazing
Under Massachusetts General Laws, Chapter 269, Sections 17 through 19, the definition of the term "hazing" is as follows: " Any conduct or method of initiation into any student organization, whether on public or private property, which willfully or recklessly endangers the physical or mental health of any student or other person." Hazing is strictly prohibited at MassBay.

Smoking Policy
Smoking is not permitted in any MassBay building or within 50 feet of any entrance. Outdoor smoking areas are designated.

Technology Use
To ensure fair and equal access and treatment of the College's users, MassBay has adopted a code of conduct for use of computers and technology. This code is printed in full in the MassBay Student Handbook.

Verbal/Physical Threats and Harassment
It is considered to be a major violation of College policy for any student or member of the community at large to verbally or physically threaten or harass a student or employee of MassBay. Specific policies and procedures regarding physical and verbal threats and harassment are defined in detail in the MassBay Student Handbook.

Student Grievance Procedures
The College has instituted procedures to secure prompt and equitable resolution of student complaints and grievances. Grievances filed in the appropriate forums include, but are not limited to, matters arising under federal and state laws prohibiting discriminatory educational regulations, policies, and/or practices, i.e., Title IX of the Education Amendments of 1972; Section 504 of the 1973 Rehabilitation Act; Title VI of the 1964 Civil Rights Amendment; and Massachusetts General Laws, Chapter 151C, Section 1, et seq. A complete description of MassBay's student grievance procedures is printed in the MassBay Student Handbook.

FACILITY REGULATIONS AND POLICIES

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, faculty and staff, 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, faculty 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.

Events
The President of MassBay 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. All non-academic use of MassBay facilities must 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.

Classroom Use
Use of MassBay classrooms are restricted to authorized use only by MassBay faculty and staff; registered MassBay students; and others designated by an appropriate and authorized College official. Classrooms may be reserved and scheduled by the Registrar or the Manager of Special Events only. Classrooms will be locked when not scheduled for use. Students may not be provided with keys to any College facility, including classrooms, unless authorized by the President or his/her designee. Use of classrooms is limited to College course related instruction, research or projects, unless authorized by the President or his/her designee.

Lab Use
Use of MassBay laboratories is restricted to authorized use only by MassBay faculty and staff; registered MassBay students; and others designated by an appropriate and authorized College official. Laboratories may be reserved and scheduled by the Registrar or the Manager of Special Events only. Laboratories will be locked when not scheduled for use. At all times, students in a lab (clinical or research) must be accompanied by a faculty member or authorized College personnel. Use of laboratories is limited to College course related instruction, research or projects, unless authorized by the President or his/her designee. Upon request, individuals using College labs will be required to provide proof of College affiliation or produce a contract.

Library Use
The library is a member of The Minuteman Library Network and as such is open to all holding a Minuteman Library Network Card. Users who are not registered MassBay students, faculty, or staff must check in with the librarian upon arrival. 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.

Automotive Technology Facilities
Automotive technology facilities are restricted to authorized use only by MassBay faculty and staff, registered MassBay students, or others designated by an appropriate and authorized College official. Automotive technology facilities may be reserved and scheduled by the division Dean or by the Manager of Special Events only. Automotive technology facilities will be locked when not scheduled for use.

Recreation & Wellness Center and Athletics Fields
The MassBay Recreation & Wellness Center and athletic fields and facilities 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 Recreation & Wellness Center and athletic fields and facilities may be reserved and scheduled by the Manager of Special Events and the Athletics Director only. Usage policies for new and/or expanded facilities will be adopted and implemented as necessary.

External Group Policies
Facilities at MassBay are primarily for purposes of College instruction, College programs, student life and public service. Facilities may be used by the community, but are not available for unrestricted use by non-College affiliated 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. All external use of MassBay facilities must 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 apply also to any individual or organization using College facilities. Catering services are available through an outside vendor upon request. Separate charges apply and payment is to be made directly to the vendor. 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 and/or number in attendance at the discretion of the President or his/her designee. Notification of event cancellation must occur five (5) days prior to the event or fees will be forfeited.

ADMINISTRATION, FACULTY & STAFF

As of March 2013

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B.A., Bowling Green State University

Abraham, Catherine
Coordinator of Library Services
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B.S., Lesley College

Acevedo, Victor
Clerk, Admissions

Alegi-Feeney, Joan
Professor, Psychology
M.A., Framingham State College
M.Ed., University of Massachusetts Boston
B.S., Northeastern University

Altavesta, Kimberly
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A.D.N., Excelsior College

Ashton, Cathaleen
Library Assistant,
Library Services

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Clerk, Financial Aid
B.S.N., Curtin University

Barrow, Jhen-Nell
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